ENERGY FOR AGRICULTURE

A Computerized Information Retrieval System

Bibliographies and Literature of Agriculture No. 5
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ENERGY FOR AGRICULTURE

A Computerized Information Retrieval System

Compiled by
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December 1979

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Energy may come from the sun or the earth or be the product of plant materials or agricultural wastes. Whatever its source, energy is indispensable to our way of life, beginning with the production, processing, and distribution of abundant, high quality food and fiber supplies.

This specialized bibliography on the subject of energy for agriculture contains 2,613 citations to the literature for 1973 through May 1979. Originally issued by Michigan State University (MSU), it is being reprinted and distributed by the U.S. Department of Agriculture as a companion piece to the Department's recently published volume:


In addition, these literature citations will be incorporated into AGRICOLA (Agricultural On-Line Access), the comprehensive bibliographic data base maintained by Technical Information Systems (TIS), a component of USDA's Science and Education Administration (SEA). The citations and the listing of research projects will be combined with other relevant references to provide a continuously updated source of information on energy programs in the agricultural field.

The MSU bibliography is being reproduced by agreement between compilers B. A. Stout and C. A. Myers of the university's Engineering Department and SEA/TIS, the same unit responsible for USDA's Solar Energy Research Directory. The appearance of these two documents together illustrates the type of Federal-State cooperation essential to the building of a national energy data base for agriculture and related fields.
Free copies of either or both of these publications may be obtained by sending a self-addressed mailing label with requests to:

Library Operations Division, Technical Information Systems
U. S. Department of Agriculture
National Agricultural Library Building
Beltsville, Maryland 20705

Eugene M. Farkas, Chief
Educational Resources Division
Technical Informations Systems
ENERGY FOR AGRICULTURE
A Computerized Information Retrieval System

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PREFACE

Much has been written about the explosion of technical information being produced in most scientific fields. Researchers and other users of technical information are hard-pressed to keep up with current literature in their fields. A number of information retrieval systems have evolved to facilitate locating information as it is needed. One of these is the Basic Information Retrieval System (BIRS).

BIRS is a set of fundamental programs designed to allow researchers to use their own locally based computers to construct and maintain a variety of information retrieval systems.

For the purposes of this particular project, each information element or bibliographic entry to be retrieved is placed into the computer's memory by means of a terminal outlet or punched cards. Each entry contains basic information about its source, the author, etc., plus a set of keywords or terms that are used to describe the content of the article or element. BIRS is then used to generate a book of all information contained in the entered plus author and keyword indices.

The project will continue, both in terms of adding new bibliographic entries and also by improving the keywords and including brief summaries of some of the most relevant references. Errors in the present edition should be pointed out.
BIRS also permits the user to ask "questions" about its contents. Each abstract contains six fields: title, author, source, keywords, notes, and date. The user can feed words or phrases into a program in the computer system and specify in which field the computer should search for it. The computer will then look through all the information in the system and print out the abstracts which contain the specified words or phrases.

The questioning procedure is best illustrated by a simple example. Suppose a user is interested in finding out what articles have been published by Michigan State University personnel on solar energy. The user would feed the phrases "Michigan State University" and "solar" into the computer specifying the fields "source" and "keywords" respectively. The abstracts which fit that description would then be printed out.

For all practical purposes, a "question" can contain queries about any field and any number of phrases in any field or fields. When there is more than one part to a question, as in the previous example where both "Michigan State University" and "solar" were searched for, the user has to separate the phrases by any of the following fundamental searching operators: and, or, not, greater than, less than, equal to. These operators work exactly as one would expect them to. If the operator "or" had been used in the previous example, then the computer would have listed all of the abstracts that contained Michigan State University in their source plus all of the abstracts which contained solar in the keywords. It would not just have listed the abstracts which contained both phrases.

The operators -- greater than, less than, equal to -- can be used in searches involving dates. This makes it possible to find publications printed before, after, or on certain dates.

The keyword index and author index are located at the end of the list of references. In the notes section, the word "filed" means that I actually have that reference in my personal file. Also, in the notes section, "NAS" means the the National Academy of Sciences has the reference, "AID" refers to the Agency for International Development, etc. As others contribute to the BIRS system, I plan to list a name where each article can be obtained, in the event that it cannot be located in a library.

Another aspect of the BIRS searching program is that it gives a relevance index for each abstract that is listed as an "answer" to a "question". As an example, suppose a user asks the computer to search the keywords fields for the four terms methane, anaerobic fermentation, animal waste, and developing countries. The bibliographic entries which contain all four phrases as keywords would be printed out with a relevance index of 1.00. If other abstracts contain only three of the four terms, they will be printed out with a relevance of about 0.75. Those that contain only two of the four terms will be given a relevance index of 0.50.

The system is open-ended. Additional material can be added at any time and periodically a new edition of the contents of the system, author index, and keyword index printed out.
In the event that a user does not have access to the computer or chooses not to use it because of the expense, the computer-generated book and indices can be used manually to locate information of immediate interest.

ACKNOWLEDGEMENTS

Mary Schuelke assisted in preparing the original handwritten bibliographic cards and Candy Treleven did much of the editing and key-punching for the 4th edition. Monica Diehl prepared cards and key-punched new material for the 5th, 6th and 7th editions. Terry Benedict did much of the editing and helped prepare cards for the 6th and 7th editions.

John Forslin provided invaluable advice concerning the basic principles of building an information retrieval system and helped clarify the mysteries of the computer and the BIRS programs.

The financial assistance of the Midwest Universities Consortium for International Assistance, the Brookhaven National Laboratory, the Agency for International Development, the Rockefeller Foundation, and the U. S. Department of Energy made it possible to develop the system to the 7th edition.
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Abbreviations

Author Index

Keyword Index
ABSTRACT 1

• TITLE: UNDERSTANDING THE NATIONAL ENERGY DILEMMA.
• AUTHOR: ANON.
• SOURCE: STOCK NUMBER 5270-01947, JOINT COMMITTEE ON ATOMIC ENERGY,
  US GOVT PRINTING OFFICE, WASHINGTON DC 20405, 1975, 34PP.
• KEYWORDS: ACCOUNTING, ENERGY FLOW, STATISTICS, SUPPLY DEMAND.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 2

• TITLE: WORKSHOP REPORT ON ENERGY ANALYSIS AND ECONOMICS.
• AUTHOR: ANON.
• SOURCE: REPORT 9, INTERNATIONAL FED OF INST FOR ADVANCE STUDY,
  STOCKHOLM, SWEDEN, 22-27 JUNE 1975, 103PP.
• KEYWORDS: ACCOUNTING, ECONOMICS.
• NOTES: FILED.
• DATE: 750622

ABSTRACT 3

• TITLE: THE PRICE OF A TRACTOR.
• AUTHOR: BORGSTROM G.E.
• KEYWORDS: ACCOUNTING, FUEL CONSUMPTION, TRACTOR, INDIA, MEXICO,
  ITALY, USA.
• NOTES: FILED.
• DATE: 741100

ABSTRACT 4

• TITLE: THE NATIONAL ENERGY DILEMMA, DISPLAYED FOR TOTAL VIEWING.
• AUTHOR: BRIDGES J.
• SOURCE: CONF BOARD RECORD, 10(8)/14-30, AUG 1973.
• KEYWORDS: ACCOUNTING, FOSSIL FUELS, ENERGY FLOW, ENERGY SOURCES.
• NOTES: FILED.
• DATE: 730800

ABSTRACT 5

• TITLE: ENERGY UTILIZATION IN VERMONT AGRICULTURE, PART 1.
• AUTHOR: BURRILL G.C, NOLFI J R, MILTNER M.
• SOURCE: CENTER FOR STUDIES IN FOOD SELF-SUFFICIENCY, VERMONT INST OF
  COMMUNITY INVOLVEMENT, 90 MAIN ST, BURLINGTON, VT, 1976, 65PP.
• KEYWORDS: ACCOUNTING, VERMONT, PRODUCTION, DAIRY.
• NOTES: FILED.
• DATE: 760600

ABSTRACT 6

• TITLE: MISINTERPRETING ENERGY USAGE IN FOOD PRODUCTION.
• AUTHOR: CONNOR L J.
• SOURCE: DEPT OF AGR ECON, MICH STATE UNIV, EAST LANSING, MI 48824,
  1974, 17PP.
• KEYWORDS: ACCOUNTING, AGRICULTURE.
• NOTES: FILED.
• DATE: 740400

ABSTRACT 7

• TITLE: NET ENERGY ANALYSIS CAN BE ILLUMINATING.
• AUTHOR: CONSERVATION FOUNDATION.
• SOURCE: CONSERVATION FOUNDATION LETTER, 1717 MASS AVE NW,
  WASHINGTON DC, OCT 1975, 7PP.
• KEYWORDS: ACCOUNTING, ECONOMICS, AGRICULTURE, NUCLEAR.
• NOTES: FILED.
• DATE: 751000
ABSTRACT 15

TITLE: ENERGY FOR FOOD - FROM FARM TO HOME.
AUTHOR: HIRST E.
KEYWORDS: ACCOUNTING, USA, FOOD SYSTEM.
NOTES: REVIEWS ENERGY CONSUMPTION IN 1963 TO GROW, PROCESS, TRANSPORT, WHOLESALE, RETAIL, REFRIGERATE AND COOK FOOD IN THE USA.
DATE: 740000

ABSTRACT 16

TITLE: AN ALTERNATIVE APPROACH TO RELATIVE INDICES OF DEVELOPMENT AND POTENTIAL FOR CHANGE OF THE NATION-STATE.
AUTHOR: HOWELL J A, SLESSER M.
KEYWORDS: ACCOUNTING, DEVELOPING COUNTRIES, POPULATION, ENERGY CONSUMPTION, ECONOMICS, DEVELOPMENT.
NOTES: FILED.
DATE: 730000

ABSTRACT 17

TITLE: NET ENERGY ANALYSIS - AN ECONOMIC ASSESSMENT.
AUTHOR: HUETTNER D A.
KEYWORDS: ACCOUNTING, NET ENERGY, ECONOMICS.
NOTES: FILED.
DATE: 760409

ABSTRACT 18

TITLE: ULTIMATE LIMITS ON THE USES OF ENERGY ANALYSIS.
AUTHOR: HUETTNER D A.
SOURCE: PRESENTED AT THE FIRST INTERNATIONAL CONF ON ENERGY USE MANAGEMENT, TUCSON, AZ, OCT 1977, 8 PP.
KEYWORDS: ACCOUNTING.
NOTES: FILED.
DATE: 770000

ABSTRACT 19

TITLE: THE ROLES OF THE ECONOMIST IN STUDYING PROBLEMS INVOLVING ENERGY AND FOOD.
AUTHOR: JOHNSON G L.
SOURCE: STAFF PAPER 1974-23, DEPT OF AGR ECON, MICH STATE UNIV, EAST LANSING, MI 48824, 26PP.
KEYWORDS: ACCOUNTING, ECONOMICS.
NOTES: FILED.
DATE: 740000

ABSTRACT 20

TITLE: ENERGY CONSUMPTION MEASUREMENT - DATA NEEDS FOR PUBLIC POLICY.
AUTHOR: JUSTER F T, ET AL.
SOURCE: COMMITTEE ON MEASUREMENT OF ENERGY CONSUMPTION, ASSEMBLY OF BEHAVIORAL AND SOCIAL SCI, NRC, NAS, WASHINGTON DC, 1977, 107PP.
KEYWORDS: ACCOUNTING, ENERGY CONSUMPTION, HOME, INDUSTRY, POLICY.
NOTES: FILED.
DATE: 770000

ABSTRACT 21

TITLE: THE FLOW OF ENERGY IN A HUNTING SOCIETY.
AUTHOR: KEMP W B.
KEYWORDS: ACCOUNTING, ENERGY FLOW, HISTORICAL, INTERNATIONAL.
NOTES: FILED.
DATE: 710900
Abstract 8

*Title: The Flow of Energy in an Industrial Society.
*Author: Cook, E.
*Source: Scientific Amer., 114(3)/135-144, 1971.
*Keywords: Accounting, Waste Heat, Industry, Energy Consumption, World Wide, USA, Economics, Energy Flow.
*Notes: Filed.
*Date: 710000

Abstract 9

*Title: Energy and the Built Environment - A Gap in Current Strategies.
*Author: Daly, L. A.
*Keywords: Accounting, Conservation, Design, Policy, Supply Demand, Buildings.
*Notes: Filed.
*Date: 740500

Abstract 10

*Title: Energy Analysis and Public Policy.
*Author: Gilliland, M. W.
*Source: Science, 189(4208)/1051-1056, 26 Sept 1975.
*Keywords: Accounting, Policy, Environment, Economics.
*Notes: Filed.
*Date: 750926

Abstract 11

*Title: A Systems Approach to Energy.
*Author: Hafele, W.
*Keywords: Accounting, Supply Demand, Models, Environment, Economics, Nuclear, Hydrogen.
*Notes:Filed.
*Date: 740700

Abstract 12

*Title: A Methodology for Determining Energy Requirements on Michigan Farms Using Farm Records.
*Author: Hall, F. W.
*Keywords: Accounting, Michigan, Energy Consumption, Agriculture, Models.
*Notes: Filed. Masters Thesis.
*Date: 750000

Abstract 13

*Title: Energy Growth and Altruism.
*Author: Hannon, B. M.
*Keywords: Accounting, Models, Conservation, Economics.
*Notes: Filed.
*Date: 751021

Abstract 14

*Title: The Energy Cost of Goods and Services.
*Author: Herendeen, R. A.
*Keywords: Accounting.
*Notes: Filed.
*Date: 751000
ABSTRACT 22

• TITLE: ENERGY MODELING FOR AN UNCERTAIN FUTURE.
• AUTHOR: KOOPMANS T. C. ET AL.
• SOURCE: PRINTING AND PUBL OFFICE, NAS, 2101 CONSTITUTION AVE,
WASHINGTON DC 20418, 1978, 225 PP.
• KEYWORDS: ACCOUNTING, POLICY.
• NOTES: FILED, STUDY OF NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS,
SUPPORTING PAPER 2.
• DATE: 780000

ABSTRACT 23

• TITLE: ENERGY IN AGRICULTURE—ON MODELING ENERGY INPUTS IN AGRIMOD.
• AUTHOR: LEVIS A. H. ET AL.
• SOURCE: REPORT 50, ERDA, DIV OF INDUSTRIAL ENERGY CONSERVATION,
AUG 1977, 182 PP.
• KEYWORDS: ACCOUNTING, AGRICULTURE, ENERGY ACCOUNTING.
• NOTES, FILED.
• DATE: 770800

ABSTRACT 24

• TITLE: AGRIMOD--A DYNAMIC SIMULATION MODEL OF THE US FOOD
PRODUCTION SYSTEM.
• AUTHOR: LEVIS A. H., DUCOT E. R., SIDENBLAD K. M., LEVIS I. S.
• SOURCE: PREPARED BY SYSTEMS CONTROL, INC., 1801 PAGE MILL RD, PALO ALTO,
CA 94304, FOR DIV OF POLICY RESEARCH AND ANALYSIS, NSF, MARCH 1977,
121 PP.
• KEYWORDS: ACCOUNTING, PRODUCTION, MODELS.
• NOTES, FILED.
• DATE: 770300

ABSTRACT 25

• TITLE: WORKSHOP ON RESEARCH METHODOLOGIES FOR STUDIES OF ENERGY,
FOOD, MAN AND ENVIRONMENT, PHASE I.
• AUTHOR: PIMENTEL D., LYNN W. R., MACREYNOLDS W. K., HEVES M. T., RUSH S.
• SOURCE: CENTER FOR ENVIRO QUALITY MANAGEMENT, CORNELL UNIV,
ITHACA, NY, 18-26 JUNE 1974, 52 PP.
• KEYWORDS: ACCOUNTING, ENERGY CONSUMPTION, POPULATION, WORLD WIDE,
AGRICULTURE.
• NOTES, FILED.
• DATE: 740611

ABSTRACT 26

• TITLE: WORKSHOP ON RESEARCH METHODOLOGIES FOR STUDIES OF ENERGY,
FOOD, MAN AND ENVIRONMENT, PHASE II.
• AUTHOR: PIMENTEL D., LYNN W. R., MACREYNOLDS W. K., DATTNER M.
• SOURCE: CENTER FOR ENVIRO QUALITY MANAGEMENT, CORNELL UNIV,
ITHACA, NY, 11 NOV 1974, 20 PP.
• KEYWORDS: ACCOUNTING, AGRICULTURE, PRODUCTION.
• NOTES, FILED.
• DATE: 741111

ABSTRACT 27

• TITLE: THE ECONOMIC APPLICATIONS OF VITAL RATE MONITORING.
• AUTHOR: POLEMAN T. T., BEEMHLY W., MALIGN P., MCGREGOR A.
• SOURCE: MIMEOGRAPH 38, INTERNATIONAL AGR DEV, DEPT OF AGR ECON,
NOV. 1972.
• KEYWORDS: ACCOUNTING.
• NOTES.
• DATE: 721100

ABSTRACT 28

• TITLE: ENERGY ACCOUNTING IN FOOD PROCESS OPERATIONS.
• AUTHOR: SINGH R. P.
• SOURCE: REPRINTED FROM FOOD TECH, APRIL 1978, PP 40-46.
• KEYWORDS: ACCOUNTING, FOOD PROCESSING, MODELS.
• NOTES, FILED.
• DATE: 780400
ABSTRACT 29

**TITLE**: ENERGY ACCOUNTING - PRELIMINARY SURVEY OF THE STATE OF THE ART.

**AUTHOR**: SLESSER M.

**SOURCE**: INTERNATIONAL FED OF INST OF ADVANCED STUDY, UNIV OF STRATHCLYDE, GLASGOW, SCOTLAND, 15 PP.

**KEYWORDS**: ACCOUNTING, GENERAL.

**NOTES**: FILED.

**DATE**: UNDATED.

ABSTRACT 30

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 31

**TITLE**: ENERGY ACCOUNTING IN TECHNOLOGY ASSESSMENT.

**AUTHOR**: SLESSER M.

**SOURCE**: TECH ASSESSMENT, 2(3)/201-208, 1974.

**KEYWORDS**: ACCOUNTING, TECHNOLOGY ASSESSMENT, ECONOMICS, SOCIAL IMPLICATIONS.

**NOTES**: FILED.

**DATE**: 740000.

ABSTRACT 32

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 33

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 34

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 35

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 36

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 37

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 38

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 39

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 40

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 41

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.

ABSTRACT 42

**TITLE**: ENERGY ACCOUNTING IN HUMAN SOCIETIES.

**AUTHOR**: SLESSER M.

**SOURCE**: PREPARED FOR THE SYMPOSIUM ON LIVING SYSTEMS AS ENERGY CONVERTERS, ORGANIZED BY THE COUNCIL FOR EUROPE, PONT A MOUSSON, FRANCE.

**NOTES**: FILED.

**DATE**: 21 OCT 1976, 5PP.
ABSTRACT 42

• TITLE: ENERGY AND FOOD.
• AUTHOR: ANDERSON R J. ED.
• SOURCE: ENERGY PERSPECTIVES, NO. 26-27, AUG-SEPT 1976, 4PP.
• BATTLENE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH.
• KEYWORDS: AGRICULTURE, FOOD PROCESSING.
• NOTES: FILED.
• DATE: 760900.

ABSTRACT 43

• TITLE: HARWELL'S U-TUBE PUMP TO IRRIGATE INDIAN ARID ZONES.
• AUTHOR: ANON.
• SOURCE: NEW SCIENTIST, 7 AUG 1975, P.325.
• KEYWORDS: AGRICULTURE, IRRIGATION, INDIA, STIRLING.
• NOTES: FILED.
• DATE: 750807.

ABSTRACT 44

• TITLE: HIGH PLAINS GRAIN CONFERENCE - 1976.
• AUTHOR: ANON.
• SOURCE: A UNIV EXTENSION PROGRAM OF KANSAS, OKLAHOMA, AND TEXAS, 1976, 75PP.
• KEYWORDS: AGRICULTURE, DRYING, NATURAL GAS, CONSERVATION.
• NOTES: FILED.
• DATE: 760000.

ABSTRACT 45

• TITLE: SPECIAL ISSUE: ENERGY AND AGRICULTURE.
• AUTHOR: ANON.
• SOURCE: SPAN, 18(11) 1975, 44PP.
• KEYWORDS: AGRICULTURE, FOOD PROCESSING, DEVELOPING COUNTRIES, FERTILIZERS, CHEMICALS, GREENHOUSE, ORGANIC, DRYING.
• NOTES: FILED.
• DATE: 750000.

ABSTRACT 46

• TITLE: SPECIAL ISSUE: ENERGY AND AGRICULTURE.
• AUTHOR: ANON.
• SOURCE: OBJEKT, 30(3)/49-88, AUTUMN 1975.
• KEYWORDS: AGRICULTURE, ENERGY SOURCES, ECONOMICS.
• NOTES: FILED.
• DATE: 750000.

ABSTRACT 47

• TITLE: SPECIAL ISSUE: ENERGY AND AGRICULTURE.
• AUTHOR: ANON.
• KEYWORDS: AGRICULTURE.
• NOTES: FILED. THE KANSAS CONFERENCE ON US AND WORLD FOOD NEEDS IS THE MAIN STORY IN THIS SMALL MAGAZINE.
• DATE: 750723.

ABSTRACT 48

• TITLE: MANAGING YOUR CORN HARVESTING UNDER LIMITED DRYER FUEL SUPPLY.
• AUTHOR: ANTHONY W. ET AL.
• KEYWORDS: AGRICULTURE, HARVESTING, DRYING.
• NOTES: FILED.
• DATE: 750000.

ABSTRACT 49

• TITLE: ENERGY REQUIREMENTS FOR WHEAT PRODUCTION AND USE IN CALIFORNIA.
• AUTHOR: AVLANI P K, CHANCELLOR W J.
• SOURCE: ASAE PAPER 75-1557, 1975, 8PP.
• KEYWORDS: AGRICULTURE, ENERGY ACCOUNTING, PRODUCTION, CALIFORNIA.
• NOTES: FILED.
• DATE: 750000.
ABSTRACT 50

**TITLE:** ENERGY IN MICHIGAN AGRICULTURE.
**AUTHOR:** BAKKER-ARKEMA F W ET AL.
**SOURCE:** AGR ENGR DEPT. MICH STATE UNIV. EAST LANSING, MI 48824,
MARCH 1974, 63PP.
**KEYWORDS:** AGRICULTURE, ENERGY CONSUMPTION, ENERGY FLOW, MICHIGAN.
**NOTES:** FILED.
**DATE:** 740300

ABSTRACT 51

**TITLE:** ENERGY AND AGRICULTURE - TOWARD A NEW BALANCE.
**AUTHOR:** BARNES K K.
**SOURCE:** IMPLEMENT AND TRACTOR, 7 JAN 1974, PP 6-6.
**KEYWORDS:** AGRICULTURE.

NOTES: FILED.
**DATE:** 740107

ABSTRACT 52

**TITLE:** ENERGY IN AGRICULTURE.
**AUTHOR:** BARNES K K ET AL.
**SOURCE:** REPORT 14, COUNCIL FOR AGR SCI AND TECH, DEPT OF AGRON,
IOWA STATE UNIV. AMES, IA, 26 NOV 1973, 16 PP.
**KEYWORDS:** AGRICULTURE, FERTILIZER, IRRIGATION, DRYING, FOSSIL FUELS.
**NOTES:** FILED.
**DATE:** 731126

ABSTRACT 53

**TITLE:** ENERGY AND U.S. AGRICULTURE -- A STATEWIDE ENERGY MANAGEMENT AND
CONSERVATION PROGRAM FOR PRODUCTION AGRICULTURE IN NEBRASKA.
**AUTHOR:** BASHFORD L L SHELTON D P.
**SOURCE:** DEPT OF AGR ENGR UNIV OF NEBR. LINCOLN, NE 68583,
AUG 1977, 178 PP.
**KEYWORDS:** AGRICULTURE, CONSERVATION, FUEL CONSUMPTION, NEBRASKA.
**NOTES:** FILED. INFORMATION ON A FUEL SURVEY AND STATEWIDE ENERGY
CONSERTION FOR PRODUCTION AGRICULTURE. APPENDICES INCLUDE
ENERGY MANAGEMENT FACTSHEETS, DESIGNS FOR FIELD DEMONSTRATIONS AND
FIELD EXPERIMENTS, MEDIA RELEASES AND ANNOUNCEMENTS.
**DATE:** 770890

ABSTRACT 54

**TITLE:** TRACTOR BALLASTING.
**AUTHOR:** BASHFORD L L SHELTON D P.
**SOURCE:** FARM ENERGY TIPS CC278, INST OF AGR AND NAT RESOURCES,
UNIV OF NEBR. LINCOLN, NE, OCT 1877, 2 PP.
**KEYWORDS:** AGRICULTURE, EFFICIENCY, TRACTOR, MACHINERY.
**NOTES:** FILED.
**DATE:** 771000

ABSTRACT 55

**TITLE:** WHEEL WEIGHTS - HOW MUCH.
**AUTHOR:** BASHFORD L L.
**SOURCE:** COOPERATIVE EXTENSION SERVICE, INST OF AGR AND NATURAL RESOURCES,
UNIV OF NEBR. LINCOLN, NE, JUNE 1975, 2 PP.
**KEYWORDS:** AGRICULTURE, MACHINERY.
**NOTES:** FILED.
**DATE:** 750608

ABSTRACT 56

**TITLE:** REDUCING THE ENERGY REQUIREMENTS OF PLANT JUICE PROTEIN
PRODUCTION.
**AUTHOR:** BASKEN K E SHIRER C K KOEGEL R G BRUHN M D.
**SOURCE:** ASAE PAPER 75-1036, 24 PP.
**KEYWORDS:** AGRICULTURE, FOOD PROCESSING.
**NOTES:** FILED.
**DATE:** 750000
ABSTRACT 57

*TITLE: EXTENSION EFFORTS IN ENERGY MANAGEMENT AND CONSERVATION ON THE FARM, IN THE HOME, AND IN LOCAL COMMUNITIES.
*AUTHOR: BEER C.
*DATE: 770715

ABSTRACT 58

*TITLE: ENERGY CONSUMPTION AND THE PENNSYLVANIA FOOD SYSTEM.
*AUTHOR: BEIERLEIN J G, GESSLER T E.
*SOURCE: FARM ECON., COOPERATIVE EXTENSION SERVICE, PENN STATE UNIV.
*DATE: 780300

ABSTRACT 59

*TITLE: ENERGY TO KEEP AGRICULTURE GOING.
*AUTHOR: BERGER D I.
*KEYWORDS: AGRICULTURE, FOSSIL FUELS, PETROLEUM, FERTILIZER.
*DATE: 740200

ABSTRACT 60

*TITLE: ENERGY AND FOOD PRODUCTION.
*AUTHOR: BISWAS A K, BISWAS M R.
*KEYWORDS: AGRICULTURE, PRODUCTION.
*DATE: 750000

ABSTRACT 61

*TITLE: ENERGY RELATIONS IN CROP PRODUCTION - A PRELIMINARY SURVEY.
*AUTHOR: BLACK J M.
*KEYWORDS: AGRICULTURE, FOOD ENERGY.
*DATE: 710000

ABSTRACT 62

*TITLE: THE ENERGETICS OF BRITISH AGRICULTURE.
*AUTHOR: BLAXTER K L.
*KEYWORDS: AGRICULTURE, ENERGETICS, UNITED KINGDOM.
*DATE: 750000

ABSTRACT 63

*TITLE: POWER AND AGRICULTURAL REVOLUTION.
*AUTHOR: BLAXTER K L.
*KEYWORDS: AGRICULTURE, UNITED KINGDOM, ENERGY CONSUMPTION, FERTILIZER.
*DATE: 740214

ABSTRACT 64

*TITLE: ENERGY INSIGHTS.
*AUTHOR: BOEKE R.
*KEYWORDS: AGRICULTURE, PETROLEUM, CULTURAL ENERGY.
*DATE: 740331
ABSTRACT 65

TITLE: ENERGY CONSUMPTION IN THE FOOD SYSTEM.
AUTHOR: BOOZ ALLEN AND HAMILTON INC.
SOURCE: REPORT 13592-007-001 TO FEA BY BOOZ ALLEN AND HAMILTON INC., 4733 BETHESDA AVE, BETHESDA, MD 20014, 125 PP.
KEYWORDS: AGRICULTURE, FOOD PROCESSING, FOOD ENERGY.
NOTES: FILED.
DATE:

ABSTRACT 66

TITLE: ENERGY USE IN THE FOOD SYSTEM.
AUTHOR: BOOZ ALLEN AND HAMILTON INC.
SOURCE: BOOZ ALLEN AND HAMILTON INC., 4733 BETHESDA AVE, BETHESDA, MD 20014, UNDER CONTRACT CO-34-50303--00, TO THE OFFICE OF INDUSTRIAL PROGRAMS, FEA, WASHINGTON DC, MAY 1976.
KEYWORDS: AGRICULTURE, FOOD PROCESSING, ENERGY ACCOUNTING, USA.
NOTES: FILED.
DATE: 760500

ABSTRACT 67

TITLE: FOOD AND ENERGY IN CONFRONTATION.
AUTHOR: BORGSTROM G.
SOURCE: PRESENTED AT APS-SON: WORLD FOOD SYMPOSIUM, HOUSTON, TX, 10-12 AUG 1975, 21 PP.
KEYWORDS: AGRICULTURE, FOOD ENERGY, ANIMAL, HISTORICAL, ENERGY SUBSIDY, ENERGY RATIO, IRRIGATION, DEVELOPING COUNTRIES, ORGANIC.
NOTES: FILED.
DATE: 750801

ABSTRACT 68

TITLE: ENERGY--THERE'S NOT ENOUGH.
AUTHOR: BORGSTROM G.
KEYWORDS: AGRICULTURE, LAND USE, PRODUCTION.
NOTES: FILED. WITH THE EVER GROWING POPULATION OF PEOPLE AND ANIMALS, AND THE DECREASE IN TILLABLE ACREAGE, WILL FOOD PRODUCTION BE ABLE TO KEEP UP.
DATE: 770900

ABSTRACT 69

TITLE: FOOD, FEED AND ENERGY.
AUTHOR: BORGSTROM G.
SOURCE: PRESENTED AT THE SYMPOSIUM ON ENERGY AND SOCIETY CALLED BY THE SWEDISH ACADEMY OF SCIENCE, STOCKHOLM, SWEDEN, DEC 1973, 13 PP.
KEYWORDS: AGRICULTURE, FOOD ENERGY, ENERGY CONSUMPTION.
NOTES: FILED.
DATE: 731200

ABSTRACT 70

TITLE: ENERGY AND LABOUR BOTTLENECKS AND THEIR INFLUENCE ON THE CHOICE OF IMPROVED EQUIPMENT.
AUTHOR: BOSSHOFF W H, NINTO S D.
SOURCE: FARM EQUIPMENT WORKSHOP, PAPER III A, FAO, ROME, ITALY, UNDATED.
KEYWORDS: AGRICULTURE, KENYA, AFRICA.
NOTES: FILED.
DATE:

ABSTRACT 71

TITLE: MATCHING EQUIPMENT TO BIG TRACTORS FOR EFFICIENT FIELD OPERATIONS.
AUTHOR: BOVERS W.
SOURCE: ASAE PAPER 78-1031, 1978, 7 PP.
KEYWORDS: AGRICULTURE, TRACTOR, EFFICIENCY, REQUIREMENTS, MACHINERY.
NOTES: FILED. BY MATCHING TILLAGE EQUIPMENT AT 86 PERCENT OF MAXIMUM AVAILABLE POWER AND TO GIVE FIELD SPEEDS IN THE GENERAL RANGE OF 7.25 TO 10.0 KMH, OVERLOADING AND MAJOR BREAKDOWNS ARE REDUCED WHILE MAINTAINING MAXIMUM EFFECTIVENESS OF THE TILLAGE OPERATIONS.
DATE: 780800
ABSTRACT 72

• TITLE: MANURE MANAGEMENT ENERGY CONSUMPTION IN SWINE CONFINEMENT SYSTEMS.
• AUTHOR: BRODIE H. L.
• KEYWORDS: AGRICULTURE, MANURE, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 73

• TITLE: THE PARTIAL IMPACT OF THE ENERGY CRISIS ON AGRICULTURE IN ASIAN COUNTRIES.
• AUTHOR: BROWN D. D.
• KEYWORDS: AGRICULTURE, ECONOMICS, FERTILIZER, CHEMICALS, DEVELOPING COUNTRIES, CONSERVATION, ASIA.
• NOTES: FILED.
• DATE: 740117

ABSTRACT 74

• TITLE: WORLD FOOD AND NUTRITION STUDY, INTERIM REPORT.
• AUTHOR: BROWN H. S. ET AL.
• SOURCE: LIBRARY OF CONGRESS 75-37120; NAS, PRINTING AND PUBL OFFICE, 2101 CONSTITUTION AVE NW, WASHINGTON DC, 1975, 62PP.
• KEYWORDS: AGRICULTURE, WORLD WIDE, USA, FOOD ENERGY, SOCIAL IMPLICATIONS.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 75

• TITLE: ENERGY AND OUR FOOD SYSTEM - A MICROSCALE VIEW.
• AUTHOR: BROWN S. J.; BATTY J. C.
• KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 770500

ABSTRACT 76

• TITLE: ENERGY ALLOCATIONS IN THE FOOD SYSTEM - A MICROSCALE VIEW.
• AUTHOR: BROWN S. J.; BATTY J. C.
• SOURCE: TRANSACTIONS OF THE ASAE, 19(1)/758-761/1976.
• KEYWORDS: AGRICULTURE, ENERGY BUDGET.
• NOTES: FILED.
• DATE: 760000

ABSTRACT 77

• TITLE: CROP PRODUCTIVITY -- RESEARCH IMPERATIVES.
• AUTHOR: BROWN A. W. A. ID.
• SOURCE: INTERNATIONAL CONF ON CROP PRODUCTIVITY, MICH AGR EXPT STA, EAST LANSING, MI 48824, 20-24 OCT 1975, 399 PP.
• KEYWORDS: AGRICULTURE, CROP PROTECTION.
• NOTES: FILED. SIX DISCUSSION GROUPS WERE CONCERNED WITH - NITROGEN INPUT, CARBON INPUT, WATER AND SOIL MINERAL INPUT, PLANT PROTECTION FROM PESTS, ENVIRONMENTAL STRESS, AND PLANT DEVELOPMENT PROCESSES. THE REPORTS DISCUSS WHAT WERE CONSIDERED THE MOST IMPORTANT FUNDAMENTAL BIOLOGICAL PROCESSES THAT LIMIT CROP PRODUCTIVITY AND ALSO IDENTIFY RESEARCH IMPERATIVES DEEMED ESSENTIAL TO RAPIDLY ADVANCE THE KNOWLEDGE OF THESE PROCESSES.
• DATE: 751120

ABSTRACT 78

• TITLE: WORLD FOOD AND NUTRITION STUDY - THE POTENTIAL CONTRIBUTIONS OF RESEARCH.
• AUTHOR: BROWN H. S. ET AL.
• SOURCE: LIBRARY OF CONGRESS 77-81318; PRINTING AND PUBL OFFICE, NAS, 2101 CONSTITUTION AVE NW, WASHINGTON DC 20418, 1977, 192 PP.
• KEYWORDS: AGRICULTURE, WORLD WIDE, POLICY, SUPPLY DEMAND, PRODUCTION.
• NOTES: FILED.
• DATE: 770000
12. ABSTRACT

• TITLE: THAT WE MAY EAT - THE FOOD AND ENERGY SITUATION.
  • AUTHOR: BUCHELE V F, BUCHELE M J.
  • SOURCE: DEPT OF AGR ENGR, IOWA STATE UNIV, AMES, IA 50010.
  • DATE: APRIL 1977, 91 PP.
  • KEYWORDS: AGRICULTURE, SOLAR, PETROLEUM, SOCIAL IMPLICATIONS.
  • NOTES: FILED.
  • DATE: 770401

ABSTRACT 80

• TITLE: WHAT HAPPENS WHEN DIESEL FUEL GOES TO ONE DOLLAR A GALLON.
  • AUTHOR: BUCKINGHAM F.
  • SOURCE: IMPLEMENT AND TRACTOR, 7 JAN 1978, PP 10-16.
  • KEYWORDS: AGRICULTURE, DIESEL, DRYING, TILLAGE.
  • NOTES: FILED.
  • DATE: 780107

ABSTRACT 81

• TITLE: REALISTIC AND UNREALISTIC ENERGY CONSERVATION POTENTIAL IN AGRICULTURE.
  • AUTHOR: BUFFINGTON J D, ZAR J M.
  • SOURCE: ARGONNE NATIONAL LAB, ARGONNE, IL, 16-19 JUNE 1976, 27PP.
  • KEYWORDS: AGRICULTURE, CONSERVATION.
  • NOTES: FILED.
  • DATE: 760616

ABSTRACT 82

• TITLE: LAND, BREAD, AND HISTORY - A RESEARCH REPORT ON THE POTENTIAL FOR FOOD SELF-SUFFICIENCY IN VERMONT.
  • AUTHOR: BURRILL G, NOLFI J R.
  • SOURCE: CENTER FOR STUDIES IN FOOD SELF-SUFFICIENCY, VERMONT INST.
  • OF COMMUNITY INVOLVEMENT, 90 MAIN ST, BURLINGTON, VT, 1976, 93PP.
  • KEYWORDS: AGRICULTURE, VERMONT, FOOD ENERGY.
  • NOTES: FILED.
  • DATE: 760000

ABSTRACT 83

• TITLE: ENERGY UTILIZATION IN VERMONT AGRICULTURE - A SUMMERY.
  • AUTHOR: BURRILL G, NOLFI J R.
  • SOURCE: CENTER FOR STUDIES IN FOOD SELF-SUFFICIENCY, VERMONT INST.
  • OF COMMUNITY INVOLVEMENT, 90 MAIN ST, BURLINGTON, VT, 1976, 8 PP.
  • KEYWORDS: AGRICULTURE, VERMONT, ACCOUNTING, TRACTOR, FOSSIL FUELS.
  • NOTES: FILED.
  • DATE: 760000

ABSTRACT 84

• TITLE: ENERGY UTILIZATION IN VERMONT AGRICULTURE - PART 2.
  • AUTHOR: BURRILL G, NOLFI J R.
  • SOURCE: CENTER FOR STUDIES IN FOOD SELF-SUFFICIENCY, VERMONT INST.
  • OF COMMUNITY INVOLVEMENT, 90 MAIN ST, BURLINGTON, VT, 1976, 76 PP.
  • KEYWORDS: AGRICULTURE, VERMONT, DAIRY, ENERGY FLOW, ENERGY CONSUMPTION, POUTRY.
  • NOTES: FILED.
  • DATE: 760000

ABSTRACT 85

• TITLE: CONSTRUCTION OF AN AGRICULTURAL SOLAR DRYING SYSTEM.
  • AUTHOR: CARNEGIE E, POHL J.
  • INTERNATIONAL SOLAR ENERGY SOC, VOL 2,1, DENVER, CO, 28-31 AUG 1978.
  • 8 PP.
  • KEYWORDS: AGRICULTURE, SOLAR, DRYING.
  • NOTES: FILED.
  • DATE: 780828

ABSTRACT 86

• TITLE: 1974 TEXAS FARM FUEL AND FERTILIZER SURVEY.
  • AUTHOR: CAUDILL C E, WELLS R H, WICK R M, MURPHY J M, ADKINS W E.
  • SOURCE: CRCP AND LIVESTOCK REPORTING SERVICE, TEXAS DEPT OF AGR.
  • PO BOX 70, AUSTIN, TX, 1974, 55PP.
  • KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, TEXAS, FERTILIZER,
  • MACHINERY.
  • NOTES: FILED.
  • DATE: 740000
ABSTRACT 87

• TITLE: BULLETIN D'INFORMATION DU CNEEMA
• AUTHOR: CENTRE NATIONAL D'ETUDES ET D'EXPÉRIMENTATION DE MACHINISME AGRICOLE
• SOURCE: CNEEMA REPORT 200, ANTOY, FRANCE, SEPT 1974
• KEYWORDS: AGRICULTURE, FRANCE, METHANE, SOLAR
• NOTES: FILED
• DATE: 740908

ABSTRACT 88

• TITLE: ESSAI SUR L'ÉNERGIE DANS L'AGRICULTURE OU DANS LE SYSTÈME AGRO-ALIMENTAIRE EN FRANCE
• AUTHOR: CENTRE NATIONAL D'ETUDES ET D'EXPÉRIMENTATION DE MACHINISME AGRICOLE
• SOURCE: CNEEMA REPORT 404, ANTOY, FRANCE, JUNE 1975, 86 PP
• KEYWORDS: AGRICULTURE, FRANCE, HISTORICAL, ENERGY ACCOUNTING, SOLAR, ALTERNATIVES, CONSERVATION
• NOTES: FILED
• DATE: 750601

ABSTRACT 89

• TITLE: ENERGY REQUIREMENTS FOR AGRICULTURE IN CALIFORNIA
• AUTHOR: CERVINKA V, CHANCELLOR W J, COFFELT R J, CURLEY R G, DOBLE J E
• SOURCE: UNIV OF CALIF, JAN 1974
• KEYWORDS: AGRICULTURE, ENERGY ACCOUNTING, REQUIREMENTS, PETROLEUM, ELECTRICAL, CALIFORNIA
• NOTES: FILED
• DATE: 740400

ABSTRACT 90

• TITLE: METHODS USED IN DETERMINING ENERGY FLOWS IN CALIFORNIA AGRICULTURE
• AUTHOR: CERVINKA V, CHANCELLOR W J, COFFELT R J, CURLEY R G, DOBLE J E, HARRISON B D
• SOURCE: TRANSACTIONS OF THE ASAE, 18(2)/246-251, 1975
• KEYWORDS: AGRICULTURE, FOSSIL FUELS, DIESEL, ELECTRICAL
• NOTES: FILED
• DATE: 740001

ABSTRACT 91

• TITLE: BALANCING ENERGY AND FOOD PRODUCTION, 1975-2000
• AUTHOR: CHANCELLOR W J, GIDSS J R
• SOURCE: SCIENCE, 192(4236)/213-218, 16 APRIL 1976
• KEYWORDS: AGRICULTURE, INTERNATIONAL
• NOTES: FILED
• DATE: 760416

ABSTRACT 92

• TITLE: THE ROLE OF FUEL AND ELECTRICAL ENERGY IN INCREASING PRODUCTION FROM TRADITIONALLY BASED AGRICULTURE
• AUTHOR: CHANCELLOR W J
• SOURCE: ASAE PAPER 77-5529, 1977, 37 PP
• KEYWORDS: AGRICULTURE, DEVELOPING COUNTRIES, DEVELOPMENT
• NOTES: FILED
• DATE: 770100

ABSTRACT 93

• TITLE: INCORPORATING ENERGETIC MEASURES IN AN ANALYSIS OF CROP PRODUCTION PRACTICES IN SIGATOKA VALLEY, FIJI
• AUTHOR: CHANDRO S, DEBOER A J, EVENSON J P
• SOURCE: AGA SYSTEMS, 1(4)/301-311, 1976
• KEYWORDS: AGRICULTURE, FIJI
• NOTES: FILED
• DATE: 760400
ABSTRACT 94

*TITLE: OPTIMIZING OREGON AGRICULTURAL PRODUCTION SYSTEMS WITH LIMITED ENERGY SUPPLIES.
*AUTHOR: CHEN K L, WENSINK R B.
*SRCOE: ASAE PAPER 76-5019, 1976, 31PP.
*KEYWORDS: AGRICULTURE, OREGON, PRODUCTION, MODELS.
*NOTES: FILED.
*DATE: 760000

ABSTRACT 95

*TITLE: PROCEEDINGS OF ENERGY SYMPOSIUM III - ENERGY FOR FOOD PRODUCTION.
*AUTHOR: CLARK S J.
*SRCOE: REPORT CES-12, CENTER FOR ENERGY STUDIES, KANSAS STATE UNIV, MANHATTAN, KS, 15 SEPT 1975, 116 PP.
*KEYWORDS: AGRICULTURE, FOOD PROCESSING, EFFICIENCY, PRODUCTION, FERTILIZER, ENERGY SOURCES.
*NOTES: FILED.
*DATE: 750915

ABSTRACT 96

*TITLE: US AGRICULTURE IS GROWING TROUBLE AS WELL AS CROPS.
*AUTHOR: CLARK W.
*KEYWORDS: AGRICULTURE, USA.
*NOTES:
*DATE: 750000

ABSTRACT 97

*TITLE: DEPARTMENT OF ENERGY PROGRAMS AND OBJECTIVES - ENERGY CONSERVATION IN AGRICULTURAL PRODUCTION.
*AUTHOR: CLARK S J.
*SRCOE: PREPARED BY WASH SCI MARKETING, INC, CONTRACT 31-109-38-3896, FOR THE US DEPT OF ENERGY, DIV OF INDUSTRIAL ENERGY CONSERVATION, WASH DC 20545, DEC 1977, 39 PP.
*KEYWORDS: AGRICULTURE, DRYING, FERTILIZER, IRRIGATION, GREENHOUSE, ANIMAL PRODUCTION, CONSERVATION.
*NOTES: FILED.
*DATE: 771200

ABSTRACT 98

*TITLE: ENERGY CONSUMPTION, CONSERVATION, AND PROJECTED NEEDS FOR TEXAS AGRICULTURE.
*AUTHOR: COBLE C G, LEPORI W A.
*SRCOE: DEPT OF AGR ENGR, TEXAS A AND M UNIV, 1974, 70 PP.
*KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, CONSERVATION, TEXAS.
*NOTES: FILED.
*DATE: 740300

ABSTRACT 99

*TITLE: MACHINERY ENERGY REQUIREMENTS FOR CROP PRODUCTION IN DELAWARE.
*AUTHOR: COLLINS N E, WILLIAMS T M, KEMBLE L J.
*KEYWORDS: AGRICULTURE, DELAWARE, ENERGY CONSUMPTION, PRODUCTION.
*NOTES: FILED.
*DATE: 750000

ABSTRACT 100

*TITLE: BEEF FEEDLOT DESIGN AND MANAGEMENT IN MICHIGAN.
*AUTHOR: CONNOR L J, ET AL.
*SRCOE: FARM SCI RESEARCH REPORT 292, AGR EXPT STA, MICH STATE UNIV, EAST LANSING, MI, 1/8824, FEB 1976, 31 PP.
*KEYWORDS: AGRICULTURE, MICHIGAN, ANIMAL.
*NOTES: FILED.
*DATE: 760200
ABSTRACT 101

• TITLE: IMPLICATIONS OF CHANGING ENERGY PRICES AND SUPPLIES UPON MICHIGAN AGRICULTURE.
• AUTHOR: CONNOR L J.
• SOURCE: PRESENTED AT ENERGY ALTERNATIVES FOR MICH. CONF SPONSORED BY THE JOINT-COMMITTEE ON ENERGY, MICH LEGISLATURE, LANSING, MI, 9 JUNE 1977, 13PP.
• KEYWORDS: AGRICULTURE, ENERGY BUDGET, POLICY, MICHIGAN.
• NOTES: FILED. CHARACTERISTICS OF MICH AGR SUCH AS EMPLOYMENT, VALUE, DIVERSITY AND FARM SIZE. TABLES ON THE ENERGY USE OF AGR IN MICH AND THE US, ALONG WITH ENERGY-PRICE POLICY.
• DATE: 770609

ABSTRACT 102

• TITLE: ENERGY FOR AGRICULTURE CONFERENCE.
• AUTHOR: CORN REFINERS ASSOCIATION INC.
• SOURCE: CORN REFINERS ASSOC INC, 1001 CONN AVE NW, WASHINGTON D C, 18-19 SEPT 1973, 157 PP.
• KEYWORDS: AGRICULTURE, POLICY, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 730918

ABSTRACT 103

• TITLE: ENERGY OUT OF AGRICULTURE--PLANTS AS A SOURCE OF FUEL AND POWER.
• AUTHOR: CORNFORTH J W.
• SOURCE: SPAN, 18(11)/10-11, 1975.
• KEYWORDS: AGRICULTURE, BIOMASS.
• NOTES: FILED.
• DATE: 750909

ABSTRACT 104

• TITLE: ENERGY CRISIS - NO JOKE.
• AUTHOR: COURTER P.
• SOURCE: MICH FARMER, 5 MAY 1973, PP 8, 16-17.
• KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, FOSSIL FUELS, POLICY.
• NOTES: FILED. APRIL 1973 REPORT OF CONFERENCE ON AGRICULTURE AND THE ENERGY CRISIS AT THE UNIV OF NEBR.
• DATE: 730504

ABSTRACT 105

• TITLE: SUMMARY OF CURRENT STATE EXTENSION WORK ON ENERGY CONSERVATION.
• AUTHOR: COX W T L ANPHER B F.
• SOURCE: FED EXTENSION SERVICE, USDA, WASHINGTON DC, 10 JAN 1974, 15 PP.
• KEYWORDS: AGRICULTURE, CONSERVATION, BIBLIOGRAPHY.
• NOTES: FILED.
• DATE: 740110

ABSTRACT 106

• TITLE: SELECTING POWER EQUIPMENT TO SAVE ENERGY.
• AUTHOR: CROMWELL R P.
• SOURCE: FACT SHEET EC-18, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL 32611, 1976, 3PP.
• KEYWORDS: AGRICULTURE, TRACTOR, CONSERVATION.
• NOTES: FILED.
• DATE: 760900

ABSTRACT 107

• TITLE: TRACTOR OPERATION FOR FUEL SAVINGS.
• AUTHOR: CROMWELL R P.
• SOURCE: ENERGY CONSERVATION FACT SHEET EC-21, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
• KEYWORDS: AGRICULTURE, TRACTOR, CONSERVATION.
• NOTES: FILED.
• DATE: 760900
ABSTRACT 108

**Title**: TUNE-UPS SAVE FUEL.

**Author**: CROMWELL R P.

**Source**: ENERGY CONSERVATION FACT SHEET EC-20, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.

**Keywords**: AGRICULTURE, MACHINERY, CONSERVATION.

**Notes**: FILED.

**Date**: 760000

ABSTRACT 109

**Title**: RELATIONS BETWEEN FOOD PRODUCTION PROCESSING AND DISTRIBUTION ALTERNATIVES AND ENERGY

**Author**: CROSSON P R.

**Source**: RESOURCES FOR THE FUTURE, 1755 MASS AVE NW, WASHINGTON DC 20036, JUNE 1976, 15PP.

**Keywords**: AGRICULTURE, FOOD PROCESSING, ALTERNATIVES, FOSSIL FUELS.

**Notes**: FILED.

**Date**: 760000

ABSTRACT 110

**Title**: FOOD PRODUCTION AND THE ENERGY DILEMMA

**Author**: CUMMINGS R W.

**Source**: THE ROCKEFELLER FOUNDATION, AUG 1974, 28 PP.

**Keywords**: AGRICULTURE, PRODUCTION.

**Notes**: FILED.

**Date**: 740000

ABSTRACT 111

**Title**: GETTING OUT OF THE FOOD ENERGY FIX

**Author**: CUTLER M R.

**Source**: AGR ENGR, 59(1)/41-44, JAN 1978.

**Keywords**: AGRICULTURE, POLICY.

**Notes**: FILED.

**Date**: 780100

ABSTRACT 112

**Title**: FUEL, FERTILIZER--WILL YOU GET ENOUGH?

**Author**: DAHL O. ET AL.

**Source**: COOPERATIVE EXTENSION SERVICE, UNIV OF ILL, UDANA: CHAMPAIGN, IL 1974, 36 PP.

**Keywords**: AGRICULTURE, FERTILIZER, SUPPLY DEMAND, FOSSIL FUELS.

**Notes**: FILED.

**Date**: 740000

ABSTRACT 113

**Title**: ENERGY AND US

**Author**: DAVIS D R.

**Source**: ARKANSAS PROCESSING CROPS REVIEW, 11(4)/1-4, OCT 1975, UNIV OF ARKANSAS.

**Keywords**: AGRICULTURE, FOSSIL FUELS, PETROLEUM.

**Notes**: FILED.

**Date**: 751000

ABSTRACT 114

**Title**: ENERGY PRODUCTION AND USE IN DUTCH AGRICULTURE

**Author**: DEKKERS W A, LANGE J M, DEVIT C T.


**Keywords**: AGRICULTURE, FOOD ENERGY, FOOD PROCESSING.

**Notes**: FILED.

**Date**: 740000
ABSTRACT 122

- TITLE: ENERGY IN AGRICULTURE--ACCOUNTING FOR TILLAGE EQUIPMENT AND OTHER MACHINERY IN AGRICULTURAL ENERGY ANALYSIS.
- AUTHOR: DOERING O C, CONSIDINE T J, HARLING C E.
- SOURCE: NSF/RA-770128, AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE, IN 47907, JUNE 1977, 4PP.
- KEYWORDS: AGRICULTURE, MACHINERY, ENERGY ACCOUNTING.

NOTES: FILED. THE ENERGY VALUE BASED ON INDUSTRY SOURCES, OF DIFFERENT TILLAGE EQUIPMENT AND FARM MACHINERY IS PRESENTED. DISCOUNTING, SCRAPPAGE AND UTILIZATION ARE DISCUSSED. COMPARISONS ARE MADE BETWEEN THE NEW DISAGGREGATED DATA AND INITIAL ATTEMPTS TO DETERMINE FARM MACHINERY'S ENERGY CONTENT BASED ON ENERGY CONTENT OF AUTOMOBILES.

DATE: 770600

ABSTRACT 123

- TITLE: EVALUATING ALTERNATIVE ENERGY TECHNOLOGIES IN AGRICULTURE.
- AUTHOR: DOERING O C, PEARY R M.
- SOURCE: NSF/RA-770124, AGR ECON DEPT, PURDUE UNIV, WEST LAFAYETTE, IN 47907, JUNE 1977, 16PP.
- KEYWORDS: AGRICULTURE, ENERGY BUDGET, CONSERVATION, MODELS.

NOTES: FILED. IDENTIFIED AND EVALUATED ARE CROPPING SYSTEMS AND PRODUCTION METHODS FOR CORN, SOYBEANS, WHEAT AND ALFALFA, WHICH WILL REDUCE THE TOTAL ENERGY INPUTS REQUIRED RELATIVE TO PRODUCTION. ECONOMIC AND TECHNICAL FEASIBILITY IS CONSIDERED.

DATE: 770600

ABSTRACT 124

- AUTHOR: DOERING O C.
- KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION.

DATE: 771200

ABSTRACT 125

- TITLE: CURRENT ENERGY USE IN THE FOOD AND FIBER SYSTEM.
- AUTHOR: DOERING O C, GAYETT E E, VAN ARSDALL R T, RALL E, DEVLIN P.
- SOURCE: PREPARED BY ECON RESEARCH SERVICE, USDA, 23 JUNE 1977, 21 PP.
- KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION.

DATE: 770623

ABSTRACT 126

- TITLE: ENERGY CONSUMPTION IN SWINE CONFINEMENT BUILDINGS.
- AUTHOR: DRIGGERS L B.
- SOURCE: ASAE PAPER 76-4537, 1976, 6 PP.
- KEYWORDS: AGRICULTURE, BUILDINGS, ENERGY CONSUMPTION.

DATE: 770623

ABSTRACT 127

- TITLE: ENERGY AND AMERICAN AGRICULTURE.
- AUTHOR: DUNCAN M, WEBB K.
- SOURCE: ECON REVIEW, 63(4)/13-14, APRIL 1978.
- KEYWORDS: AGRICULTURE, USA, POLICY.

DATE: 780400

ABSTRACT 128

- TITLE: ENERGY USE IN US AGRICULTURE - AN EVALUATION OF NATIONAL AND REGIONAL IMPACTS FROM ALTERNATIVE ENERGY POLICIES.
- AUTHOR: DVOSKIN D, HEADY E D, ENGLISH B C.
- SOURCE: CARD REPORT 78, THE CENTER FOR AGR AND RURAL DEV, IOWA STATE UNIV, AMES, IA 50011, MARCH 1978, 121 PP.
- KEYWORDS: AGRICULTURE, NATURAL GAS, POLICY.

DATE: 780300
**ABSTRACT 129**

*TITLE* • THE US FOOD AND FIBER SECTOR - ENERGY USE AND OUTLOOK.
*AUTHOR* • ECONOMIC RESEARCH SERVICE, US-DEPARTMENT OF AGRICULTURE.
*SOURCE* • PREPARED BY ECON RESEARCH SERVICE, USDA, FOR THE COMMITTEE ON AGR AND FORESTRY, US SENATE, 93RD CONGRESS, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1974, 111PP.
*KEYWORDS* • AGRICULTURE, FOOD PROCESSING, POLICY, MARKETING, FUEL CONSUMPTION.
*NOTES* • FILED.
*DATE* • 740000.

**ABSTRACT 130**

*TITLE* • AUTOMATIC FEEDING OF CATTLE.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 19, APRIL 1974, 87 PP, THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV8 2LS, ENGLAND.
*KEYWORDS* • AGRICULTURE, ANIMAL, FOOD ENERGY, FOOD PROCESSING.
*NOTES* • FILED.
*DATE* • 740400.

**ABSTRACT 131**

*TITLE* • AUTOMATIC FEEDING OF POULTRY AND PIGS.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 20, MAY 1974, 60 PP, THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV8 2LS, ENGLAND.
*KEYWORDS* • AGRICULTURE, ANIMAL, FOOD ENERGY, FOOD PROCESSING.
*NOTES* • FILED.
*DATE* • 740500.

**ABSTRACT 132**

*TITLE* • FEED PREPARATION.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 14, OCT 1971, 112 PP, THE ELECTRICITY COUNCIL, TRAFALGAR BLDG, 1 CHARING CROSS, LONDON SWIA 2DS, ENGLAND.
*KEYWORDS* • AGRICULTURE, ANIMAL, FOOD PROCESSING, ECONOMICS.
*NOTES* • FILED.
*DATE* • 711000.

**ABSTRACT 133**

*TITLE* • GRAIN DRYING AND STORAGE.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 21, NOV 1974, 124 PP, THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV8 2LS, ENGLAND.
*KEYWORDS* • AGRICULTURE, DRYING, STORAGE.
*NOTES* • FILED.
*DATE* • 741100.

**ABSTRACT 134**

*TITLE* • HAY DRI YING.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 22, OCT 1975, 66 PP, THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, STONELEIGH, KENILWORTH, WARWICKSHIRE CV8 2LS, ENGLAND.
*KEYWORDS* • AGRICULTURE, DRYING.
*NOTES* • FILED.
*DATE* • 751000.

**ABSTRACT 135**

*TITLE* • MILK PRODUCTION.
*AUTHOR* • ELECTRICITY COUNCIL.
*SOURCE* • FARM ELECTRIC HANDBOOK 17, JUNE 1972, 72 PP, THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV8 2LS, ENGLAND.
*KEYWORDS* • AGRICULTURE, DAIRY, ELECTRICAL, PRODUCTION.
*NOTES* • FILED.
*DATE* • 720600.
ABSTRACT 136

• TITLE: PUMPING.
• AUTHOR: ELECTRICITY COUNCIL.
• SOURCE: FARM ELECTRIC HANDBOOK 11, OCT 1971, 81 PP. THE ELECTRICITY COUNCIL, 1 CHARING CROSS, LONDON SW1A 2DS, ENGLAND.
• KEYWORDS: AGRICULTURE, WATER POWER, IRRIGATION.
• NOTES: FILED.
• DATE: 711000

ABSTRACT 137

• TITLE: VEGETABLE STORAGE.
• AUTHOR: ELECTRICITY COUNCIL.
• SOURCE: FARM ELECTRIC HANDBOOK 23, NOV 1974, 118 PP. THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, KENILWORTH, WARWICKSHIRE CV8 2LS.
• KEYWORDS: AGRICULTURE, STORAGE.
• NOTES: FILED.
• DATE: 741100

ABSTRACT 138

• TITLE: FOOD AND ENERGY.
• AUTHOR: FARM ELECTRIFICATION COUNCIL.
• SOURCE: FARM ELECTRIFICATION COUNCIL, 909 UNIV AVE, COLUMBIA, MO, 65201.
• KEYWORDS: AGRICULTURE, FOOD PROCESSING, FOOD ENERGY, POPULATION.
• NOTES: FILED.
• DATE: 750620

ABSTRACT 139

• TITLE: FOOD AND ENERGY SYMPOSIUM.
• AUTHOR: FARML ELECTRIFICATION COUNCIL.
• SOURCE: FARM ELECTRIFICATION COUNCIL, 816 LOCUST, DES MOINES, IA, 50309.
• KEYWORDS: AGRICULTURE, ELECTRICAL, CONSERVATION, SOLAR, NUCLEAR.
• NOTES: FILED.
• DATE: 730400

ABSTRACT 140

• TITLE: ARE FOOD PRICES HIGH.
• AUTHOR: FERRIS J.
• SOURCE: MICH FARM ECON 364, AGR ECON DEPT, MICH STATE UNIV, EAST LANSING, MI 48824. 1973, 4 PP.
• KEYWORDS: AGRICULTURE, ECONOMICS.
• NOTES: FILED.
• DATE: 730400

ABSTRACT 141

• TITLE: ENERGY AND AGRICULTURE - RESEARCH IMPLICATIONS.
• AUTHOR: FISCHER L, BIERE A.
• SOURCE: REPORT 2, NORTH CENTRAL REGIONAL STRATEGY COMMITTEE ON NATURAL RESOURCE DEV, OCT 1973, 99 PP.
• KEYWORDS: AGRICULTURE, SOCIAL IMPPLICATIONS, ECONOMICS.
• NOTES: FILED.
• DATE: 731000

ABSTRACT 142

• TITLE: ENERGY CONSUMPTION OF THE FLORIDA VEGETABLE INDUSTRY.
• AUTHOR: FLUCK R C.
• SOURCE: FLORIDA AGR EXPT STA J SERIES NO 7060, AGR ENGR DEPT, UNIV OF FLORIDA, GAINESVILLE, 1975, 13 PP.
• KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, FLORIDA, INDUSTRY.
• NOTES: FILED.
• DATE: 750000
ABSTRACT 143

TITLE: FOOD AND ENERGY
AUTHOR: FOOD AND ENERGY COUNCIL
SOURCE: FOOD AND ENERGY COUNCIL, 909 UNIV AVE, COLUMBIA, MO 65201, 1977, 15 PP.
KEYWORDS: AGRICULTURE, ENERGY SOURCES, POPULATION
NOTE: THE CURRENT AND FUTURE ASPECTS OF THE WORLD FOOD SUPPLY, INCREASED CROP YIELD, INCREASED POPULATION, THE ENERGY CRISIS AND IMPROVED TECHNOLOGY, ARE DEALT WITH.
DATE: 770000

ABSTRACT 144

TITLE: AGRICULTURE, ENERGY, AND SOCIETY
AUTHOR: FOWLER J M, KRYGER K C, CAREY M H
KEYWORDS: AGRICULTURE
NOTE: FILED.
DATE: 780200

ABSTRACT 145

TITLE: FUEL USE FOR CROP AND LIVESTOCK PRODUCTION IN 1973 WITH PROJECTIONS TO 1985
AUTHOR: FOX A S
SOURCE: PREPARED FOR PRESENTATION AT THE SOUTHERN AGR ECON ASSOC MEETING, NEW ORLEANS, LA, FEB 1975, 11PP.
KEYWORDS: AGRICULTURE, FOSSIL FUELS, REQUIREMENTS
NOTE: FILED.
DATE: 750200

ABSTRACT 146

TITLE: DIRECT ENERGY USE IN MILK PRODUCTION - METHODOLOGY AND COEFFICIENT
AUTHOR: FRANK G G
SOURCE: PRESENTED AT THE AMER AGR ECON ASSOC MEETING, COLUMBUS, OH, 10 AUG 1975, 12PP.
KEYWORDS: AGRICULTURE, FOOD PROCESSING, ANIMAL, DAIRY
NOTE: FILED.
DATE: 750800

ABSTRACT 147

TITLE: A GUIDE TO ENERGY SAVINGS--FOR THE DAIRY FARMER
AUTHOR: FRANK G G
SOURCE: FEA, OFFICE OF COMMUNICATION, PUBLICATIONS DIV, U.S. DEPT OF AGR, WASHINGTON DC 20250, JUNE 1977, 50PP.
KEYWORDS: AGRICULTURE, DAIRY, CONSERVATION, ENERGY CONSUMPTION
NOTE: FILED.
DATE: 770600

ABSTRACT 148

TITLE: ENERGY AND FOOD--ENERGY USED IN PRODUCTION, PROCESSING, DELIVERY AND MARKETING OF SELECTED FOOD ITEMS
AUTHOR: FRITSCH A J, OUJACK L W, JIMPERSON D A
SOURCE: ENERGY SERIES VI, CENTER FOR SCI IN THE PUBLIC INTEREST, 1779 CHURCH ST, WASHINGTON D C, JUNE 1975, 74 PP.
KEYWORDS: AGRICULTURE, PRODUCTION, MARKETING, ENERGY RATIO, ENERGY SUBSIDY, ENERGY FLOW, STATISTICS, FOOD ENERGY
NOTE: FILED.
DATE: 750600
ABSTRACT 149

*TITLE, AGRICULTURE AND THE ENERGY CRISIS.
*AUTHOR, GAVETT E E.
*SOURCE, PRESENTED AT THE NATIONAL CONFERENCE ON AGR AND THE ENERGY CRISIS, UNIV OF NEB., 10-11 APRIL 1973, 20 PP.
*KEYWORDS, AGRICULTURE, SOLAR, ORGANIC, ALCOHOL.
*NOTES, FILED.
*DATE, 750410

ABSTRACT 150

*TITLE, CAN 1918 FARMING FEED 1975 PEOPLE.
*AUTHOR, GAVETT E E.
*KEYWORDS, AGRICULTURE, LABOR, FERTILIZER.
*NOTES, FILED.
*DATE, 750800

ABSTRACT 151

*TITLE, OIL RICH, TRACTOR POOR.
*AUTHOR GERSTNER J.
*SOURCE, JOHN DEERE J. 54(1/6-9), WINTER 1976.
*KEYWORDS, AGRICULTURE, MIDDLE EAST.
*NOTES, FILED.
*DATE, 760000

GIBBONS

ABSTRACT 152

*TITLE, ENERGETICS OF FOOD SYSTEMS, THERMODYNAMIC THRIFT AND POWER VIA PHOTOSYNTHESIS.
*AUTHOR, GIFFORD R M.
*KEYWORDS, AGRICULTURE, AUSTRALIA, ENERGETICS, ENERGY ACCOUNTING, MINIMUM TILLAGE.
*NOTES, FILED.
*DATE, 740621

ABSTRACT 153

*TITLE, ENERGETICS OF AGRICULTURE AND FOOD PRODUCTION WITH SPECIAL EMPHASIS ON THE AUSTRALIAN SITUATION.
*AUTHOR, GIFFORD R M, MILLINGTON R J.
*SOURCE, CSIRO BULLETIN 268, 1975, 29 PP.
*KEYWORDS, AGRICULTURE, ENERGETICS, AGRICULTURE, ENERGY ACCOUNTING, ORGANIC, AUSTRALIA, EFFICIENCY, TILLAGE.
*DATE, 750900

ABSTRACT 154

*TITLE, BIOPHYSICAL CONSTRAINTS IN AUSTRALIAN FOOD PRODUCTION - IMPLICATIONS FOR POPULATION POLICY.
*AUTHOR, GIFFORD R M, KALMA J D, ASTON A R, MILLINGTON R J.
*SOURCE, SEARCH, 6(6)/212-220, JUNE 1975.
*KEYWORDS, AGRICULTURE, AUSTRALIA, POPULATION, POLICY.
*NOTES, FILED.
*DATE, 750600

ABSTRACT 155

*TITLE, THE EMERGING ECONOMIC BASE FOR LOW-ENERGY AGRICULTURE.
*AUTHOR, GOLDSMITH J.
*KEYWORDS, AGRICULTURE, ECONOMICS, WASTES.
*NOTES, FILED.
*DATE, 750800
ABSTRACT 156

• TITLE: THE FLOW OF ENERGY IN A FOREST ECOSYSTEM.
• AUTHOR: BOSS J R, HOLMES R T, LIKENS G E, BORMANN F H.
• SOURCE: SCIENTIFIC AMER, 238(3)/93-102, MARCH 1978.
• KEYWORDS: AGRICULTURE, PHOTOSYNTHESIS, ENERGY FLOW.
• NOTES: FILED.
• DATE: 780300

ABSTRACT 157

• TITLE: FARM ENERGY DURING AN ERA OF SCARCITY.
• AUTHOR: GOSTOVICH J.
• SOURCE: MINN AGR ECONOMIST NO 570, INST OF AGR, UNIV OF MINN, ST PAUL, AUG 1975, 5 PP.
• KEYWORDS: AGRICULTURE, FERTILIZER, ELECTRICAL, DRYING, EFFICIENCY.
• NOTES: FILED.
• DATE: 750800

ABSTRACT 158

• TITLE: ENERGY IN AGRICULTURE.
• AUTHOR: GREEN M B.
• SOURCE: CHEMISTRY AND INDUSTRY, AUG 1976, PP 641-646.
• KEYWORDS: AGRICULTURE, UNITED KINGDOM, ENERGY ACCOUNTING.
• NOTES: FILED. PAPER PROVIDES SOME QUANTITATIVE DATA ON ENERGY INPUTS TO THE UNITED KINGDOM'S SYSTEM OF FOOD PRODUCTION, PROCESSING, DISTRIBUTION AND PREPARATION.
• DATE: 760820

ABSTRACT 159

• TITLE: EATING OIL - ENERGY USE IN FOOD PRODUCTION.
• AUTHOR: GREEN M B.
• SOURCE: BOULDER, CO/WESTVIEW PRESS, 1978, 205 PP.
• KEYWORDS: AGRICULTURE, FOOD PROCESSING, CONSERVATION.
• NOTES: FILED.
• DATE: 780000

ABSTRACT 160

• TITLE: SOLAR ENERGY APPLICATIONS IN AGRICULTURE AND INDUSTRY.
• AUTHOR: GREYERBIEHL.
• KEYWORDS: AGRICULTURE, SOLAR.
• NOTES: FILED.
• DATE: 780828

ABSTRACT 161

• TITLE: ENERGY IN AGRICULTURE—ENERGY REQUIREMENTS AND AREAS OF ADAPTATION FOR EIGHT TILLAGE-PLANTING SYSTEMS FOR CORN.
• AUTHOR: GRIFFITH D R, MANNERING J V, RICHEY C B.
• SOURCE: J PAPER 6380, AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE, IN 47907, JUNE 1977, 8 PP.
• KEYWORDS: AGRICULTURE, TILLAGE.
• NOTES: FILED. FUEL USE, PLANT GROWTH AND GRAIN YIELD COMPARISONS ARE DISCUSSED FOR DIFFERENT TILLAGE-PLANTING SYSTEMS.
• DATE: 770600

ABSTRACT 162

• TITLE: ENERGY REQUIREMENTS FOR NEW YORK STATE AGRICULTURE.
• AUTHOR: GUNKEL W W.
• SOURCE: AGR EXTENSION BULLETIN 405, CORNELL UNIV, ITHACA, NY, NOV 1974, 48 PP.
• KEYWORDS: AGRICULTURE, REQUIREMENTS, ENERGY ACCOUNTING, ECONOMICS, NEW YORK.
• NOTES: FILED. ENGINEERING ANALYSIS OF FARM OPERATIONS, PP 20-43.
• DATE: 741100
ABSTRACT 163

TITLE: ENERGY REQUIREMENTS FOR NEW YORK STATE AGRICULTURE. PART 2
INDIRECT ENERGY INPUTS.

AUTHOR: GUNKEL W W. ET AL.

SOURCE: AGR EXT ENGR BULLETIN 406, AGR ECON EXT BULLETIN 76-24,
DEPT OF AGR ENGR AND AGR ECON, N Y STATE COL OF AGR AND LIFE SCI,
CORNELL UNIV, ITHACA, N Y, JULY 1976, 28 PP.

KEYWORDS: AGRICULTURE, NEW YORK, ENERGY CONSUMPTION.

NOTES: FILED.

DATE: 760700

ABSTRACT 164

TITLE: PRODUCTIVE AGRICULTURE AND A QUALITY ENVIRONMENT.

AUTHOR: GUNSAULUS I C, BERTRAND A R, CARLSON A E, DAGLEY S.

SOURCE: NAS, DIV OF BIOLOGY AND AGR, COMMITTEE ON AGR AND THE
ENVIR, WASHINGTON DC, 1974, 189PP.

KEYWORDS: AGRICULTURE, CROP PROTECTION, FERTILIZER, ANIMAL WASTE,
ENVIRONMENT, ELECTRICAL, ENERGY ACCOUNTING.

NOTES: FILED.

DATE: 740900

ABSTRACT 165

TITLE: ENERGY UTILIZATION ON SELECTED MICHIGAN FARMS.

AUTHOR: HALL F W, MADDEX R, BAKKER-ARKEPA F W.

SOURCE: ASAE PAPER 75-3017, 1975, 23 PP.

KEYWORDS: AGRICULTURE, MICHIGAN, ENERGY ACCOUNTING.

NOTES: FILED.

DATE: 750900

ABSTRACT 166

TITLE: ELECTRIC POWER AND PROCESSING - A HISTORY OF CONTRIBUTIONS-CHALLENGES
OF THE FUTURE.

AUTHOR: HALL C W.

SOURCE: ASAE PAPER 76-3001, 1976, 6 PP.

KEYWORDS: AGRICULTURE, ELECTRICAL.

NOTES: FILED.

DATE: 760600

ABSTRACT 167

TITLE: ENERGY AND AGRICULTURAL ENGINEERING.

AUTHOR: HALL C W.


KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, ENERGY RATIO.

NOTES: FILED.

DATE: 760500

ABSTRACT 168

TITLE: THE DOLLAR, ENERGY AND EMPLOYMENT COSTS OF PROTEIN CONSUMPTION.

AUTHOR: HANNON B R, HARRINGTON C, HOWELL R W, KIRKPATRICK K.

SOURCE: CAC 182, CENTER FOR ADVANCED COMPUTATION, UNIV OF ILLINOIS,
URBANA, ILL BIEU, JUL 1976, 81 PP.

KEYWORDS: AGRICULTURE, ENERGY FLOW, ECONOMICS.

NOTES: FILED.

DATE: 760700

ABSTRACT 169

TITLE: AGRICULTURAL NEEDS FOR ENERGY.

AUTHOR: HANSEN E H.

SOURCE: APPENDIX I, MINUTES OF AGR MARKETING AND RELATED INDUSTRIES,
ECOP, 24-26 OCT 1973, 11 PP.

KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION.

NOTES: FILED.

DATE: 731024

ABSTRACT 170

TITLE: AGRICULTURAL PRODUCTION AND ENERGY RESOURCES.

AUTHOR: HEICHEM G M.

SOURCE: AMERICAN SCIENTIST, 64/64-72, JAN-FEB 1976.

KEYWORDS: AGRICULTURE, PRODUCTION, ENERGY SOURCES.

NOTES: FILED.

DATE: 760100
*TITLE: COMPARATIVE EFFICIENCY OF ENERGY USE IN CROP PRODUCTION.*
*AUTHOR: HEICHEL G M.*
*SOURCE: BULLETIN 759, CONN AGR EXPT STA, NEW HAVEN, CT. NOV 1973, PP 3-26.*
*KEYWORDS: AGRICULTURE, CULTURAL ENERGY.*
*NOTE: FILED.*
*DATE: 731103*

**ABSTRACT 172**

*TITLE: ENERGY NEEDS AND FOOD YIELDS.*
*AUTHOR: HEICHEL G M.*
*SOURCE: TECHNOLOGY REVIEW, 76(8)/2-9, JULY-AUG 1974.*
*KEYWORDS: AGRICULTURE, CULTURAL ENERGY, PHOTOSYNTHESIS.*
*NOTE: FILED.*
*DATE: 740700*

**ABSTRACT 175**

*TITLE: ENERGY USE AND CROP PRODUCTION.*
*AUTHOR: HEICHEL G M.*
*SOURCE: AAAS ANNUAL MEETING, 26-31 JAN 1975, NEW YORK, 14 PP.*
*KEYWORDS: AGRICULTURE, TILLAGE, FERTILIZER.*
*NOTE: FILED.*
*DATE: 750130*

**ABSTRACT 174**

*TITLE: ANTICIPATING THE ENERGY NEEDS OF AMERICAN AGRICULTURE.*
*AUTHOR: HEICHEL G M, FRINK C R.*
*SOURCE: J OF SOIL AND WATER CONSERVATION, 30(1)/48, 53, JAN-FEB 1975.*
*KEYWORDS: AGRICULTURE, CULTURAL ENERGY, SOLAR.*
*NOTE: FILED.*
*DATE: 750100*

**ABSTRACT 176**

*TITLE: ENERGY ANALYSIS OF FORAGE PRODUCTION.*
*AUTHOR: HEICHEL G.*
*KEYWORDS: AGRICULTURE, ENERGETICS.*
*NOTE: FILED.*
*DATE: 771024*

**ABSTRACT 177**

*TITLE: THE ENERGY CRISIS AND THE EFFICIENCY OF TRACTORS AND FARMING MACHINERY.*
*AUTHOR: HEREDIA E A.*
*KEYWORDS: AGRICULTURE, TRACTOR, PETROLEUM.*
*NOTE: FILED, ENGLISH.*
*DATE: 750606*

**ABSTRACT 178**

*TITLE: ASSESSING ENERGY EFFICIENCIES IN AUGER CONVEYORS.*
*AUTHOR: HERUM F L, ROSS I S.*
*SOURCE: ASAE PAPER 75-3016, 10 PP.*
*KEYWORDS: AGRICULTURE, MECHANIZATION, REQUIREMENTS.*
*NOTE: FILED.*
*DATE: 750000*

**ABSTRACT 179**

*TITLE: LIMITATIONS OF THE ENERGY APPROACH IN DEFINING PRIORITIES IN AGRICULTURE.*
*AUTHOR: HILL S B, RAMSAY J A.*
*SOURCE: PAPER PRESENTED AT ENERGY AND AGR CONF, CBNS, WASHINGTON UNIV, ST LOUIS, MO, 16-19 JUNE 1976, 18PP.*
*KEYWORDS: AGRICULTURE, SOCIAL IMPLICATIONS, POLICY.*
*NOTE: FILED.*
*DATE: 760616*
ABSTRACT 179
*TITLE: ENERGY ASPECTS OF WORLD FOOD PROBLEMS.
*AUTHOR: MINNIN G. BUTCHER W. LEOPOLD A C.
*SOURCE: ENERGY COMMISSION OF THE INST OF ECOLOGY, FOUNDERS CONF, MORGANTOWN, WV, 16-19 APRIL 1975, 23 PP.
*KEYWORDS: AGRICULTURE.
*NOTES: FILED.
*DATE: 750416

ABSTRACT 180
*TITLE: FOOD RELATED ENERGY REQUIREMENTS.
*AUTHOR: HIRST E.
*KEYWORDS: AGRICULTURE, FOOD PROCESSING, FOOD ENERGY.
*NOTES: FILED.
*DATE: 740412

ABSTRACT 181
*TITLE: MATERIAL - ENERGY REQUIREMENTS AND PRODUCTION COSTS FOR ALTERNATE DAIRY FARMING SYSTEMS.
*AUTHOR: HOLTMAN J B, CONNOR L J, LUCAS R E, WOLAK F J.
*SOURCE: FCRC SCIENTIFIC REPORT 352, AGR EXPT STA, MICH STATE UNIV, EAST LANSING, APRIL 1977, 8 PP.
*KEYWORDS: AGRICULTURE, DAIRY, MODELS, ACCOUNTING.
*NOTES: FILED.
*DATE: 770500

ABSTRACT 182
*TITLE: AGRICULTURAL ENERGY, GETTING YOUR FUEL TANKS IN PERSPECTIVE.
*AUTHOR: MEDD M.
*KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION.
*NOTES: FILED.
*DATE: 750500

ABSTRACT 183
*TITLE: A SOLAR GREENBED FOR AGRICULTURAL APPLICATIONS.
*AUTHOR: HORAK P.
*KEYWORDS: AGRICULTURE, SOLAR.
*NOTES: FILED.
*DATE: 780828

ABSTRACT 184
*TITLE: ENERGY IN AGRICULTURE--DRYING ENERGY FROM CORN COBS.
*AUTHOR: MURFIELD B, DOSTER D M, PEARL R M.
*SOURCE: NYS/ERA-770129, AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE, IN 47907.
*KEYWORDS: AGRICULTURE, BIOMASS, DRYING.
*NOTES: FILED.
*DATE: 770600

ABSTRACT 185
*TITLE: THE ENERGY SITUATION - CURRENT CRUNCH, COMING CRISIS, AND CONVULSIVE CATASTROPHE, OR CARELESS CRUNCH, CORRECTABLE CRISIS, AND COUNTERFEIT CATASTROPHE.
*AUTHOR: HOYT J S. ET AL.
*SOURCE: REPORT OF THE EXTENSION AD HOC ENERGY COMMITTEE, AGR EXTENSION SERVICE, UNIV OF MINN, 75 NOV 1973, 40 PP.
*KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, POLICY, HOME.
*NOTES: FILED.
*DATE: 731015
ABSTRACT 194

TITLE: THE CYCLES OF PLANT AND ANIMAL NUTRITION.
AUTHOR: JANICK J, NOLLER C H, RHYKERD C L.
SOURCE: SCIENTIFIC AMERI. 235(3)/75-87, SEPT 1976.
KEYWORDS: AGRICULTURE, NITROGEN, ORGANIC.
NOTE: FILED.
DATE: 760900

ABSTRACT 195

TITLE: ENERGY CONSERVATION IN AMISH AGRICULTURE.
AUTHOR: JOHNSON W A, STOLTZFUS Y, CRAUMER P.
KEYWORDS: AGRICULTURE, CONSERVATION.
NOTE: FILED.
DATE: 771128

ABSTRACT 196

TITLE: ENERGY CONSIDERATIONS IN CROP PROTECTION.
AUTHOR: JONES O.
SOURCE: OUTLOOK ON AGRICULTURE, 8(3)/141-147, 1974.
KEYWORDS: AGRICULTURE, CHEMICALS, CROP PROTECTION.
NOTE: FILED.
DATE: 740900

ABSTRACT 197

TITLE: THE POLITICAL ECONOMY OF FOOD AND ENERGY.
AUTHOR: JUNKER L.
SOURCE: MICH BUSINESS PAPERS 62, GRADUATE SCHOOL OF BUSINESS ADMINISTRATION, UNIV OF MICH, ANN ARBOR, MI, 1977, 137 PP.
KEYWORDS: AGRICULTURE, ECONOMICS, SUPPLY DEMAND.
NOTE: FILED.
DATE: 770700

ABSTRACT 198

TITLE: ENERGY CONSERVATION IN AGRICULTURE - A REPORT OF PROGRESS.
AUTHOR: KANSAS STATE UNIVERSITY.
SOURCE: COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, KS, 10 OCT 1975, 22 PP.
KEYWORDS: AGRICULTURE, CONSERVATION.
NOTE: FILED.
DATE: 751010

ABSTRACT 199

TITLE: ENERGY MANAGEMENT RESEARCH.
AUTHOR: KEENER H M, ROLLER W L.
SOURCE: DEPT OF AGR ENGR, OHIO STATE UNIV, WOOSTER, OH 44691, 19 OCT 1976, 14 PP.
KEYWORDS: AGRICULTURE.
NOTE: FILED.
DATE: 761019

ABSTRACT 200

TITLE: ENERGY CONSERVATION PROGRAM DESCRIPTION FOR AGRICULTURE AND FOOD PROCESS EFFICIENCY BRANCH.
AUTHOR: KELSO L.
SOURCE: US DEPT OF ENERGY, OFFICE OF CONSERVATION AND SOLAR APPLICATIONS, WASHINGTON DC 20545, JUNE 1976, 77 PP.
KEYWORDS: AGRICULTURE, FOOD PROCESSING, CONSERVATION.
NOTE: FILED.
DATE: 760710
ABSTRACT 201
*TITLE: THE FUEL/FOOD CONNECTION.
*AUTHOR: KENDRICK J D.
*SOURCE: CALIFORNIA AGRICULTURE, 30(1)/2, JAN 1976.
*KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, FOOD ENERGY.
*NOTES, FILED.
*DATE: 760100

ABSTRACT 202
*TITLE: SYSTEMS MODEL OF FORAGE TRANSPORT AND HANDLING.
*AUTHOR: KJELGAARD V L, QUADE M L.
*KEYWORDS: AGRICULTURE.
*NOTES, FILED.
*DATE: 750000

ABSTRACT 203
*TITLE: ENERGY AND TIME NEEDS IN FORAGE SYSTEMS.
*AUTHOR: KJELGAARD U, QUADE M.
*KEYWORDS: AGRICULTURE, DRYING.
*NOTES: FILED.
*DATE: 770000

ABSTRACT 204
*AUTHOR: KLEIS R W, ET AL.
*SOURCE: GPAC 82 AGR EXPT STA, UNIV OF NEBR, LINCOLN, NE, 1976; 26 PP.
*KEYWORDS: AGRICULTURE, TECHNOLOGY ASSESSMENT.
*NOTES: FILED.
*DATE: 760000

ABSTRACT 205
*TITLE: ENERGY CONSUMED IN HARVESTING AND ENERGY LOST IN HARVESTING.
*AUTHOR: KLINE R D, KEENER M M.
*SOURCE: DARDC, WOOSTER, OH 44691, OCT 1974; 6 PP.
*KEYWORDS: AGRICULTURE, HARVESTING, REQUIREMENTS.
*NOTES: FILED.
*DATE: 740000

ABSTRACT 206
*TITLE: ANALYSIS OF THE NATIONAL ENERGY PLAN - THE EFFECTS ON TEXAS AGRICULTURE.
*AUTHOR: KHUTSON R D, ET AL.
*SOURCE: MP-1331, TEXAS AGR EXPT STA, COLLEGE STATION, TX, JUNE 1977; 76 PP.
*KEYWORDS: AGRICULTURE, TEXAS, IRRIGATION, ANIMAL PRODUCTION, ENERGY CONSUMPTION, POLICY.
*NOTES: FILED.
*DATE: 770600

ABSTRACT 207
*TITLE: ENERGY ECONOMICS OF ALFALFA JUICE PROTEIN.
*AUTHOR: KOESEL R G, BRUMH H D.
*KEYWORDS: AGRICULTURE, ENERGY ACCOUNTING.
*NOTES: FILED.
*DATE: 780800

ABSTRACT 208
*TITLE: ENERGY AND AGRICULTURE.
*AUTHOR: KOENIG H E, CONNOR L J, STOUT B A.
*SOURCE: PAPER PRESENTED AT 1976 SUMMER WORKSHOP ON ENERGY EXTENSION SERVICE, LAWRENCE LAB, UNIV OF CALIF, BERKELEY, CA, 18-25 JULY 1976, 27PP.
*KEYWORDS: AGRICULTURE, ENERGY SOURCES, CONSERVATION.
*NOTES: FILED.
*DATE: 760718
ABSTRACT 210

*TITLE* | ENERGY REQUIREMENTS IN INTENSIVE AGRICULTURAL PRODUCTION.
*AUTHOR* | KULSHRESTHA S P.
*KEYWORDS* | AGRICULTURE, ENERGY ACCOUNTING, TILLAGE, REQUIREMENTS, MECHANIZATION.
*NOTES* | DESCRIBES FOUR EXPERIMENTS WITH VARIOUS LEVELS OF MECHANIZATION.
*DATE* | 730000

ABSTRACT 211

*TITLE* | ENERGY USES IN NEBRASKA AGRICULTURE.
*AUTHOR* | LANE D E, FISCHBACH P E, TETER N C.
*SOURCES* | EXTENSION BULLETIN CC 259, UNIV OF NEBR, LINCOLN, NE, NOV 1973, 35PP.
*KEYWORDS* | AGRICULTURE, ENERGY ACCOUNTING, TILLAGE, REQUIREMENTS, LOAD SPEED, OPERATING PROCEDURE, IRRIGATION, DRYING, NEBRASKA.
*NOTES* | FILED.
*DATE* | 731100

ABSTRACT 212

*TITLE* | DE ENERGIEHUISHOUING IN DE NEIDERLANDSE LONDBOUW.
*AUTHOR* | LAPIERRE J M.
*SOURCES* | PUBLICATION 12, INST VOOR MECHANISATIE, ARBEID EN GEBROUWEN, IMAG, WAGENINGEN, DEC 1974.
*KEYWORDS* | AGRICULTURE, NETHERLANDS, ENERGY ACCOUNTING.
*NOTES* | ENGLISH SUMMARY-TO GAIN INSIGHT INTO INPUT/OUTPUT FOR AGR, 1950-1970 ENERGY FROM SUN FOR AGR. DECREASED 4.5 PERCENT HUMAN LABOR DECREASED 60.0 PERCENT NUMBER OF MORGES DECREASED 83.0 PERCENT TRACTORS AND IMPLEMENTS INCREASED 300.0 PERCENT (DIRECT) 800.0 PERCENT ELECTRICITY INCREASED 255.0 PERCENT HEATING INCREASED 500.0 PERCENT GLASSHOUSES DOUBL. HERBI. AND PESTICIDE USE INCREASED 60.0 PERCENT CATTLE FOOD EXCREASED 1200.0 PERCENT 29 TABLES.
*DATE* | 741200

ABSTRACT 213

*TITLE* | EFFICIENT USE OF ENERGY IN STABLE-CLIMATIZATION BY MEANS OF CONTROL SYSTEMS AND HEAT RECOVERY EQUIPMENT.
*AUTHOR* | LAPIERRE J M, GOEDSCHEL VS, TUEMLINKY G.
*KEYWORDS* | AGRICULTURE, BUILDINGS, AIR CONDITIONING.
*NOTES* | FILED.
*DATE* | 771024

ABSTRACT 214

*TITLE* | THE FUEL COST OF FOOD.
*AUTHOR* | LASLEY F A.
*SOURCES* | MARKETING AND TRANSPORTATION SITUATION, 192/14-19, FEB 1974.
*KEYWORDS* | AGRICULTURE, ENERGY CONSUMPTION.
*NOTES* | FILED.
*DATE* | 740200
ABSTRACT 215

• TITLE: ENERGY AND FOOD PRODUCTION.
• AUTHOR: LEACH G.
• SOURCE: INTERNATIONAL INST FOR ENVIR AND DEV., LONDON, JUNE 1975, 151 PP.
• KEYWORDS: AGRICULTURE, ENERGY RATIO, DEVELOPING COUNTRIES, ENERGETICS, UNITED KINGDOM, ORGANIC, METHANE, ENERGY ACCOUNTING, FERTILIZER, MECHANIZATION, ANIMAL, DRYING, TRANSPORTATION, ENERGY BUDGET.
• NOTES: FILED.
• DATE: 750600

ABSTRACT 216

• TITLE: FROM STONE AGE TO SUPERMARKET-ENERGY AND FOOD PRODUCTION.
• AUTHOR: LEACH G.
• KEYWORDS: AGRICULTURE, ENERGY RATIO, UNITED KINGDOM, WORLD WIDE, ENERGY SUBSIDY.
• NOTES: FILED.
• DATE: 751100

ABSTRACT 217

• TITLE: NO SIMPLE ANSWER TO THE ENERGY SUPPLY PROBLEM.
• AUTHOR: LEACH G.
• KEYWORDS: AGRICULTURE.
• NOTES: FILED.
• DATE: 740200

ABSTRACT 218

• TITLE: ENERGY AND FOOD PRODUCTION.
• AUTHOR: LEACH G.
• SOURCE: FOOD POLICY, 11(1)/62-73, NOV 1975.
• KEYWORDS: AGRICULTURE, SUPPLY DEMAND, UNITED KINGDOM, FOOD ENERGY.
• NOTES: FILED.

FOOD PRODUCTION IN THE INDUSTRIALIZED COUNTRIES IS HEAVILY DEPENDENT ON INPUTS OF ENERGY FROM FOSSIL FUELS. THIS ARTICLE ANALYZES THESE INPUTS WITH PARTICULAR ATTENTION TO THE UNITED KINGDOM. PRESENTED IS A WIDE RANGE OF DATA ON THE TOTAL ENERGY USED AND HOW THIS RELATES TO FACTORS SUCH AS OUTPUTS, LABOR, AND LAND. EMPHASIZED IS THE IMPORTANCE OF LOW ENERGY ALTERNATIVES FOR THIRD WORLD COUNTRIES.
• DATE: 751100

ABSTRACT 219

• TITLE: ENERGY INTENSIVENESS OF WASHINGTON AGRICULTURE AND THE EFFECTS OF INCREASES IN ENERGY PRICES ON WASHINGTON AGRICULTURE.
• AUTHOR: LEHOCZKY L.
• SOURCE: FOR PRESENTATION AT THE CONF ON ENERGY AND AGR., ST LOUIS, MO, JUNE 1976, 17 PP.
• KEYWORDS: AGRICULTURE, ECONOMICS, WASHINGTON, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 750600

ABSTRACT 220

• TITLE: ITS A MATTER OF ENERGY TRANSFORMATION EFFICIENCY.
• AUTHOR: LEHOCZKY L.
• KEYWORDS: AGRICULTURE, EFFICIENCY, CONVERSION.
• NOTES: FILED.
• DATE: 780107

ABSTRACT 221

• TITLE: DIRECT ECONOMIC EFFECTS OF INCREASED ENERGY PRICES ON CORN AND SOYBEAN PRODUCTION ON CASH GRAIN FARMS IN SOUTHWESTERN MICHIGAN.
• AUTHOR: LEHRMAN J A, BLACK R J, CONNOR L J.
• SOURCE: AGRICULTURAL ECONOMICS REPORT 310, DEPT OF AGR ECON., MICH. STATE UNIV., EAST LANSING, SEPT 1976, 30 PP.
• KEYWORDS: AGRICULTURE, ECONOMICS, MICHIGAN.
• NOTES: FILED.
• DATE: 760900
ABSTRACT 222

• TITLE: ENERGY - A CHALLENGE AND AN OPPORTUNITY FOR AGRICULTURE.
• AUTHOR: LEPORI W A, LACEWELL R D.
• KEYWORDS: AGRICULTURE.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 223

• TITLE: CONCERNS AND ACTIONS ON FOOD PRODUCTION AND ENERGY USE.
• AUTHOR: LITTON J.
• SOURCE: FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, WASHINGTON D C, 20 AUG 1975, 11 PP.
• KEYWORDS: AGRICULTURE, FOOD PROCESSING.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 224

• TITLE: A COMPARISON OF THE PRODUCTION, ECONOMIC RETURNS, AND ENERGY-INTENSIVENESS OF CORN BELT FARMS THAT DO AND DO NOT USE INORGANIC FERTILIZERS AND PESTICIDES.
• AUTHOR: LOCKERETZ W, ET AL.
• KEYWORDS: AGRICULTURE, FERTILIZER, CHEMICALS.
• NOTES: FILED. SEE OTHER DOCUMENTS IN THIS SERIES.
• DATE: 750000

ABSTRACT 225

• TITLE: AGRICULTURAL RESOURCES CONSUMED IN BEEF PRODUCTION.
• AUTHOR: LOCKERETZ W, ET AL.
• KEYWORDS: AGRICULTURE, ANIMAL, FERTILIZER, LAND USE.
• NOTES: FILED. SEE OTHER DOCUMENTS IN THIS SERIES.
• DATE: 750000

ABSTRACT 226

• TITLE: THE EFFECT OF RECENT ENERGY PRICE INCREASES ON FIELD CROP PRODUCTION COSTS.
• AUTHOR: LOCKERETZ W, COMMONER B, GERTLER M, KLEPPER R.
• KEYWORDS: AGRICULTURE, ECONOMICS, FERTILIZER, CHEMICALS, MECHANIZATION, DRYING, IRRIGATION, TRANSPORTATION.
• NOTES: FILED. IN ALMOST ALL CASES, THE PRICE RECEIVED FOR THE CROP HAS RISEN MORE RAPIDLY THAN THE COST OF ENERGY INPUTS (1970-74), SEE OTHER DOCUMENTS IN THIS SERIES BY LOCKERETZ.
• DATE: 741200

ABSTRACT 227

• TITLE: ORGANIC AND CONVENTIONAL CROP PRODUCTION IN THE CORN BELT - A COMPARISON OF ECONOMIC PERFORMANCE AND ENERGY USE FOR SELECTED FARMS.
• AUTHOR: LOCKERETZ W, KLEPPER R, COMMONER B, GERTLER M, FIST S, O LEARY D.
• SOURCE: CBNS-AE-5, WASHINGTON UNIV, ST LOUIS, MO, JUNE 1976, 42 PP.
• KEYWORDS: AGRICULTURE, ORGANIC, PRODUCTION, ECONOMICS.
• NOTES: FILED.
• DATE: 760000

ABSTRACT 228

• TITLE: ENERGY IN CORN BELT CROP PRODUCTION.
• AUTHOR: LOCKERETZ W, ET AL.
• KEYWORDS: AGRICULTURE, ECONOMICS, ENERGY ACCOUNTING, MECHANIZATION, FERTILIZER, CHEMICALS, DRYING.
• NOTES: FILED. SEE OTHER DOCUMENTS IN THIS SERIES.
• DATE: 750000

ABSTRACT 229

• TITLE: THE VULNERABILITY OF CROP PRODUCTION SYSTEMS TO ENERGY PROBLEMS.
• AUTHOR: LOCKERETZ W, GERTLER M, KLEPPER R, COMMONER B.
• KEYWORDS: AGRICULTURE, ECONOMICS, ALTERNATIVES, CONSERVATION.
• NOTES: FILED. SEE OTHER DOCUMENTS IN THIS SERIES.
• DATE: 750000
ABSTRACT 230

**TITLE:** FIELD CROP PRODUCTION ON ORGANIC FARMS IN THE MIDWEST.
**AUTHOR:** LOCKERETZ W, SHEARER G, KLEPPER R, SWEENEY S.
**SOURCE:** J OF SOIL AND WATER CONSERVATION, 35(3)/130-134, MAY 1978.
**KEYWORDS:** AGRICULTURE, PRODUCTION.
**NOTES:** FILED.
**DATE:** 780500

ABSTRACT 231

**TITLE:** AGRICULTURE AND ENERGY.
**AUTHOR:** LOCKERETZ W.
**SOURCE:** NEW YORK, NY 10003/ACADEMIC PRESS, INC. 1977, 750 PP.
**KEYWORDS:** AGRICULTURE, TILLAGE, ANIMAL, FERTILIZER, IRRIGATION, DEVELOPING COUNTRIES, POLICY, DRYING, ECONOMICS.
**NOTES:** FILED.
**DATE:** 770000

ABSTRACT 232

**TITLE:** SIMULATION OF AN ENERGY-FOOD HOUSING SYSTEM.
**AUTHOR:** LOEWER D J, COLLIVER D G, DUNCAN G A, MYNEAR D K, CICKRAN W J.
**SOURCE:** ASAE PAPER 75-4507.
**KEYWORDS:** AGRICULTURE, FOSSIL FUELS, GREENHOUSE, SOLAR, ORGANIC.
**NOTES:** FILED.
**DATE:** 750000

ABSTRACT 233

**TITLE:** TECHNOLOGICAL ALTERNATIVES.
**AUTHOR:** MACKILLOP A.
**SOURCE:** NEW SCIENTIST, 22 NOV 1973, PP 549-551.
**KEYWORDS:** AGRICULTURE, ALTERNATIVES, SOCIAL IMPLICATIONS.
**NOTES:** FILED.
**DATE:** 731122

ABSTRACT 234

**TITLE:** MODELING WHEEL TRACTOR ENERGY REQUIREMENTS AND TRACTIVE PERFORMANCES.
**AUTHOR:** MACNAB J E, WENSINK R B, BOOSTER D E.
**SOURCE:** ASAE PAPER 76-1039, 1976; 16 PP.
**KEYWORDS:** AGRICULTURE, MODELS, TRACTOR.
**NOTES:** FILED.
**DATE:** 760600

ABSTRACT 235

**TITLE:** HIGH MOISTURE CORN --- STORAGE REQUIREMENTS --- CONVERSION FACTORS
**AUTHOR:** MADDEX R L.
**SOURCE:** FACTS & AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, DEC 1973, 2 PP.
**KEYWORDS:** AGRICULTURE, STORAGE, CONVERSION.
**NOTES:** FILED.
**DATE:** 731200

ABSTRACT 236

**TITLE:** A LARGE SCALE NORTHERN CLIMATE SOLAR GARDEN.
**AUTHOR:** MAES R E.
**SOURCE:** PROC OF THE 1978 ANNUAL MEETING OF THE AMER SECTION OF THE INTERNATIONAL SOLAR ENERGY SOC, VOL 2, 1, DENVER, CO, 28-31 AUG 1978, 7 PP.
**KEYWORDS:** AGRICULTURE, SOLAR.
**NOTES:** FILED.
**DATE:** 780828

ABSTRACT 237

**TITLE:** ENERGY AND AGRICULTURE IN THE THIRD WORLD.
**AUTHOR:** MAKNIJANI A.
**SOURCE:** CAMBRIDGE, MA/GALLINGER PUBL CO, 1975, 160 PP.
**KEYWORDS:** AGRICULTURE, PRODUCTION, DEVELOPING COUNTRIES, MECHANIZATION, IRRIGATION, LABOR, ANIMAL, WOOD, MANURE, FERTILIZER.
**NOTES:** FILED.
**DATE:** 750000
ABSTRACT 238

- **TITLE:** ENERGY AND US AGRICULTURE - 1974 DATA BASE - VOL 1.
- **AUTHOR:** MARLAY R, ET AL.
- **SOURCE:** FEA/RD-76/459, STOCK NO 041-018-00128-0, US GOVT PRINTING OFFICE, WASHINGTON D C 20402, SEPT 1976; 260 PP.
- **KEYWORDS:** AGRICULTURE, USA, STATISTICS.
- **DATE:** 760900

ABSTRACT 239

- **TITLE:** ENERGY AND US AGRICULTURE - 1974 DATA BASE.
- **AUTHOR:** MARLAY R, ET AL.
- **SOURCE:** STOCK NO 041-018-00136-1, US DEPT OF AGR ECON RESEARCH SERVICE, FEDERAL ENERGY ADMINISTRATION, US GOVT PRINTING OFFICE, WASHINGTON DC 20405, APRIL 1977; 182 PP.
- **KEYWORDS:** AGRICULTURE, ENERGY CONSUMPTION, STATISTICS.
- **DATE:** 770400

ABSTRACT 240

- **TITLE:** ENERGY CONSUMPTION IN AGRICULTURAL FIELD WORK.
- **AUTHOR:** MATTHEWS J.
- **SOURCE:** SPAN 16/11/25-26, 1975.
- **KEYWORDS:** AGRICULTURE, FUEL CONSUMPTION, CONSERVATION.
- **DATE:** 750000

ABSTRACT 241

- **TITLE:** A NEW LOOK AT ENERGY SOURCES.
- **AUTHOR:** MCCLOUD D E, ET AL.
- **SOURCE:** SPECIAL PUBL 22, AMER SOC OF AGRON, MADISON, WI, 1974; 50 PP.
- **KEYWORDS:** AGRICULTURE, PETROLEUM, FOSSIL FUELS, ORGANIC.
- **DATE:** 740000

ABSTRACT 242

- **TITLE:** SOLAR DRYING OF CROPS AND FOODS IN HUMID TROPICAL CLIMATES.
- **AUTHOR:** MCDOWELL J.
- **SOURCE:** THE CARIBBEAN FOOD AND NUTRITION INST, JAMAICA CENTRE/TRINIDAD CENTRE, 1973; 42 PP.
- **KEYWORDS:** AGRICULTURE, SOLAR, DRYING.
- **DATE:** 730000

ABSTRACT 243

- **TITLE:** THE PROCEEDINGS OF ENERGY - KEY TO FOOD PRODUCTION.
- **AUTHOR:** MCFATE K L.
- **SOURCE:** A NATIONAL SYMPOSIUM ON ELECTRICAL ENERGY FOR THE FOOD CHAIN, SPONSORED BY THE FARM ELECTRIFICATION COUNCIL, INC. IN COOPERATION WITH EDISON ELECTRIC INST NATIONAL RURAL ELECTRIC COOPERATIVE ASSN, ST LOUIS, MISSOURI, 15-16 SEPT 1976; 128 PP.
- **KEYWORDS:** AGRICULTURE, IOWA, ENERGY BUDGET, NUCLEAR, FOSSIL FUELS, FERTILIZER, SOLAR, WIND.
- **DATE:** 760916

ABSTRACT 244

- **TITLE:** LP GAS - THE SUPPLY FOR THIS YEARS HARVEST.
- **AUTHOR:** MCKENZIE B A, DOERING D C.
- **SOURCE:** AGR ENGR JULY 1973; PP 12-13.
- **KEYWORDS:** AGRICULTURE, SUPPLY DEMAND, LPGAS, INDIANA.
- **DATE:** 730700
ABSTRACT 245
TITLE: ENERGY RESOURCES AND AGRICULTURE.
AUTHOR: MCKINSEY J W.
SOURCE: SPECIAL REPORT 174, DEPT OF AGR ECON, UNIV OF MISSOURI,
COLUMBIA, MO, JUNE 1975, 39 PP.
KEYWORDS: AGRICULTURE, HISTORICAL ENERGY SOURCES.
NOTES: FILED.
DATE: 750600

ABSTRACT 246
TITLE: RADICAL AGRICULTURE.
AUTHOR: HERRILL R.
SOURCE: NEW YORK/HARPER AND ROW INC, 1976, 459 PP.
KEYWORDS: AGRICULTURE, LAND USE, CULTURAL ENERGY, FOOD ENERGY.
NOTES: FILED.
DATE: 760000

ABSTRACT 247
TITLE: BEEF FEEDLOT DESIGN AND MANAGEMENT-A PROGRAM REPORT.
AUTHOR: MICHIGAN STATE UNIVERSITY.
SOURCE: STAFF PAPER 73-34, DEPT OF AGR ECON, MICH STATE UNIV, EAST
LANSING, MI 48824, SEPT 1973, 19PP.
KEYWORDS: AGRICULTURE, ANIMAL, ECONOMICS.
NOTES: FILED.
DATE: 730900

ABSTRACT 248
TITLE: ENERGY SAVINGS THROUGH ALTERNATIVE FUEL UTILIZATION IN DESERT
AGRICULTURE.
AUTHOR: MILES J A.
SOURCE: ASAE PAPER 75-1004, 16 PP.
KEYWORDS: AGRICULTURE, REQUIREMENTS, CULTURAL ENERGY, ARIZONA.
NOTES: FILED.
DATE: 750000

ABSTRACT 249
AUTHOR: MINNESOTA ENERGY AGENCY.
SOURCE: MINN ENERGY AGENCY, RESEARCH DIV, OCT 1975, 29 PP.
KEYWORDS: AGRICULTURE, LP GAS, DIESEL, ELECTRICAL.
NOTES: FILED.
DATE: 751000

ABSTRACT 250
TITLE: PRELIMINARY THOUGHTS ON THE PROPOSED STUDY OF ENERGY
RESOURCE USE IN SMALL-HOLDER AGRICULTURE.
AUTHOR: PUCHIRI G.
SOURCE: DEPT OF AGR MECHANIZATION AND FARM PLANNING,
UNIV OF NAIROBI, KENYA.
KEYWORDS: AGRICULTURE, ENERGY SOURCES, MODELS, KENYA.
NOTES: FILED.
DATE: 751000

ABSTRACT 251
TITLE: NATIONAL ENERGY USE IN SWINE PRODUCTION.
AUTHOR: MUEHLING A J.
SOURCE: IN THE BOOK PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON
ENERGY USE MANAGEMENT - VOL I, FAZZOLARE R A, SMITH C B, EDITORS,
KEYWORDS: AGRICULTURE, BUILDINGS.
NOTES: FILED.
DATE: 771024
ABSTRACT 252

**TITLE**: ENERGY IN AGRICULTURE—DEVELOPING AN ENERGY INPUT-OUTPUT SIMULATOR FOR ANALYSIS OF ALTERNATIVE CROPPING SYSTEMS IN THE CORN BELT.

**AUTHOR**: MULLER R E. ET AL.

**SOURCE**: NSF/RA-770125. AGR EXPT STA. PURDUE UNIV. WEST LAFAYETTE, IN 47907. JUNE 1977. 44PP.

**KEYWORDS**: AGRICULTURE, OPERATING PROCEDURE, TECHNOLOGY ASSESSMENT.

**NOTES**: FILED.

**DATE**: 770600

ABSTRACT 253

**TITLE**: ENERGY INPUT-OUTPUT SIMULATION OF MIDWEST CROP PRODUCTION.

**AUTHOR**: HULLER R E. PEART R M. DOERING O C. PARSONS S D. DALE R F. PECKETT R C.

**SOURCE**: ASAE PAPER 78-5022, 1978. 20 PP.

**KEYWORDS**: AGRICULTURE, MODELS, ENERGY RATIO.

**NOTES**: FILED.

**DATE**: 780000

ABSTRACT 254

**TITLE**: INTEGRATED FOOD PRESERVATION CENTER.

**AUTHOR**: Maccach A F.


**KEYWORDS**: AGRICULTURE, SOLAR, FOOD PROCESSING.

**NOTES**: FILED.

**DATE**: 780828

ABSTRACT 255

**TITLE**: WEEDS—COEXISTENCE OR CONTROL.

**AUTHOR**: Nalewaja J D.


**KEYWORDS**: AGRICULTURE, CRN. PROTECTION.

**NOTES**: FILED.

**DATE**: 721000

ABSTRACT 256

**TITLE**: AGRICULTURAL PRODUCTION EFFICIENCY.

**AUTHOR**: National Academy of Science.

**SOURCE**: NAS, WASHINGTON D C. 1979. 199 PP.

**KEYWORDS**: AGRICULTURE, LAND USE, PHOTOSYNTHESIS, ANIMAL, ENERGETICS, CULTURAL ENERGY.

**NOTES**: FILED.

**DATE**: 750900

ABSTRACT 257

**TITLE**: ENERGY VS PRODUCTIVITY—DIMINISHING RETURNS.

**AUTHOR**: National Science Foundation.

**SOURCE**: MOSAIC. 6(3)/9-12. MAY/JUNE 1975.

**KEYWORDS**: AGRICULTURE, FERTILIZER, FOSSIL FUELS.

**NOTES**: FILED.

**DATE**: 750500

ABSTRACT 258

**TITLE**: A NATIONAL PROGRAM OF AGRICULTURAL ENERGY RESEARCH AND DEVELOPMENT.

**AUTHOR**: National Association of State University and Land Grant Colleges.

**SOURCE**: REPORT TO THE NATIONAL PLANNING COMMITTEE OF THE AGR POLICY ADVISORY COMMITTEE. CONDUCTED BY REP OF THE NATIONAL ASSOC OF STATE UNIV AND LAND GRANT COLLEGES AND THE USDA. SEPT 1976. 91 PP.

**KEYWORDS**: AGRICULTURE, POLICY, USA.

**NOTES**: FILED.

**DATE**: 760900
**ABSTRACT 259**

**TITLE:** PUTTING THE U.S. AGRICULTURAL ENERGY PICTURE INTO FOCUS.

**AUTHOR:** NELSON L F., BURROWS W. C.

**SOURCE:** ASAE PAPER 74-1040, 14 PP.

**KEYWORDS:** AGRICULTURE, ENERGY CONSUMPTION, USA.

**NOTES:** FILED.

**DATE:** 740000

**ABSTRACT 260**

**TITLE:** THE U.S. AGRICULTURAL ENERGY PICTURE.

**AUTHOR:** NELSON L F., BURROWS W. C.

**SOURCE:** AGR ENGR. SEPTEMBER 1974, PP. 17-19.

**KEYWORDS:** AGRICULTURE, ENERGY CONSUMPTION, USA.

**NOTES:** FILED.

**DATE:** 740000

**ABSTRACT 261**

**TITLE:** RECOGNIZING PRODUCTIVE ENERGY EFFICIENT AGRICULTURE IN THE COMPLEX U.S. FOOD SYSTEM.

**AUTHOR:** NELSON L F., BURROWS W. C., STICKLER F. C.

**SOURCE:** ASAE PAPER 75-7505, 20 PP.

**KEYWORDS:** AGRICULTURE, FOSSIL FUELS, MECHANIZATION, CULTURAL ENERGY.

**NOTES:** FILED.

**DATE:** 750000

**ABSTRACT 262**

**TITLE:** ENERGY IN AGRICULTURE--CONSERVING ENERGY WITH NITRIFICATION INHIBITORS.

**AUTHOR:** NELSON D. W., SOMMERS L. E., HUBER D. M., WARREN H. L.

**SOURCE:** JOURNAL PAPER No 6289, AGR. EXPT. STA. PURDUE UNIV., WEST LAFAYETTE, IN 47907, JUNE 1977, 8 PP.

**KEYWORDS:** AGRICULTURE, FERTILIZER, NITROGEN FIXATION.

**NOTES:** FILED.

**DATE:** 770000

**ABSTRACT 263**

**TITLE:** NEW YORK'S FOOD AND LIFE SCIENCES QUARTERLY.

**AUTHOR:** NEW YORK'S FOOD AND LIFE SCIENCE.


**KEYWORDS:** AGRICULTURE, GENERAL, GREENHOUSE, PHOTOSYNTHESIS, METHANE, ANAEROBIC FERMENTATION.

**NOTES:** FILED.

**DATE:** 780000

**ABSTRACT 264**

**TITLE:** 35TH ANNUAL PROGRESS REPORT OF THE NEW YORK STATE FOOD AND ENERGY COUNCIL.

**AUTHOR:** NEW YORK STATE FOOD AND ENERGY COUNCIL.

**SOURCE:** SUBMITTED TO THE EXECUTIVE COMMITTEE, NEW YORK STATE FOOD AND ENERGY COUNCIL, 5 MAY 1978, 87 PP.

**KEYWORDS:** AGRICULTURE, ENERGY CONSUMPTION, FRUITS AND VEGETABLES, DAIRY, SOLAR.

**NOTES:** FILED.

**DATE:** 780503

**ABSTRACT 265**

**TITLE:** REPORT OF THE ENERGY WORKING PARTY.

**AUTHOR:** O'CALLAGHAN J. R. ET AL.

**SOURCE:** REPORT NO. 1, JOINT CONSULTATIVE ORGANIZATION FOR RESEARCH AND DEVELOPMENT IN AGR AND FOODS MINISTRY OF AGR., FISHERIES AND FOOD, LONDON, DEC 1974, 28 PP.

**KEYWORDS:** AGRICULTURE, UNITED KINGDOM, ENERGY ACCOUNTING, FERTILIZER, MECHANIZATION, PETROLEUM, ALTERNATIVES.

**NOTES:** FILED.

**DATE:** 741200
ABSTRACT 266

•TITLE: ENERGY AND AGRICULTURE - SOME ECONOMIC ISSUES.
•AUTHOR: PASOUR E C, BULLOCK J B.
•SOURCE: PREPARED FOR ENERGY AND AGR CONF, WASHINGTON UNIV, ST LOUIS, 16-19 JUNE 1976, 15 PP.
•KEYWORDS: AGRICULTURE, ECONOMICS, FOOD ENERGY, USA.
•NOTES: FILED.
•DATE: 760616

ABSTRACT 267

•TITLE: ENERGY AND AGRICULTURE - FACT VS MYTH.
•AUTHOR: PASOUR E C, BULLOCK J B.
•SOURCE: PAPER 4962, JOURNAL SERIES OF THE NORTH CAROLINA AGR EXPT STA, RALEIGH, 1976, 13 PP.
•KEYWORDS: AGRICULTURE, ACCOUNTING, USA, EFFICIENCY.
•NOTES: FILED.
•DATE: 760000

ABSTRACT 268

•TITLE: ENERGY USE PATTERNS FOR AGRICULTURAL PRODUCTION IN NEW MEXICO.
•AUTHOR: PATRICK N A.
•SOURCE: PAPER PRESENTED AT ENERGY AND AGR CONF, ST LOUIS, MO, 16-19 JUNE 1976, 13 PP.
•KEYWORDS: AGRICULTURE, NEW MEXICO, MODELS, REQUIREMENTS, ENERGY CONSUMPTION.
•NOTES: FILED.
•DATE: 760616

ABSTRACT 269

•TITLE: OUTLOOK FOR FUEL.
•AUTHOR: PATTERSON R E.
•SOURCE: SOUTHERN REGIONAL AGRICULTURAL OUTLOOK WORKSHOP, 16-18 SEPT 1974, ATLANTA, GEORGIA, 8 PP.
•KEYWORDS: AGRICULTURE, SUPPLY DEMAND, ENERGY CONSUMPTION.
•NOTES: FILED.
•DATE: 740916

ABSTRACT 270

•TITLE: ENERGY, NATURAL RESOURCES AND RESEARCH IN AGRICULTURE - EFFECTS ON ECONOMIC GROWTH AND PRODUCTIVITY FOR THE UNITED STATES.
•AUTHOR: PATELLIS G A.
•SOURCE: ECON RESEARCH SERVICE, USD, WASHINGTON D C, 1 AUG 1973, 41 PP.
•KEYWORDS: AGRICULTURE, ECONOMICS, ELECTRICAL, PETROLEUM, USA.
•NOTES: FILED.
•DATE: 730801

ABSTRACT 271

•TITLE: ENERGY IN AGRICULTURE -- EVALUATING ENERGY-SAVING PRACTICES BY SIMULATION.
•AUTHOR: PEARL R M, DOERING D C.
•SOURCE: NSF/RA-77G127, AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE, IN 47907, JUNE 1977, 5PP.
•KEYWORDS: AGRICULTURE.
•NOTES: FILED. A CORN HARVEST SIMULATOR IS DISCUSSED.
•DATE: 770600

ABSTRACT 272

•TITLE: THE ENVIRONMENTAL EFFICIENCY OF AGRICULTURE.
•AUTHOR: PERELMAN M J.
•SOURCE: CBMS NOTES, WASHINGTON UNIV, ST LOUIS, MO, 6(1)/1-6, 1973.
•KEYWORDS: AGRICULTURE, PETROLEUM, FOSSIL FUELS, MECHANIZATION.
•NOTES: FILED.
•DATE: 730000

ABSTRACT 273

•TITLE: MECHANIZATION AND THE DIVISION OF LABOR IN AGRICULTURE.
•AUTHOR: PERELMAN M J.
•KEYWORDS: AGRICULTURE, MECHANIZATION, LABOR, FOSSIL FUELS, PETROLEUM.
•NOTES: FILED.
•DATE: 730800
ABSTRACT 274

•TITLE: FARMING WITH PETROLEUM.
•AUTHOR: PERELMAN M J.
•KEYWORDS: AGRICULTURE, PETROLEUM, ELECTRICAL, MECHANIZATION.
•NOTES: FILED.
•DATE: 781080

ABSTRACT 275

•TITLE: ENERGY AND FOOD - ENERGY USED ON PRODUCTION, PROCESSING, DELIVERY AND MARKETING OF SELECTED FOOD ITEMS.
•AUTHOR: PIEROTTI A, KEEGER A G, FRITSCH A J.
•SOURCE: CSPI ENERGY SERIES X: CENTER FOR SCI IN THE PUBLIC INTEREST, 1755 S STREET NW, WASHINGTON, D C 20009, 1977, 76 PP.
•KEYWORDS: AGRICULTURE, FOOD PROCESSING, ENERGY FLOW, USA, MARKETING, TRANSPORTATION.
•NOTES: FILED.
•DATE: 771000

ABSTRACT 276

•TITLE: FOOD PRODUCTION AND THE ENERGY CRISIS.
•AUTHOR: PIMENTEL D ET AL.
•KEYWORDS: AGRICULTURE, WORLD WIDE.
•NOTES: FILED.
•DATE: 731102

ABSTRACT 277

•TITLE: ENERGY AND LAND CONSTRAINTS IN FOOD PROTEIN PRODUCTION.
•AUTHOR: PIMENTEL D, DRTSCHL J, KRUMMEL J, KRUTZMAN J.
•SOURCE: SCIENCE, 190/ 754-761, 21 NOV 1975.
•KEYWORDS: AGRICULTURE, FOOD ENERGY.
•NOTES: FILED.
•DATE: 751121

ABSTRACT 278

•TITLE: FOOD AND THE ENERGY CRISIS.
•AUTHOR: PIMENTEL D.
•KEYWORDS: AGRICULTURE, MECHANIZATION, MANURE, FERTILIZER.
•NOTES: FILED.
•DATE: 731200

ABSTRACT 279

•TITLE: AGRICULTURAL PRODUCTION - RESOURCE NEEDS AND LIMITATIONS.
•AUTHOR: PIMENTEL D.
•KEYWORDS: AGRICULTURE, FOOD ENERGY, POPULATION, SOLAR, PETROLEUM.
•NOTES: FILED.
•DATE: 750317

ABSTRACT 280

•TITLE: ENERGY USE IN WORLD FOOD PRODUCTION.
•AUTHOR: PIMENTEL D.
•KEYWORDS: AGRICULTURE, INTERNATIONAL, ENERGETICS, ENERGY SOURCES.
•NOTES: FILED.
•DATE: 740711

ABSTRACT 281

•TITLE: LAND DEGRADATION - EFFECTS ON FOOD AND ENERGY RESOURCES.
•AUTHOR: PIMENTEL D ET AL.
•KEYWORDS: AGRICULTURE, LAND USE.
•NOTES: FILED.
•DATE: 760800
ABSTRACT 282

•TITLE: ENERGY USE IN CEREAL GRAIN PRODUCTION.
•AUTHOR: PIMENTEL D.
•KEYWORDS: AGRICULTURE, LABOR, LAND USE, ENERGY ACCOUNTING.
•NOTES: FILED.
•DATE: 771024

ABSTRACT 283

•TITLE: ENERGY AND AGRICULTURE - THE CRISIS IS REAL.
•AUTHOR: POLLARD B, OHM K.
•SOURCE: MICHIGAN FARMER 269(6)/4-6, 9-10, 18 MARCH 1978.
•KEYWORDS: AGRICULTURE.
•NOTES: FILED.
•DATE: 780318

ABSTRACT 284

•TITLE: ENERGY AND AGRICULTURE, PART 2 - FREEING THE FARM FROM ENERGY DEPENDENCE.
•AUTHOR: POLLARD B, OHM K.
•SOURCE: MICHIGAN FARMER 269(7)/8-10, 14-21, 1 APRIL 1978.
•KEYWORDS: AGRICULTURE, POLICY.
•NOTES: FILED.
•DATE: 780401

ABSTRACT 285

•TITLE: ENERGY AND AGRICULTURE, PART 3 - WHERE ENERGY PROBLEMS ARE HEADING.
•AUTHOR: POLLARD B, OHM K.
•SOURCE: MICHIGAN FARMER 269(8)/18-20, 15 APRIL 1978.
•KEYWORDS: AGRICULTURE, POLICY.
•NOTES: FILED.
•DATE: 780415

ABSTRACT 286

•TITLE: ENERGY AND AGRICULTURE IN MICHIGAN - ENERGY COSTS WILL RISE, BUT FARMERS MAY ESCAPE SEVERE INTERRUPTIONS OF SUPPLY.
•AUTHOR: POLLARD B, OHM K.
•SOURCE: MICHIGAN FARMER 269(8)/10-16, 15 APRIL 1978.
•KEYWORDS: AGRICULTURE, MICHIGAN, ELECTRICAL, NUCLEAR.
•NOTES: FILED.
•DATE: 780415

ABSTRACT 287

•TITLE: THE ENERGY CRISIS-ITS EFFECT ON AGRICULTURE.
•AUTHOR: PRICE U K, GUNKEL W W.
•SOURCE: PRESENTED AT THE WINTER MEETING AND TRADE SHOW OF THE NEW YORK STATE HORTICULTURAL SOC, ROCHESTER, NY, 17 JAN 1974, 6 PP.
•KEYWORDS: AGRICULTURE, PETROLEUM, ENERGY SOURCES, CONSERVATION.
•NOTES: FILED.
•DATE: 740117

ABSTRACT 288

•TITLE: FOOD AND ENERGY - THEIR INTERDEPENDENCE.
•AUTHOR: PRICE D R.
•SOURCE: CORNELL ENGR QUARTERLY, APRIL 1977, PP 59-68.
•KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, PETROLEUM, POLICY, NEW YORK.
•NOTES: FILED.
•DATE: 770400

ABSTRACT 289

•TITLE: IS ENERGY BEING WASTED IN PRODUCING FOOD.
•AUTHOR: PRICE D R.
•SOURCE: CORNELL UNIV, ITHACA NY, 13 PP, UNPUBLISHED, UNDATED.
•KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, EFFICIENCY.
•NOTES: FILED.
•DATE: 770400

ABSTRACT 290

•TITLE: ENERGY USE AND EFFICIENCY IN US AGRICULTURE, FROM THE FARM TO THE CONSUMER.
•DATE: 780500
ABSTRACT 298
*TITLE*: ENERGY AND THE FOOD CHAIN.
*AUTHOR*: ROLLER W L.
*SOURCE*: DEPT OF AGR ENGR, OARDC, WOOSTER, OH 44691; MARCH 1977; 11 PP.
*KEYWORDS*: AGRICULTURE, FOOD ENERGY, GENERAL.
*NOTES*: FILED.
*DATE*: 770500

ABSTRACT 299
*TITLE*: FARM ENERGY FUTURE.
*AUTHOR*: ROLLER W L.
*SOURCE*: PREPARED FOR ANNUAL EXTENSION CONF, 19 OCT 1976; 6 PP.
*KEYWORDS*: AGRICULTURE.
*NOTES*: FILED.
*DATE*: 761019

ABSTRACT 300
*TITLE*: FOOD PRODUCTION AND THE ENERGY CRISIS - A COMMENT.
*AUTHOR*: RUTTAN V W, PIMENTEL D.
*KEYWORDS*: AGRICULTURE, FOOD ENERGY.
*NOTES*: FILED.
*DATE*: 750214

ABSTRACT 301
*TITLE*: AN ECONOMIC ANALYSIS OF IRRIGATED FARMING WITH DIMINISHING GROUND WATER RESERVES.
*AUTHOR*: SANGHVI A K, KLEPPER R.
*SOURCE*: CBNS-AE-8, WASHINGTON UNIV, ST LOUIS; MAY 1976; 50 PP.
*KEYWORDS*: AGRICULTURE, ECONOMICS, IRRIGATION.
*NOTES*: FILED.
*DATE*: 760500

ABSTRACT 302
*TITLE*: A GUIDE TO ENERGY SAVINGS--FOR THE ORCHARD GROWER.
*AUTHOR*: SCHIENBEIN A.
*SOURCE*: FEA, OFFICE OF COMMUNICATIONS, PUBL DIV, US DEPT OF AGR, WASHINGTON DC 20250; JUNE 1977; 49PP.
*KEYWORDS*: AGRICULTURE, FRUITS AND VEGETABLES, ENERGY CONSUMPTION, CONSERVATION.
*NOTES*: FILED.
*DATE*: 770600

ABSTRACT 303
*TITLE*: ENERGY AND US AGRICULTURE - A STATEWIDE CONSERVATION PROGRAM ON KANSAS AND NEBRASKA FARMS.
*AUTHOR*: SHELTON D P, ET AL.
*SOURCE*: MF451, KANSAS STATE UNIV, MANHATTAN, KS; AUG 1977; 16 PP.
*KEYWORDS*: AGRICULTURE, KANSAS, NEBRASKA.
*NOTES*: FILED. BRIEFLY PRESENTED IS ENERGY USE AND EFFICIENCY ON THE FARM ALONG WITH AN ENERGY MANAGEMENT PROGRAM FOR FARMERS.
*DATE*: 770800

ABSTRACT 304
*TITLE*: GEAR UP - THROTTLE DOWN.
*AUTHOR*: SHELTON D P, VON BARGEN K.
*SOURCE*: FARM ENERGY TIPS CC279, INST OF AGR AND NATURAL RESOURCES, UNIV OF NEBR, LINCOLN, NE; OCT 1977; 2 PP.
*KEYWORDS*: AGRICULTURE, TRACTOR, EFFICIENCY.
*NOTES*: FILED.
*DATE*: 771000
ABSTRACT 305

TITLE: TRACTOR INSTRUMENTATION FOR PRACTICAL DEMONSTRATIONS AND DATA ACQUISITION.

AUTHOR: SHELTON D P, BASHFORD L L.

SOURCE: ASAE PAPER 77-1523, 1977, 13 PP.

KEYWORDS: AGRICULTURE, TRACTOR, FUEL CONSUMPTION.

NOTES: FILED.

DATE: 770000

ABSTRACT 306

TITLE: ENERGY REQUIREMENTS IN INTENSIVE AGRICULTURAL PRODUCTION PROGRAMME.

AUTHOR: SINGH C P, KHALDON S S, RANDHAWA G S, PANESAR B S.


KEYWORDS: AGRICULTURE, TECHNOLOGY ASSESSMENT, REQUIREMENTS.

NOTES: FILED.

DATE: 750000

ABSTRACT 307

TITLE: ENERGY SUBSIDY AS A CRITERION IN FOOD POLICY PLANNING.

AUTHOR: SLESSER M.


KEYWORDS: AGRICULTURE, REQUIREMENTS, FOOD PROCESSING, FOOD ENERGY, DEVELOPING COUNTRIES.

NOTES: FILED.

DATE: 730000

ABSTRACT 308

TITLE: ENERGY FOR AGRICULTURE.

AUTHOR: SMERDON E T.

SOURCE: PREPARED FOR, PRESENTATION AT THE CONFERENCE ON AGR GROWTH IN AN URBAN AGE, GAINESVILLE, FLORIDA, 11-12 FEB 1975, 15 PP.

KEYWORDS: AGRICULTURE, PETROLEUM, FOOD PROCESSING, CONSERVATION, TILLAGE.

NOTES: FILED.

DATE: 750211

ABSTRACT 309

TITLE: FOOD PRODUCTION POTENTIAL FROM HOME GARDENS.

AUTHOR: SMITH W W, WALKER W R.

SOURCE: ASAE PAPER 76-2522, 1976, 11 PP.

KEYWORDS: AGRICULTURE, HOME, ECONOMICS.

NOTES: FILED.

DATE: 760000

ABSTRACT 310

TITLE: OPPORTUNITIES FOR ENERGY SAVINGS IN CRCP PRODUCTION.

AUTHOR: SMITH M L, VIESSMAN V T, KANE T.


KEYWORDS: AGRICULTURE, NITROGEN, DRYING, CONSERVATION, IRRIGATION.

NOTES: FILED.

DATE: 780100

ABSTRACT 311

TITLE: ENERGY IN AGRICULTURE.

AUTHOR: SOUTHERN REGIONAL EDUCATION BOARD.

SOURCE: SOUTHERN REGIONAL EDUCATION BOARD, 136 SIXTH ST NW, ATLANTA, GA 1-5 OCT 1975, 113PP.

KEYWORDS: AGRICULTURE, USA, FERTILIZER, POLICY, FOOD ENERGY.

NOTES: FILED.

DATE: 751001

ABSTRACT 312

TITLE: ENERGY IN PERSPECTIVE.

AUTHOR: SOUTHWELL P M.

SOURCE: PRESENTATION TO ONTARIO INST OF AGROLOGISTS, ANNUAL MEETING, APRIL 1974, UNIV OF GUELPH, 20 PP.

KEYWORDS: AGRICULTURE, HISTORICAL, CANADA, POPULATION, ORGANIC, ENERGY SOURCES, ENERGY ACCOUNTING.

NOTES: FILED.

DATE: 740400
ABSTRACT 313

*TITLE: ENERGY USE IN AGRICULTURAL SYSTEMS.*
*AUTHOR: SPEDDING C R W, WALSINGHAM J M.*
*SOURCE: SPAN, 1811/7-9, 1975.*
*KEYWORDS: AGRICULTURE, EFFICIENCY, RECYCLING, ECONOMICS.*
*NOTES: FILED.*
*DATE: 750000*

ABSTRACT 314

*TITLE: VENTILATION SYSTEM OPERATION AND ENERGY USE IN FARROWING BUILDINGS.*
*AUTHOR: SPILLMAN C K, MURPHY J P, ROBBINS F V.*
*SOURCE: ASAE PAPER 76-4536, 1976, 10 PP.*
*KEYWORDS: AGRICULTURE, BUILDINGS, FUEL CONSUMPTION, INSULATION.*
*NOTES: FILED.*
*DATE: 760000*

ABSTRACT 315

*TITLE: RESEARCH RECOMMENDATIONS BY STUDY TEAM 4C - ENERGY AND EQUIPMENT.*
*AUTHOR: SPLINTER W E, ET AL.*
*SOURCE: WORLD FOOD AND NUTRITION STUDY, NATIONAL ACADEMY OF SCIENCE, 1976 (IN PRESS).*
*KEYWORDS: AGRICULTURE, MECHANIZATION, ALTERNATIVES.*
*NOTES: FILED.*
*DATE: 760000*

ABSTRACT 316

*TITLE: ENERGY REQUIREMENTS IN MANAGING FOR FOOD AND FIBER PRODUCTION.*
*AUTHOR: SPLINTER W E.*
*SOURCE: PRESENTED AT THE AAAS MEETING, DENVER, CO, 1976, 23 PP.*
*KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, USA.*
*NOTES: FILED.*
*DATE: 760000*

ABSTRACT 317

*TITLE: ENERGY AND AGRICULTURE - A NATIONAL CASE STUDY.*
*AUTHOR: STANHILL G.*
*SOURCE: AGRO-ECOSYSTEMS, 1/205-217, 1974, AMSTERDAM.*
*KEYWORDS: AGRICULTURE, ISRAEL, FOOD ENERGY, SOLAR, FOSSIL FUELS.*
*NOTES: FILED.*
*DATE: 740000*

ABSTRACT 318

*TITLE: AGRICULTURE AND ENERGY - THE GREEN COUNTERREVOLUTION.*
*AUTHOR: STANSBURG J, FLATTAU C.*
*SOURCE: CONSERVATION NEWS, NAT WILDLIFE FED, 1 FEB 1974, PP 2-4.*
*KEYWORDS: AGRICULTURE.*
*NOTES: FILED.*
*DATE: 740201*

ABSTRACT 319

*TITLE: FUEL IN BRITISH AGRICULTURE.*
*AUTHOR: STANSFIELD J R.*
*SOURCE: NIAE REPORT NO 13, NATIONAL INST AGR ENGR, WEST PARK, SILSOE, BEDFORD MK45 4HS, JAN 1974.*
*KEYWORDS: AGRICULTURE, UNITED KINGDOM, PETROLEUM, CONSERVATION, DRYING, GREENHOUSE, ENERGY SOURCES, ALTERNATIVES.*
*NOTES: FILED.*
*DATE: 740100*
ABSTRACT 320

•TITLE: FUEL AND POWER IN AGRICULTURE.
•AUTHOR: STANSFIELD J. R.
•SOURCE: SPAN, 18(1)/25-24, 1975.
•KEYWORDS: AGRICULTURE, UNITED KINGDOM, FERTILIZER, FOSSIL FUELS.
•NOTES: FILED.
•DATE: 750900

ABSTRACT 321

•TITLE: ENERGY USE IN THE US FOOD SYSTEM.
•AUTHOR: STEINHART J. E. STEINHART C. E.
•KEYWORDS: AGRICULTURE, ECONOMICS, PRODUCTION, LABOR, FOOD ENERGY.
•NOTES: FILED.
•DATE: 740419

ABSTRACT 322

•TITLE: IMPACTS OF ENERGY UNCERTAINTIES ON THE FOOD SYSTEM IN THE UPPER MIDWEST.
•AUTHOR: STINCHFIELD J.
•SOURCE: UPPER MIDWEST COUNCIL, FEDERAL RESERVE BANK BUILDING, MINNEAPOLIS, MN 55402, MAY 1977, 37 PP.
•KEYWORDS: AGRICULTURE, POLICY, CONSERVATION, USA.
•NOTES: FILED.
•DATE: 770500

ABSTRACT 323

•TITLE: ENERGY USE IN US AGRICULTURE.
•AUTHOR: STOUT B. A.
•SOURCE: AEIS 357, AGR ENGR DEPT, IOWA STATE UNIV, EAST LANSING 48824, 15 SEPT 1976, 8 PP.
•KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, USA.
•NOTES: FILED.
•DATE: 760915

ABSTRACT 324

•TITLE: ENERGY FOR WORLD-WIDE AGRICULTURE.
•AUTHOR: STOUT B. A., MYERS C A., MURAND A., FAIDLEY L W.
•SOURCE: FAO, APRIL 1977, 424 PP.
•KEYWORDS: AGRICULTURE, WORLD WIDE, ENERGY FLOW, SOLAR, WIND.
•NOTES: FILED.
•DATE: 770400

ABSTRACT 325

•TITLE: ENERGY USE IN AGRICULTURE—NOW AND FOR THE FUTURE.
•AUTHOR: STOUT B. A., ET AL.
•SOURCE: REPORT 68, COUNCIL FOR AGR SCI AND TECH, IOWA STATE UNIV, AMES, IA 50011, AUG 1977, 28 PP.
•KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, USA.
•NOTES: FILED.
•DATE: 770800

ABSTRACT 326

•TITLE: STATISTICAL ANALYSIS OF NEBRASKA PTO-VARYING POWER AND FUEL CONSUMPTION DATA.
•AUTHOR: SULEK J. J., LANE D E.
•SOURCE: PROC AMER SOC AGR ENGR, 211/43-45, 49, 1968.
•KEYWORDS: AGRICULTURE, TRACTOR.
•NOTES: FILED.
•DATE: 680000

ABSTRACT 327

•TITLE: ENERGY AND US AGRICULTURE—FEAS PROGRAMS AND POLICIES.
•AUTHOR: SYNG V. J.
•SOURCE: PRESENTED AT THE ENGINEERING FOUNDATIONS CONFERENCE ON ENERGY'S ROLE IN FOOD PRODUCTION, PACIFIC GROVE, CALIF, 9 FEB 1977, 19 PP.
•KEYWORDS: AGRICULTURE, CONSERVATION, ENERGY CONSUMPTION.
•NOTES: FILED.
•DATE: 770209
ABSTRACT 328

*TITLE*, ENERGY USE IN CROP PRODUCTION - VEGETABLES.
*AUTHOR*, TERNUNE E C.
*KEYWORDS*, AGRICULTURE, FRUITS AND VEGETABLES, PRODUCTION, ENERGY ACCOUNTING.
*NOTE*, FILED.
*DATE*, 771024

ABSTRACT 329

*TITLE*, UNDERSTANDING THE ENERGY CRISIS.
*AUTHOR*, TEXAS A AND M UNIVERSITY.
*SOURCE*, TEXAS AGR PROGRESS, 2013/4-7, AGR EXPT STA, TEXAS A AND M UNIV COLLEGE STATION, TX, SUMMER 1974.
*KEYWORDS*, AGRICULTURE, CONSERVATION, LEGISLATION.
*NOTE*, FILED.
*DATE*, 740000

ABSTRACT 330

*TITLE*, UNDERSTANDING THE ENERGY CRISIS.
*AUTHOR*, TEXAS A AND M UNIVERSITY.
*SOURCE*, TEXAS AGR PROGRESS, FALL 1974, PP 14-19, AGR EXPT STA, TEXAS A AND M UNIV COLLEGE STATION, TX.
*KEYWORDS*, AGRICULTURE, ENERGY ACCOUNTING.
*NOTE*, FILED.
*DATE*, 740000

ABSTRACT 331

*TITLE*, ALTERNATE ENERGY SOURCES FOR TEXAS AGRICULTURE-A REVIEW OF RESEARCH AND DEVELOPMENT.
*AUTHOR*, TEXAS A AND M UNIVERSITY.
*SOURCE*, PRESENTED TO THE TEXAS HOUSE SUBCOMMITTEE ON ALTERNATE SOURCES OF ENERGY FOR AGR, TEXAS A AND M UNIV COLLEGE STATION, TX 77843, 13-14 MARCH 1978, 132 PP.
*KEYWORDS*, AGRICULTURE, ENERGY SOURCES, TEXAS, ORGANIC.
*NOTE*, FILED. ENERGY FROM BIOMASS. POTENTIALS FOR ENERGY FROM BIOMASS IN TEXAS. CONVERSION OF AGRICULTURAL PRODUCTS AND BY-PRODUCTS INTO ETHYL ALCOHOL. COMMERCIAL METHANE PRODUCTION USING SOLAR ENERGY. AGRICULTURAL APPLICATIONS USING SOLAR ENERGY. WIND ENERGY AS A RESOURCE.
*DATE*, 780313

ABSTRACT 332

*TITLE*, AS ENERGY SHAPES THE FUTURE OF AGRICULTURE.
*AUTHOR*, THOMAS G W.
*SOURCE*, PREPARED FOR THE SOUTHWEST ENERGY-MINERALS CONF, ALBUQUERQUE, NM, NOV 2, 1977, 28 PP.
*KEYWORDS*, AGRICULTURE, ENERGY ACCOUNTING.
*NOTE*, FILED. THOMAS IS THE PRESIDENT OF NEW MEXICO STATE UNIV.
*DATE*, 771102

ABSTRACT 333

*TITLE*, ENERGY REQUIREMENTS OF CANADIAN BIOMASS AND AGRICULTURAL PRODUCTION.
*AUTHOR*, TIMBERS G E, DOWNING C G E E.
*KEYWORDS*, AGRICULTURE, REQUIREMENTS, BIOMASS, PRODUCTION.
*NOTE*, FILED.
*DATE*, 760809

ABSTRACT 334

*TITLE*, DEVELOPMENT OF A SIMULATION MODEL FOR THE MILK HOUSE.
*AUTHOR*, TIMMONS M B, LUDINGTON D C, ALBRIGHT L D.
*SOURCE*, ASAE PAPER 77-3538, 1977, 27 PP.
*KEYWORDS*, AGRICULTURE, DAIRY, MODELS.
*NOTE*, FILED.
*DATE*, 770000
ABSTRACT 335

*TITLE: NOTE ON THE USE OF ENERGY IN AGRICULTURE.
*AUTHOR: UN-ECONOMIC COMMISSION FOR EUROPE.
*SOURCE: AGR/GE.2/R.53, ECE COMMITTEE ON AGR PROBLEMS,
21ST SESSION, 15-19 SEPT 1975, 11 PP.
*KEYWORDS: AGRICULTURE.
*NOTES: FILED.
*DATE: 750915

ABSTRACT 336

*TITLE: ENERGY FOR AGRICULTURAL PRODUCTION.
*AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
*SOURCE: PPAB/75/69(DP), PROGRAMME AND POLICY ADVISORY BOARD,
FAO, ROME, ITALY, 18 JULY 1975, 10 PP.
*KEYWORDS: AGRICULTURE, ENERGY SOURCES, FERTILIZER, CHEMICALS, DRYING,
MECHANIZATION, IRRIGATION, INTERNATIONAL.
*NOTES: FILED.
*DATE: 750718

ABSTRACT 337

*TITLE: ENERGY FOR AGRICULTURE IN THE DEVELOPING COUNTRIES.
*AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
*SOURCE: FAO MONTHLY BULLETIN OF AGR ECON AND STATISTICS, 5(2)/2-8,
FEB 1976.
*KEYWORDS: AGRICULTURE, PRODUCTION, FERTILIZER, CHEMICALS.
*NOTES: FILED.
*DATE: 760200

ABSTRACT 338

*TITLE: FARM EQUIPMENT AND FOSSIL FUEL CONSUMPTION IN AGRICULTURE.
*AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
*SOURCE: AGR ENGR SERVICE, FAO, ROME, ITALY, MAY 1974, 13PP.
UNPUBLISHED.
*KEYWORDS: AGRICULTURE, MECHANIZATION, ENERGY CONSUMPTION, REQUIREMENTS.
*NOTES: FILED.
*DATE: 740500

ABSTRACT 339

*TITLE: FUEL AND FARM MACHINERY.
*AUTHOR: UNIVERSITY OF FLORIDA.
*SOURCE: INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL,
17PP, UNDATED.
*KEYWORDS: AGRICULTURE, TRACTOR.
*NOTES: FILED.
*DATE: 740000

ABSTRACT 340

*TITLE: ENERGY IN AGRICULTURE.
*AUTHOR: UNIVERSITY OF KENTUCKY.
*SOURCE: AGR ENGR DEPT, UNIV OF KENTUCKY, LEXINGTON, KY 40506, 1976, 60PP.
*KEYWORDS: AGRICULTURE, CONSERVATION, ALTERNATIVES, BIOMASS.
*NOTES: FILED.
*DATE: 760100

ABSTRACT 341

*TITLE: ENERGY MANAGEMENT ON THE FARM.
*AUTHOR: US-DEPARTMENT OF AGRICULTURE.
*SOURCE: ENERGY LETTER, USDA, WASHINGTON DC 20250, MARCH 1974, 5 PP.
*KEYWORDS: AGRICULTURE, STORAGE, DRYING, IRRIGATION, FERTILIZER,
MECHANIZATION.
*NOTES: FILED.
*DATE: 740300

ABSTRACT 342

*TITLE: ENERGY TO KEEP AGRICULTURE GOING.
*AUTHOR: US-DEPARTMENT OF AGRICULTURE.
*SOURCE: ENERGY LETTER, USDA, WASHINGTON DC 20250, MARCH 1974, 6 PP.
*KEYWORDS: AGRICULTURE, FERTILIZER, FOSSIL FUELS, PETROLEUM.
*NOTES: FILED.
*DATE: 740300
ABSTRACT 343

*TITLE: REPORT OF THE PROCEEDINGS OF THE ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION WORKSHOP ON ENERGY CONSERVATION IN AGRICULTURAL PRODUCTION.
*AUTHOR: US-DEPARTMENT OF COMMERCE.
*SOURCE: NIS, US DEPARTMENT OF COMMERCE, SPRINGFIELD, VA 22161; 16 JULY 1976; 99PP.
*KEYWORDS: AGRICULTURE, CONSERVATION, DESIGN, ANIMAL PRODUCTION, GREENHOUSE, DRYING, PUMPS, WASTES.
*NOTES: FILED.
*DATE: 760716

ABSTRACT 344

*TITLE: AN UPDATE ON HUNGER IN AMERICA.
*AUTHOR: US-DEPARTMENT OF AGRICULTURE.
*SOURCE: DOMESTIC FOOD PROGRAMS, USDA, 1 MARCH 1978; 17 PP.
*KEYWORDS: AGRICULTURE, POPULATION, SOCIAL IMPLICATIONS.
*NOTES: FILED. PAPER MAKES USE OF THE WELL KNOWN REPORT-HUNGER USA.
*DATE: 780301

ABSTRACT 345

*AUTHOR: US-DEPARTMENT OF AGRICULTURE, NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES.
*KEYWORDS: AGRICULTURE.
*NOTES: FILED.
*DATE: 771226

ABSTRACT 346

*TITLE: ENERGY CONSERVATION IN THE FOOD SYSTEM - A PUBLICATIONS LIST.
*AUTHOR: US-FEDERAL ENERGY ADMINISTRATION.
*SOURCE: FEA, WASHINGTON DC, MAY 1976; 73 PP.
*KEYWORDS: AGRICULTURE, BIBLIOGRAPHY, CONSERVATION, FOOD PROCESSING, PRODUCTION.
*NOTES: FILED.
*DATE: 760590

ABSTRACT 347

*TITLE: ENERGY POLICIES-PRICE IMPACTS ON THE US FOOD SYSTEM.
*AUTHOR: VAN ARSDALL R T, DEVlin P J.
*SOURCE: AGR ECON REPORT 407, USDA, WASHINGTON DC 20250; JULY 1978; 44 PP.
*KEYWORDS: AGRICULTURE, POLICY.
*NOTES: FILED.
*DATE: 780700

ABSTRACT 348

*TITLE: ENERGY REQUIREMENTS IN THE U.S. FOOD SYSTEM.
*AUTHOR: VAN ARSDALL R T.
*KEYWORDS: AGRICULTURE, FOOD ENERGY, USA.
*NOTES: FILED.
*DATE: 760350

ABSTRACT 349

*TITLE: FARM EQUIPMENT AND FOSSIL FUEL CONSUMPTION IN AGRICULTURE.
*AUTHOR: VAN GILST W J.
*SOURCE: FOOD AND AGRICULTURE ORGANIZATION, UNITED NATIONS, ROME, 1974.
*KEYWORDS: AGRICULTURE, FOSSIL FUELS, DEVELOPING COUNTRIES, MECHANIZATION, DIESEL.
*NOTES: FILED.
*DATE: 740000
ABSTRACT 357
*TITLE: FOOD SHORTAGES - A POOR MANS ENERGY CRISIS.*
*AUTHOR: WEST Q M.*
*SOURCE: ECON RESEARCH SER. USDA, WASHINGTON, D C, 1973, 9 PP.*
*KEYWORDS: AGRICULTURE; FOOD ENERGY; SUPPLY DEMAND.*
*NOTES: FILED.*
*DATE: 730000*

ABSTRACT 358
*TITLE: THE ENERGY CRISIS - WHERE FARM FIELD AND OIL FIELD MEET.*
*AUTHOR: WHEELER C A.*
*KEYWORDS: AGRICULTURE; ECONOMICS; FOSSIL FUELS.*
*NOTES: FILED.*
*DATE: 760000*

ABSTRACT 359
*TITLE: FUEL REQUIREMENTS FOR SELECTED FARMING OPERATIONS.*
*AUTHOR: WHITE R G.*
*SOURCE: EXTENSION BULLETIN E-780, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, FEB 1974, 4PP.*
*KEYWORDS: AGRICULTURE; REQUIREMENTS.*
*NOTES: FILED. GIVES LOW, AVERAGE, HIGH GASOLINE REQUIREMENTS FOR TILLAGE, PLANTING, CULTIVATION, HARVESTING, MISC.*
*DATE: 740200*

ABSTRACT 360
*TITLE: ENERGY USE IN AGRICULTURE.*
*AUTHOR: WHITE D J.*
*SOURCE: PRESENTED AT UK SCI RESEARCH COUNCIL SUMMER SCHOOL ASPECTS OF ENERGY CONVERSION, LINCOLN COLLEGE, OXFORD, 14-25 JULY 1975, 36 PP.*
*KEYWORDS: AGRICULTURE; UNITED KINGDOM; FERTILIZER; SOLAR; WASTES; WASTE HEAT.*
*NOTES: FILED.*
*DATE: 750714*

ABSTRACT 361
*TITLE: ENERGY UTILIZATION ON BEEF FEEDLOTS AND DAIRY FARMS.*
*AUTHOR: WILLIAMS D W, MCCARTY T R, GUNKEL W W, PRICE D R, JEWELL W J.*
*KEYWORDS: AGRICULTURE; DAIRY; MANURE; ENERGY FLOW; TECHNOLOGY ASSESSMENT.*
*NOTES: FILED.*
*DATE: 750000*

ABSTRACT 362
*TITLE: MAXIMUM PRODUCTION CAPACITY OF FOOD CROPS.*
*AUTHOR: WITTWER S H.*
*SOURCE: MICH AGR EXPT STA J ARTICLE 6668, 1974, 20 PP.*
*KEYWORDS: AGRICULTURE; PHOTOSYNTHESIS; FERTILIZER; TILLAGE.*
*NOTES: FILED.*
*DATE: 740104*

ABSTRACT 363
*TITLE: AGRICULTURAL PRODUCTIVITY AND THE ENERGY CRISIS.*
*AUTHOR: WITTWER S H.*
*SOURCE: PHI KAPPA PHI J, 15(1)/35-37, WINTER 1975.*
*KEYWORDS: AGRICULTURE; PHOTOSYNTHESIS.*
*NOTES: FILED.*
*DATE: 750000*
ABSTRACT 364

• TITLE: AGRICULTURE'S RESPONSE TO THE ENERGY CRISIS.
• AUTHOR: WITTWER S H.
• SOURCE: MICH AGR EXPT STA J ARTICLE 6485, MICH STATE UNIV, EAST LANSING, MI 48824, 7 PP.
• KEYWORDS: AGRICULTURE, PHOTOSYNTHESIS, FOSSIL FUELS, FERTILIZER, IRRIGATION, TILLAGE, DIESEL, SOLAR.
• NOTES: FILED.
• DATE: 

ABSTRACT 365

• TITLE: FOOD AND ENERGY PRODUCTION: DUAL CHALLENGES FOR TODAY'S AGRICULTURE.
• AUTHOR: WITTWER S H.
• SOURCE: AGR ENGR JULY 1974, PP 42-43.
• KEYWORDS: AGRICULTURE, FOOD ENERGY, LABOR, MECHANIZATION.
• NOTES: FILED.
• DATE: 740700

ABSTRACT 366

• TITLE: IMPACT OF ENERGY REDUCTIONS ON AGRICULTURAL PRODUCTIVITY.
• AUTHOR: WITTWER S H.
• SOURCE: MICH AGR EXPT STA J ARTICLE 7009, MICH STATE UNIV, EAST LANSING, MI 48824, 11 PP.
• KEYWORDS: AGRICULTURE, PETROLEUM, FERTILIZER, FOSSIL FUELS.
• NOTES: FILED.
• DATE: 

ABSTRACT 367

• TITLE: WORLD FOOD AND NUTRITION STUDY: ENHANCEMENT OF FOOD PRODUCTION FOR THE UNITED STATES.
• AUTHOR: WITTWER S H, ET AL.
• SOURCE: NAS, WASHINGTON D C, REPORT OF THE BOARD ON AGR AND RENEWABLE RESOURCES, PREPARED FOR NRC STUDY ON WORLD FOOD AND NUTRITION, 1975, 174 PP.
• KEYWORDS: AGRICULTURE, CROP PROTECTION, RESOURCES, FOOD PROCESSING.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 368

• TITLE: ENERGY ASPECTS OF AGRICULTURAL PRODUCTIVITY.
• AUTHOR: WITTWER S H.
• SOURCE: PAPER PRESENTED AT AN INTERNATIONAL SYMPOSIUM ON ENERGY BIOCONVERSION, 8-9 JULY 1976, CAMPINAS, STATE OF SÃO PAULO, BRAZIL.
• KEYWORDS: AGRICULTURE, PRODUCTION.
• NOTES: FILED.
• DATE: 760708

ABSTRACT 369

• TITLE: THE ENERGY SQUEEZE.
• AUTHOR: WOOD G.
• SOURCE: BIG FARMER, 49(9)/7-12, OCT 1977.
• KEYWORDS: AGRICULTURE.
• NOTES: FILED. THE EFFECTS OF DWINDLING ENERGY SOURCES ON THE FARMER.
• DATE: 771003

ABSTRACT 370

• TITLE: SHALLOW SOLAR POND POWERED IRRIGATION PUMPING - A FEASIBILITY STUDY.
• AUTHOR: WOOD R L, PLATT E A.
• KEYWORDS: AGRICULTURE, SOLAR, IRRIGATION.
• NOTES: FILED.
• DATE: 780828
ABSTRACT 371

•TITLE: A GUIDE TO ENERGY SAVINGS--FOR THE FIELD CROPS PRODUCER.
•AUTHOR: WYNN N A.
•SOURCE: FEA, OFFICE OF COMMUNICATIONS, PUBL DIV, US DEPT OF AGR, WASHINGTON DC 20250, JUNE 1977, 58PP.
•KEYWORDS: AGRICULTURE, ENERGY CONSUMPTION, CONSERVATION.
•NOTES: FILED.
•DATE: 770600

ABSTRACT 372

•TITLE: A GUIDE TO ENERGY SAVINGS--FOR THE VEGETABLE PRODUCER.
•AUTHOR: WYNN N A.
•SOURCE: FEA, OFFICE OF COMMUNICATIONS, PUBL DIV, US DEPT OF AGR, WASHINGTON DC 20250, JULY 1977, 54PP.
•KEYWORDS: AGRICULTURE, FRUITS AND VEGETABLES, CONSERVATION, GREENHOUSE, ENERGY CONSUMPTION.
•NOTES: FILED.
•DATE: 770700

ABSTRACT 373

•TITLE: ENERGY AND AGRICULTURE - ECONOMIC PERSPECTIVES.
•AUTHOR: YOUDEN J G, CARTER M D.
•SOURCE: CALIF AGR, OCT 1974, PP 4-5.
•KEYWORDS: AGRICULTURE, ECONOMICS, HOME, FOOD ENERGY.
•NOTES: FILED.
•DATE: 741000

ABSTRACT 374

•TITLE: ENERGY GROWTH ALTERNATIVES.
•AUTHOR: ANON.
•KEYWORDS: ALTERNATIVES, JOURNAL.
•NOTES: FILED.
•DATE: 740700

ABSTRACT 375

•TITLE: ALTERNATE SOURCES OF ENERGY.
•AUTHOR: ECCLI S F, ET AL.
•SOURCE: NEW YORK/ THE SEABURY PRESS, 1975, 278 PP.
•KEYWORDS: ALTERNATIVES, SOLAR, WIND, WATER POWER, TRANSPORTATION, AGRICULTURE, SOCIAL IMPLICATIONS.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 376

•TITLE: THE TECHNICAL AND ECONOMIC FEASIBILITY OF SOME ALTERNATIVE FUELS FOR AUTOMOTIVE TRANSPORTATION.
•AUTHOR: GILLIS J C, PANGBORN J B, VYAS K C.
•SOURCE: INST OF GAS TECH, 3424 S STATE ST, CHICAGO, AUG 1975, 7 PP.
•KEYWORDS: ALTERNATIVES, AUTOMOBILE, TECHNOLOGY ASSESSMENT, ECONOMICS.
•DATE: 750800

ALTERNATIVES 374 — 397
TOWARD A NATIONAL ENERGY POLICY

Mobil Oil Corp

MOBIL OIL CORP 1975 10 PP

ALTERNATIVES POLICY ENERGY SOURCES

FILED

750030

WATER IN SYNTHETIC FUEL PRODUCTION - THE TECHNOLOGY AND ALTERNATIVES.

Probstin R S Gold H

CAMBRIDGE MA MIT PRESS 1978 296 PP

ALTERNATIVES COAL PRODUCTION

FILED

760000

FEASIBILITY OF ALTERNATIVE RENEWABLE RESOURCES

Society for Social Responsibility in Science

SOC FOR SOCIAL RESPONSIBILITY IN SCI (ACT) CANBERRA AUSTRALIA 1975 65PP

ALTERNATIVES JOURNAL AUSTRALIA RENEWABLE ENERGY

FILED SYMPOSIUM ON SOLAR ENERGY RESOURCES AUSTRALIAN NATIONAL UNIV 12 NOV 1975

750000

ABSTRACT 380

ECONOMIC ASPECTS OF OX CULTIVATION

Adelhelm R Schmidt H

PAPER FOR WORKSHOP ON FARM EQUIPMENT INNOVATIONS FOR AGR DEV AND RURAL INDUSTRIALIZATION FACULTY OF AGR KABETE NAIROBI 19-21 AUG 1975 23 PP

ANIMAL DRAFT

750819

ABSTRACT 381

A GUIDE TO ENERGY SAVINGS FOR THE POULTRY PRODUCER

Benson V W

FEA OFFICE OF COMMUNICATIONS PUBL DIV US DEPT OF AGR WASHINGTON DC 20250 JUNE 1977 46PP

ANIMAL PRODUCTION POULTRY ENERGY CONSUMPTION CONSERVATION

FILED

770680
**ABSTRACT 382**

**TITLE**: Molasses, Sugar (Sucrose), Corn Tallow, Soybean Oil and Mixed Fats as Sources of Energy for Growing Swine.

**AUTHOR**: Srooks C C.

**SOURCE**: J OF AMER SCIENCE; 34(2)/217-224; 1972.

**KEYWORDS**: Animal Production.

**NOTES**.

**DATE**: 720000

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**ABSTRACT 383**

**TITLE**: Energy Use and Demand in Warm Confinement Swine Buildings.

**AUTHOR**: Christianson L L, McFate K L, Kliebenstein J B.

**SOURCE**: ASAE PAPER 77-3052; 1977; 14PP.

**KEYWORDS**: Animal Production; Energy Consumption; Heat; Ventilation.

**NOTES**: FILED. Heating, Ventilation, and Lighting Energy Consumption Data for Warm Confinement Gestation, Farrowing, Nursery, and Finishing Facilities.

**DATE**: 770000

---

**ABSTRACT 384**

**TITLE**: Simulation and Optimization of Energy Requirements for Livestock Housing.

**AUTHOR**: Christianson L L, Hellickson M A.

**SOURCE**: ASAE PAPER 76-4027; 1976.

**KEYWORDS**: Animal Production; Buildings.

**NOTES**.

**DATE**: 760000

---

**ABSTRACT 385**

**TITLE**: Poultry Is Assured.

**AUTHOR**: Clayton G A.

**SOURCE**: POULTRY WORLD, 3 JAN 1974, P 22.

**KEYWORDS**: Animal Production.

**NOTES**.

**DATE**: 740103

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**ABSTRACT 386**

**TITLE**: Computer Evaluation of Alternative Broiler Production Programs for Energy Conservation Potential.

**AUTHOR**: Collins N E, Walpole E W.

**SOURCE**: MISCELLANEOUS PAPER 760, AGR EXPT STA, UNIV OF DELAWARE, NEWARK.

**DE**: 9 PP; UNDATED.

**KEYWORDS**: Animal Production; Alternatives; Conservation.

**NOTES**: FILED.

**DATE**.

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**ABSTRACT 387**

**TITLE**: Feed; Food and The Future.

**AUTHOR**: Combs G F.

**SOURCE**: FEEDSTUFFS, 10 JUNE 1974, P 29, 41.

**KEYWORDS**: Animal Production.

**NOTES**.

**DATE**: 740610

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**ABSTRACT 388**

**TITLE**: The Place of Livestock in Meeting Human Food Needs.

**AUTHOR**: Cunha T J.

**SOURCE**: FEEDSTUFFS, 10 FEB 1975, P 23.

**KEYWORDS**: Animal Production.

**NOTES**.

**DATE**: 750210
ABSTRACT 389

**TITLE:** SYMPOSIUM ON ENERGY METABOLISM.
**AUTHOR:** EUROPEAN ASSOCIATION FOR ANIMAL PRODUCTION.
**SOURCE:** EUROPEAN ASSOC FOR ANIMAL PRODUCTION CONF PROC, WAGENINGEN, NETHERLANDS; 11-15 SEP 1961.
**KEYWORDS:** ANIMAL PRODUCTION.
**DATE:** 610911

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ABSTRACT 390

**TITLE:** ENERGY UTILIZATION FOR SWINE PRODUCTION IN MODIFIED OPEN-FRONT SHADES.
**AUTHOR:** HIRNING H J, JENSEN A H.
**SOURCE:** ASAE PAPER 75-3016, 9 PP.
**KEYWORDS:** ANIMAL PRODUCTION, MEAT, ENERGY CONSUMPTION, EFFICIENCY.
**DATE:** 750000

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ABSTRACT 391

**TITLE:** ENERGY USE AND CONSERVATION IN THE POULTRY INDUSTRIES.
**AUTHOR:** ROGERS G Bo.
**SOURCE:** PRESENTED AT NORTH CENTRAL STATES POULTRY EXTENSION WORKSHOP, LINCOLN, NE; 5 MAY 1976, 23 PP.
**KEYWORDS:** POULTRY AND EGG PRODUCTS, FOOD PROCESSING, ACCOUNTING, ECONOMICS, CONSERVATION, MARKETING.
**DATE:** 760505

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ABSTRACT 392

**TITLE:** FORAGE CROPS.
**AUTHOR:** HODGSON H J.
**SOURCE:** SCIENTIFIC AMER 234(2)/61-68, 74, 75, FEB 1976.
**KEYWORDS:** ANIMAL PRODUCTION, AGRICULTURE.
**DATE:** 760200

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ABSTRACT 393

**TITLE:** MATERIAL-Energy REQUIREMENTS IN ALTERNATIVE DAIRY FARMING SYSTEMS.
**AUTHOR:** HOLTMAN J Bo, CONNOR L J, LUCAS R E, WOLAK F J.
**SOURCE:** PROC OF THE ENERGY AND AGR CONF, ACADEMIC PRESS INC, IN PRESS.
**KEYWORDS:** ANIMAL PRODUCTION, REQUIREMENTS, ALTERNATIVES, DAIRY.
**DATE:**

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ABSTRACT 394

**TITLE:** TOWARDS COUNTRYSIDE DESIGN.
**AUTHOR:** HUGHES K A, HOLTMAN J B.
**SOURCE:** ASAE PAPER 73-5525, 23 PP.
**KEYWORDS:** ANIMAL PRODUCTION, ENERGY CONSUMPTION, MODELS.
**DATE:**

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ABSTRACT 395

**TITLE:** DYNAMIC MODELING OF ENERGY UTILIZATION OF LACTATING ANIMALS.
**AUTHOR:** KEENER H M, NELSON G L, CONRAD H R, ROLLER W L.
**SOURCE:** ASAE PAPER 73-419, 7 PP.
**KEYWORDS:** ANIMAL PRODUCTION, CONVERSION, MODELS, DAIRY.
**DATE:**

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ABSTRACT 403

TITLE: A DUAL-STAGE, TIME-PROPORTIONING THERMOSTAT FOR USE IN LIVESTOCK SHELTERS.
AUTHOR: REECE F N.
SOURCE: ASAE PAPER 78-3023, 1978, 10 PP.
KEYWORDS: ANIMAL PRODUCTION, BUILDINGS, HEAT, VENTILATION.
NOTES: FILED. A DUAL-STAGE, TIME PROPORTIONING THERMOSTAT HAS BEEN DEVELOPED FOR CONTROLLING BOTH HEATING AND VENTILATING FUNCTIONS IN LIVESTOCK SHELTERS. THE DEVICE, WHEN CONNECTED TO BROODER STOVES AND VENTILATION FANS, MAKES IT POSSIBLE TO CONTROL BOTH FUNCTIONS THROUGH A SINGLE TEMPERATURE ADJUSTMENT. OVERLAPPING OPERATION OF HEATING AND COOLING IS ELIMINATED, THEREFORE CONSERVING ENERGY.
DATE: 780000

ABSTRACT 404

TITLE: ENERGY USE AND CONSERVATION IN THE POULTRY INDUSTRIES.
AUTHOR: ROGERS G B.
SOURCE: PRESENTED AT NORTH CENTRAL STATES POULTRY EXTENSION WORKSHOP, LINCOLN, NE, 5 MAY 1976, 23 PP.
KEYWORDS: ANIMAL PRODUCTION, POULTRY, POULTRY AND EGG PRODUCTS, FOOD PROCESSING, ACCOUNTING, ECONOMICS, CONSERVATION, MARKETING.
NOTES: FILED. ANALYZES ENERGY CONSUMPTION AND COST FOR THE PRODUCTION, PROCESSING AND MARKETING OF VARIOUS POULTRY AND EGG PRODUCTS.
DATE: 760505

ABSTRACT 405

TITLE: IMPACT ASSESSMENT OF MICROWAVE - VACUUM GRAIN DRYING CONSERVATION TECHNOLOGY.
AUTHOR: HITTMAN ASSOCIATES.
SOURCE: HITTMAN ASSOCIATES, INC, COLUMBIA, MD 21011, 31 DEC 1976, 62 PP.
KEYWORDS: DRYING, MICROWAVE, MODELS, ALTERNATIVES, ECONOMICS.
NOTES: FILED. TECHNOLOGICAL AND ECONOMIC FEASIBILITY OF SUBSTITUTING MICROWAVE-VACUUM GRAIN DRYING FOR EXISTING HIGH CAPACITY LPG, NATURAL GAS, OR OIL-FIRED HOT AIR DRYSERS. HIGH COSTS ARE A BARRIER TO PRACTICAL IMPLEMENTATION, BASED ON COMPUTER SIMULATION.
DATE: 761231

ABSTRACT 406

TITLE: ENERGY COSTS OF INTENSIVE LIVESTOCK PRODUCTION.
AUTHOR: ROLLER W L, KEENER H R, KLINE R D.
SOURCE: ASAE PAPER 75-11012, 27 PP.
KEYWORDS: ANIMAL PRODUCTION, FOSSIL FUELS, ACCOUNTING, FOOD ENERGY.
NOTES: FILED.
DATE: 750000

ABSTRACT 407

TITLE: ENVIRONMENTAL CONTROL FOR SWINE HOUSING BASED ON ENERGY CONSERVATION AND ANIMAL PERFORMANCE.
AUTHOR: STEVENS G R, DESMAZER J A, THOMPSON T L, TETER N C.
SOURCE: ASAE PAPER 76-4028, 15 PP.
KEYWORDS: ANIMAL PRODUCTION, MODELS, ENVIRONMENT, CONSERVATION.
NOTES: FILED.
DATE: 760000
ABSTRACT 396

• TITLE: CONVERSION OF ENERGY AND THE CHEMICAL COMPOSITION OF GAIN IN BACON PIGS.
• AUTHOR: KIELANOWSKI J.
• KEYWORDS: ANIMAL PRODUCTION.
• NOTES:
• DATE: 660200

ABSTRACT 397

• TITLE: EFFICIENCY OF ENERGY UTILIZATION IN GROWING PIGS.
• AUTHOR: KIELANOWSKI J.
• KEYWORDS: ANIMAL PRODUCTION.
• NOTES:
• DATE: 660000

ABSTRACT 398

• TITLE: LAYING HOUSE ENERGY BUDGET ANALYSIS FOR THE NORTHEAST.
• AUTHOR: LINDLEY J A.
• SOURCE: ASAE PAPER 75-4537, 15 PP.
• KEYWORDS: ANIMAL PRODUCTION, USA, ENERGY BUDGET, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 399

• TITLE: A SIMULATION MODEL FOR ASSESSING ALTERNATIVE STRATEGIES OF BEEF PRODUCTION WITH LAND, ENERGY, AND ECONOMIC CONSTRAINTS.
• AUTHOR: LOEWER O J, ET AL.
• SOURCE: ASAE PAPER 78-5025, 1978, 34 PP.
• KEYWORDS: ANIMAL PRODUCTION, AGRICULTURE, MODELS.
• NOTES: FILED. A COMPUTER MODEL HAS BEEN DEVELOPED TO ANALYZE ALTERNATE MANAGEMENT STRATEGIES OF BEEF AND CROP PRODUCTION WITH LAND, ENERGY, AND ECONOMIC CONSTRAINTS. A COMPLETE INVENTORY OF DRY MATTER, BEEF STATUS, PRODUCTION RESOURCES AND NET WORTH ARE MAINTAINED OVER THE SIMULATION PERIOD.
• DATE: 780000

ABSTRACT 400

• TITLE: THE NORTHEAST GHANA SAVALAH PROJECT - A CASE STUDY IN PROJECT DESIGN.
• AUTHOR: MATLOCK W G, JOHNSON J P.
• SOURCE: J PAPER 2456, ARIZONA AGR EXPT STA, TUCSON, AZ, 1975, 23 PP.
• KEYWORDS: ANIMAL PRODUCTION, GHANA, LAND USE.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 401

• TITLE: THE ROLE AND EFFICIENCY OF ANIMALS IN UTILIZING FEED TO PRODUCE HUMAN FOOD.
• AUTHOR: MAYNARD L A.
• SOURCE: J OF NUTRITION, 32/345-360, 1946.
• KEYWORDS: ANIMAL PRODUCTION, EFFICIENCY, SOCIAL IMPLICATIONS, FOOD ENERGY.
• NOTES: FILED.
• DATE: 460000

ABSTRACT 402

• TITLE: ENERGY AND FOOD SAVING IN LIVESTOCK PRODUCTION.
• AUTHOR: PROSSER H W.
• SOURCE: THE INST OF FUEL, SOUTH COAST SECTION, SOUTHAMPTON, 26 FEB 1976, 14 PP.
• KEYWORDS: ANIMAL PRODUCTION, CONSERVATION, BUILDINGS.
• NOTES: FILED.
• DATE: 760226
ABSTRACT 408
•TITLE: BEEF PRODUCTION EFFICIENCY.
•AUTHOR: TRENKLE A. WILLHAM R L.
•NOTES: FILED. IN THE PRODUCTION OF HIGH QUALITY PROTEIN, FEED GRAINS WILL CONTINUE TO BE USED TO FINISH CATTLE FOR MARKET AS LONG AS ECON DICTATES. PRODUCTION SYSTEMS COULD BE DEVELOPED THAT WOULD MAKE RUMINANT ANIMALS LESS COMPETITIVE WITH HUMANS FOR FEED GRAINS, BUT THE COSTS OF INSTITUTING SUCH PROGRAMS WOULD BE PROHIBITIVE. SUFFICIENT GENETIC VARIATION EXISTS EITHER BETWEEN OR WITHIN BREEDS FOR THE CATTLE POPULATION TO BE ADAPTED TO NEW MANAGEMENT PROGRAMS AND FOR CURRENT METHODS OF BEEF PRODUCTION TO BE SIGNIFICANTLY IMPROVED.
•DATE: 771209

ABSTRACT 409
•TITLE: NEW CHALLENGES FOR THE BEEF CATTLE INDUSTRY.
•AUTHOR: UNIVERSITY OF ARIZONA.
•SOURCE: TASK FORCE REPORT, AGR EXPT STA, UNIV OF ARIZONA, APRIL 1975, 28 PP.
•NOTES: FILED.
•DATE: 750400

ABSTRACT 410
•TITLE: THE ENERGY VALUE OF RATIONS FOR MONOGASTRIC ANIMALS.
•AUTHOR: VAN ES A J H.
•NOTES: FILED.
•DATE: 740527

ABSTRACT 411
•TITLE: FEED EVALUATION FOR DAIRY COWS.
•AUTHOR: VAN ES A J H.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 412
•TITLE: A GUIDE TO ENERGY SAVINGS--FOR THE LIVESTOCK PRODUCER
•AUTHOR: VAN ARSDALL R N.
•SOURCE: FEA, OFFICE OF COMMUNICATION, PUBL DIV, US DEPT OF AGR, WASHINGTON DC 20250, JUNE 1977, 78PP.
•NOTES: FILED.
•DATE: 770600

ABSTRACT 413
•TITLE: BEEF PRODUCTION OPTIONS AND REQUIREMENTS FOR FOSSIL FUEL.
•AUTHOR: WARD G M, KNOX P L, HOBBSON B W.
•NOTES: FILED. A LARGE PERCENTAGE OF THE FEED RESOURCES USED IN BEEF PRODUCTION CANNOT BE USED BY MAN OR MOST OTHER ANIMALS. THESE NONCOMPETITIVE FEEDS COULD BE USED IN DIFFERENT WAYS TO INCREASE BEEF PRODUCTION, BUT FOSSIL FUEL CONSUMPTION BY THE BEEF INDUSTRY WOULD NOT BE GREATLY REDUCED.
•DATE: 771021
ABSTRACT 414

*TITLE*: BIBLIOGRAPHY OF WORLD APPLIED SOLAR ENERGY RESEARCH (1940-1975).
*AUTHOR*: GARG H P, AMINULLAH.
*SOURCE*: CAZRI LIBRARY PUBLICATION SERIES 3, CENTRAL ARID ZONE RESEARCH INST., JODHPUR, INDIA, SEPT 1976, 195 PP.
*KEYWORDS*: BIBLIOGRAPHY, SOLAR.
*NOTES*: FILED.
*DATE*: 760906

ABSTRACT 415

*TITLE*: WORLD BIBLIOGRAPHY ON BIO-GAS TECHNOLOGY AND ITS UTILIZATION.
*AUTHOR*: GARG H P, AMINULLAH.
*SOURCE*: CAZRI LIBRARY PUBLICATION SERIES 4, CENTRAL ARID ZONE RESEARCH INST., JODHPUR, INDIA, DEC 1977, 71 PP.
*KEYWORDS*: BIBLIOGRAPHY, BIOGAS.
*NOTES*: FILED.
*DATE*: 771207

ABSTRACT 416

*TITLE*: INFORMATION ON INTERNATIONAL RESEARCH AND DEVELOPMENT ACTIVITIES IN THE FIELD OF ENERGY.
*AUTHOR*: HERSEY D F, ED.
*SOURCE*: NSF/RA-760057, NATIONAL SCI FOUNDATION, MAY 1976, 370 PP.
*KEYWORDS*: BIBLIOGRAPHY, ORGANIC, NUCLEAR, CONVERSION, CONSERVATION, INTERNATIONAL.
*NOTES*: FILED.
*DATE*: 760522

ABSTRACT 417

*TITLE*: INDEX AND BIBLIOGRAPHY - ENERGY AND ENERGY RELATED MATERIALS.
*AUTHOR*: IOWA STATE UNIVERSITY.
*SOURCE*: EDUCATIONAL MATERIALS PROJECT, NORTH CENTRAL REGION, I11-N CURTISS HALL, IOWA STATE UNIV, AMES, IA 50011, 6 JAN 1976, 50 PP.
*KEYWORDS*: BIBLIOGRAPHY, GENERAL.
*NOTES*: FILED.
*DATE*: 760106

ABSTRACT 418

*AUTHOR*: NATIONAL SCIENCE FOUNDATION.
*SOURCE*: NSF/RA-N-75-079, RANN DOCUMENT CENTER, NATIONAL SCI FOUNDATION, WASHINGTON D C, MAY 1975, 319 PP.
*KEYWORDS*: BIBLIOGRAPHY, SOLAR, GEOTHERMAL, CONVERSION, STORAGE, ENERGY SOURCES, TRANSPORTATION.
*NOTES*: FILED.
*DATE*: 750500

ABSTRACT 419

*TITLE*: WORLD ENERGY RESOURCES - AN ANNOTATED BIBLIOGRAPHY OF SELECTED MATERIAL ON THE AVAILABILITY AND DEVELOPMENT OF WORLD ENERGY RESOURCES.
*AUTHOR*: ERDA-53, ENERGY RESEARCH AND DEV ADMINISTRATION, US GOVT PRINTING OFFICE, WASHINGTON DC 20405, 1975, 18 PP.
*KEYWORDS*: BIBLIOGRAPHY, INTERNATIONAL.
*NOTES*: FILED. LISTED ARE 173 REFERENCES OF RECENT ENGLISH LANGUAGE PUBLICATIONS ON THE AVAILABILITY AND DEVELOPMENT OF WORLD ENERGY RESOURCES. CITATIONS WHICH DEAL EXCLUSIVELY WITH ENERGY RESOURCES IN THE US ARE OMITTED.
*DATE*: 750500
ABSTRACT 420

**TITLE:** ENERGY AND PESTICIDE USE - NEW SIGNALS FOR AGRICULTURE.
**AUTHOR:** EDENS T C.
**SOURCE:** ASAE PAPER 78-1501, 1978, 10 PP.
**KEYWORDS:** CHEMICAL, AGRICULTURE, SOCIAL IMPLICATIONS.
**NOTES:** FILED.
**DATE:** 780000

ABSTRACT 421

**TITLE:** HERBICIDES IN THE ENERGY EQUATION.
**AUTHOR:** ALDER E F, KLINGMAN G C, WRIGHT W L.
**KEYWORDS:** CHEMICALS.
**NOTES:** FILED.
**DATE:** 760100

ABSTRACT 422

**TITLE:** THE PESTICIDE REVIEW - 1974.
**AUTHOR:** FOWLER D L, MAHAN J N.
**SOURCE:** USDA, AGR STABILIZATION AND CONSERVATION SERVICE, SEPT 1975, 58 PP.
**KEYWORDS:** CHEMICALS, CROP PROTECTION, PRODUCTION, USA, CANADA.
**NOTES:** FILED.
**DATE:** 750900

ABSTRACT 423

**TITLE:** ENERGY CONSIDERATIONS IN THE USE OF HERBICIDES.
**AUTHOR:** GREEN M B, MCCULLOCH A.
**SOURCE:** J OF SCI FOOD AND AGR, 27/95-100, 1976.
**KEYWORDS:** CHEMICALS.
**NOTES:** FILED.
**DATE:** 760000

ABSTRACT 424

**TITLE:** USING PESTICIDES EFFICIENTLY.
**AUTHOR:** JOHNSON F A.
**SOURCE:** ENERGY CONSERVATION FACT SHEET EC-5, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
**KEYWORDS:** CHEMICALS, CROP PROTECTION.
**NOTES:** FILED.
**DATE:** 760000

ABSTRACT 425

**TITLE:** THE ENERGY RELATIONS OF PESTICIDES.
**AUTHOR:** JONES D P.
**SOURCE:** SPAN, 18(1)/20-22, 1975.
**KEYWORDS:** CHEMICALS, UNITED KINGDOM.
**NOTES:** FILED.
**DATE:** 750000

ABSTRACT 426

**TITLE:** ENERGY REQUIREMENTS OF VARIOUS WEED CONTROL PRACTICES.
**AUTHOR:** NALEWAJA J D.
**SOURCE:** PROC OF THE NORTH CENTRAL WEED CONTROL CONF, 29/19-23, 1974.
**KEYWORDS:** CHEMICALS, ENERGY CONSUMPTION, AGRICULTURE.
**NOTES:** FILED.
**DATE:** 740000
ABSTRACT

TITLE: HERBICIDAL WEED CONTROL USES ENERGY EFFICIENTLY.
AUTHOR: NALEWAJA J D.
KEYWORDS: CHEMICALS, EFFICIENCY, ENERGY CONSUMPTION, AGRICULTURE.
NOTES: FILED.
DATE: 750000

ABSTRACT

TITLE: CONSERVING ENERGY WITH HERBICIDE USE IN ROW CROPS.
AUTHOR: NILSON E B, SCHROCK M D.
SOURCE: ENERGY EFFICIENCY & COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, KS, DEC 1975, 2 PP.
KEYWORDS: CHEMICALS, CONSERVATION.
NOTES: FILED.
DATE: 751200

ABSTRACT

TITLE: CONSERVING ENERGY WITH HERBICIDE USE IN SORGHUMS.
AUTHOR: NILSON E B, SCHROCK M D.
SOURCE: ENERGY EFFICIENCY & COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, KS, DEC 1975, 2 PP.
KEYWORDS: CHEMICALS, CONSERVATION.
NOTES: FILED.
DATE: 751200

ABSTRACT

TITLE: WORLD FOOD CRISIS - ENERGY AND PESTS.
AUTHOR: PIMENTEL D.
KEYWORDS: CHEMICALS, WORLD WIDE, FOSSIL FUELS.
NOTES: FILED.
DATE: 760300

ABSTRACT

TITLE: FAO PRELIMINARY REPORT ON THE PESTICIDE SUPPLY/DEMAND SITUATION.
AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
SOURCE: FAO & PEST/PH/75/B4, APRIL 1975, 7 PP.
KEYWORDS: CHEMICALS, SUPPLY DEMAND, WORLD WIDE, CROP PROTECTION.
NOTES: FILED.
DATE: 750400

ABSTRACT

TITLE: INFORMATION SYSTEM ON PESTICIDE SUPPLY AND DEMAND.
AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
SOURCE: FAO & PEST/PH/75/84, APRIL 1975, 3 PP.
KEYWORDS: CHEMICALS, SUPPLY DEMAND, CROP PROTECTION, WORLD WIDE.
NOTES: FILED.
DATE: 750400

ABSTRACT

TITLE: PESTICIDE REQUIREMENTS IN DEVELOPING COUNTRIES - SUMMARY OF REPLIES TO FAO QUESTIONNAIRE.
AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
SOURCE: FAO & PEST/PH/75/84, APRIL 1975, 14 PP.
KEYWORDS: CHEMICALS, CROP PROTECTION, DEVELOPING COUNTRIES, SUPPLY DEMAND.
NOTES: FILED.
DATE: 750400

ABSTRACT

TITLE: REPORT OF THE AD HOC GOVERNMENT CONSULTATION ON PESTICIDES IN AGRICULTURE AND PUBLIC HEALTH.
AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
SOURCE: FAO & PEST/PH/75/P/3, ROME, ITALY, 7-11 APRIL 1975, 19 PP.
KEYWORDS: CHEMICALS, CROP PROTECTION, ENVIRONMENT, SUPPLY DEMAND, DEVELOPING COUNTRIES.
NOTES: FILED.
DATE: 750407
ABSTRACT 435

*TITLE*, CONTROL OF SULFUR DIOXIDE EMISSIONS FROM COAL.
*AUTHOR*, ABELSON P H.
*KEYWORDS*, COAL, POLLUTION.
*NOTES*, FILED.
*DATE*, 750725.

ABSTRACT 436

*TITLE*, THE COAL ALTERNATIVE.
*AUTHOR*, ANON.
*KEYWORDS*, COAL.
*NOTES*, FILED.
*DATE*, 751000.

ABSTRACT 437

*TITLE*, THE ECONOMIC VIABILITY OF SYNTHETIC FUELS FROM COAL.
*AUTHOR*, BAGGE C E.
*SOURCE*, AN ADDRESS TO THE WORLD COAL CONF, 11 SEPT 1975, LONDON, 20 PP.
*KEYWORDS*, COAL, ECONOMICS.
*NOTES*, FILED.
*DATE*, 750911.

ABSTRACT 438

*TITLE*, THE EMERGING PARTNERSHIP OF COAL AND AGRICULTURE.
*AUTHOR*, BAGGE C E.
*SOURCE*, AN ADDRESS TO THE NATIONAL FOOD AND ENERGY SYMPOSIUM, 20 AUG 1975, WASHINGTON D C, 19 PP.
*KEYWORDS*, COAL, AGRICULTURE, USA.
*NOTES*, FILED.
*DATE*, 750820.

ABSTRACT 439

*TITLE*, COAL, WHATS THAT.
*AUTHOR*, BATTELLE MEMORIAL INSTITUTE.
*SOURCE*, ENERGY PERSPECTIVES 14, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, AUG 1974, PP 1-5.
*KEYWORDS*, COAL.
*NOTES*, FILED.
*DATE*, 730800.

ABSTRACT 440

*TITLE*, COKE.
*AUTHOR*, BATTELLE MEMORIAL INSTITUTE.
*SOURCE*, ENERGY PERSPECTIVES 16-17, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, NOV-DEC 1974, PP 1-5.
*KEYWORDS*, COAL, DISTILLATION.
*NOTES*, FILED.
*DATE*, 741100.

ABSTRACT 441

*TITLE*, THE SURFACE MINING OF COAL.
*AUTHOR*, BATTELLE MEMORIAL INSTITUTE.
*SOURCE*, ENERGY PERSPECTIVES 8, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, MARCH 1974, 6 PP.
*KEYWORDS*, COAL, PRODUCTION.
*NOTES*, FILED.
*DATE*, 740330.
ABSTRACT 449

*TITLE: COAL RESEARCH (I)--IS THE PROGRAM MOVING AHEAD.
*AUTHOR: HAMMOND A L.
*KEYWORDS: COAL, USA, COAL GASIFICATION, POLICY.
*NOTES: FILED.
*DATE: 760820

ABSTRACT 450

*TITLE: COAL GASIFICATION (II)--GASIFICATION FACES AN UNCERTAIN FUTURE.
*AUTHOR: HAMMOND A L.
*SOURCE: SCIENCE, 193(4255)/750-753, 27 AUG 1976.
*KEYWORDS: COAL, COAL GASIFICATION, EFFICIENCY.
*NOTES: FILED.
*DATE: 760827

ABSTRACT 451

*TITLE: COAL RESEARCH (III)--LIQUEFACATION HAS FAR TO GO.
*AUTHOR: HAMMOND A L.
*KEYWORDS: COAL, LIQUEFICATION, AFRICA, USA, ECONOMICS.
*NOTES: FILED.
*DATE: 760903

ABSTRACT 452

*TITLE: COAL RESEARCH (IV)--DIRECT COMBUSTION LAGS ITS POTENTIAL
*AUTHOR: HAMMOND A L.
*KEYWORDS: COAL, ELECTRICAL.
*NOTES: FILED.
*DATE: 761008

ABSTRACT 453

*TITLE: GASIFICATION -- A REDISCOVERED SOURCE OF CLEAN FUEL.
*AUTHOR: MAUGH T M.
*KEYWORDS: COAL, COAL GASIFICATION, NATURAL GAS, SNG.
*NOTES: FILED.
*DATE: 721006

ABSTRACT 454

*TITLE: NEW COAL TECHNOLOGY -- THE CINDERELLA FUEL COMES OUT OF THE CELLAR.
*AUTHOR: METZGER N.
*SOURCE: POPULAR SCI, MARCH 1974, PP82-85, 162.
*KEYWORDS: COAL, COAL GASIFICATION, LIQUEFACTION.
*NOTES: FILED.
*DATE: 740300

ABSTRACT 455

*TITLE: METHANOL -- THE NEW FUEL FROM COAL.
*AUTHOR: MILLS G A, HARNEY B M.
*KEYWORDS: COAL, METHANOL, ECONOMICS, COAL GASIFICATION.
*NOTES: FILED.
*DATE: 740100

ABSTRACT 456

*TITLE: COAL AND THE PRESENT ENERGY SITUATION.
*AUTHOR: OSBORN E F.
*KEYWORDS: COAL, ENERGY SOURCES, USA.
*NOTES: FILED.
*DATE: 740208
ABSTRACT 457

•TITLE: THE GASIFICATION OF COAL.
•AUTHOR: PERRY H.
•KEYWORDS: COAL, COAL GASIFICATION.
•NOTES: FILED: NAS.
•DATE: 740300

ABSTRACT 458

•TITLE: COAL IN TENNESSEE.
•AUTHOR: TENNESSEE ENERGY OFFICE.
•SOURCE: TENN ENERGY OFFICE, 250 CAPITOL HILL BLDG, NASHVILLE, TN.
   JUNE 1975: 127 PP.
•KEYWORDS: COAL, TENNESSEE.
•NOTES: FILED.
•DATE: 750600

ABSTRACT 459

•TITLE: SHAPING COAL'S FUTURE THROUGH TECHNOLOGY 1974-1975.
•AUTHOR: US DEPARTMENT OF INTERIOR.
•SOURCE: US DEPT OF THE INTERIOR, OFFICE OF THE SECRETARY, WASHINGTON D C.
   243 PP.
•KEYWORDS: COAL, LIQUEFACTION, GENERAL.
•NOTES: FILED.
•DATE: 

ABSTRACT 460

•TITLE: CLEAN ENERGY FROM COAL.
•AUTHOR: US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE: ERDA, PITTSBURGH ENERGY RESEARCH CENTER, OAK RIDGE, TN.
   MARCH 1975: 89 PP.
•KEYWORDS: COAL, LIQUEFACTION, PYROLYSIS, POLLUTION.
•NOTES: FILED.
•DATE: 750300

ABSTRACT 461

•TITLE: CLEANING COAL AND CUTTING WASTE -- AN ANNUAL REPORT FOR YOUNG PEOPLE.
•AUTHOR: WHEELABRATOR FRYE INC.
•SOURCE: WHEELABRATOR-FRYE INC, HAMPTON, N H. 1974: 16 PP.
•KEYWORDS: COAL, GENERAL.
•NOTES: FILED.
•DATE: 740300

CONSERVATION 462 — 590

ABSTRACT 462

•TITLE: SAVING ENERGY IN THE BUILT ENVIRONMENT -- THE AIA POLICY.
•AUTHOR: AMERICAN INSTITUTE OF ARCHITECTS.
•SOURCE: AMER INST OF ARCHITECTS, 1735 MY AVE NW, WASHINGTON DC. 6 PP.
•KEYWORDS: CONSERVATION, HOME, BUILDINGS.
•NOTES: FILED.
•DATE: 

ABSTRACT 463

•TITLE: THE SQUEEZE ON NEXT YEARS ECONOMY.
•AUTHOR: ANON.
•KEYWORDS: CONSERVATION, PETROLEUM, INDUSTRY.
•NOTES: FILED.
•DATE: 731126
ABSTRACT 464

•TITLE: IN ENERGY IMPASSE, CONSERVATION KEEPS POPPING UP.
•AUTHOR: ANON.
•KEYWORDS: CONSERVATION.
•NOTES: FILED.
•DATE: 750110

ABSTRACT 465

•TITLE: SEVEN WAYS TO REDUCE FUEL CONSUMPTION IN HOUSEHOLD HEATING.
•AUTHOR: ANON.
•SOURCE: SUPERINTENDANT OF DOCUMENTS, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, DEC 1972, 9 PP.
•KEYWORDS: CONSERVATION, INSULATION, HEAT, HOME.
•NOTES: FILED.
•DATE: 721200

ABSTRACT 466

•TITLE: ELEVEN WAYS TO REDUCE ENERGY CONSUMPTION AND INCREASE COMFORT IN HOUSEHOLD COOLING.
•AUTHOR: ANON.
•SOURCE: STOCK NO 020-0876, SUPERINTENDANT OF DOCUMENTS, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 20 PP.
•KEYWORDS: CONSERVATION, HOME, AWARENESS, INSULATION, MAINTENANCE, AIR CONDITIONING.
•NOTES: FILED.
•DATE:

ABSTRACT 467

•TITLE: ECONOMIE DE NERGIE EN HORTICULTURE.
•AUTHOR: ANON.
•SOURCE: PROCEEDINGS OF THE JOURNEES NATIONALES SUR LES ECONOMIES DE NERGIE EN SERRE, ORGANIZED BY LINVULEC, AND LE SERVICE TECHNIQUE DE LA FNPH, AT ORLEANS, FRANCE, 10-11 JUNE 1975, 171 PP.
•KEYWORDS: CONSERVATION, FRANCE, GREENHOUSE.
•NOTES: FILED.
•DATE: 750611

ABSTRACT 468

•TITLE: POTENTIAL FOR ENERGY CONSERVATION IN AGRICULTURAL PRODUCTION.
•AUTHOR: BARNES K K, ET AL.
•SOURCE: REPORT 40, COUNCIL FOR AGR SCI AND TECH, DEPT OF AGRON, IOWA STATE UNIV, AMES IA, 6 FEB 1975, 26 PP.
•KEYWORDS: CONSERVATION, AGRICULTURE, ECONOMICS, ANIMAL, DRYING, TILLAGE, FERTILIZER, IRRIGATION, SOLAR, WIND, MANURE, GREENHOUSE.
•NOTES: FILED.
•DATE: 750206

ABSTRACT 469

•TITLE: PASSIVE FREEZE PROTECTION SUGGESTIONS FOR YOUR ORéHARD.
•AUTHOR: BARTMOLIC J.
•SOURCE: FACT SHEET EC-23, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL 32611, 1977, 5 PP.
•KEYWORDS: CONSERVATION, CROP PROTECTION.
•NOTES: FILED.
•DATE: 770000

ABSTRACT 470

•TITLE: ENERGY CONSERVATION THROUGH EFFECTIVE UTILIZATION.
•AUTHOR: BERG C A.
•KEYWORDS: CONSERVATION, HEAT, INDUSTRY, SOLAR, AIR CONDITIONING.
•NOTES: FILED.
•DATE: 730713
ABSTRACT 471

• TITLE: A TECHNICAL BASIS FOR ENERGY CONSERVATION.
• AUTHOR: BERG C A.
• KEYWORDS: CONSERVATION, NET ENERGY, EFFICIENCY.
• NOTES: FILED. THE ENERGY LOSS DUE TO THE THERMODYNAMIC INEFFICIENCY OF MANY SYSTEMS IS DISCUSSED.
• DATE: 740200

ABSTRACT 472

• TITLE: TIPS ON ENERGY SAVING FOR WISCONSIN FARMERS.
• AUTHOR: BERGE O L, BREVIK T J & BROOKS L A.
• SOURCE: COOPERATIVE EXTENSION PROGRAMS, UNIV OF WISC, MADISON, DEC 1973, 12 PP.
• KEYWORDS: CONSERVATION, WISCONSIN, HOME, HEAT, ELECTRICAL.
• NOTES: FILED.
• DATE: 731200

ABSTRACT 473

• TITLE: ECONOMIE DE L’ENERGIE EN AGRICULTURE - SITUATION ACTUELLE ET PERSPECTIVES.
• AUTHOR: BUBLOT G.
• KEYWORDS: CONSERVATION, AGRICULTURE, FUEL CONSUMPTION, BELGIUM.
• NOTES: FILED.
• DATE: 750700

ABSTRACT 474

• TITLE: CONSERVATION OF ENERGY IN COOLING/HEATING RESIDENTIAL BUILDINGS.
• AUTHOR: BUFFINGTON D E.
• SOURCE: ASAE PAPER 75-4583, 23 PP.
• KEYWORDS: CONSERVATION, AIR CONDITIONING, HEAT.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 475

• TITLE: COMMENT ECONOMISER LE CARBURANT ET LE COMBUSTIBLE DANS LES TRAVAUX AGRICOLES (CONSOMMATION DIRECTE).
• AUTHOR: CARILLON M R.
• SOURCE: CONFEDERATION EUROPEENNE DE L’AGRICULTURE, GROUPE DE TRAVAIL SUR MECANISATION ET PROBLEMES TECHNIQUES, 74/220-5.01.11, APRIL 1975, 15 PP.
• KEYWORDS: CONSERVATION, FUEL CONSUMPTION, AGRICULTURE, FRANCE.
• NOTES: FILED.
• DATE: 750400

ABSTRACT 476

• TITLE: MATCH TRACTORS OR TRACTOR WEIGHT TO JOB FOR FUEL ECONOMY.
• AUTHOR: CARMAHAN, MCDavid.
• SOURCE: NEWS, USDA, 10 FEB 1975, 2 PP.
• KEYWORDS: CONSERVATION, TRACTOR.
• NOTES: FILED.
• DATE: 750210

ABSTRACT 477

• TITLE: ENERGY CONSERVATION IN THE CHEMICAL INDUSTRY.
• AUTHOR: CAUDLE P.
• SOURCE: CHEMISTRY AND INDUSTRY, 6 SEPT 1975, PP 717-722.
• KEYWORDS: CONSERVATION, UNITED KINGDOM, CHEMICALS, INDUSTRY.
• NOTES: FILED.
• DATE: 750906
ABSTRACT 478

• TITLE: CONSERVE.
• AUTHOR: COLORADO STATE UNIVERSITY.
• SOURCE: COOPERATIVE EXTENSION SERVICE, COLORADO STATE UNIV, FORT COLLINS, CO, MARCH 1975, 3 PP.
• KEYWORDS: CONSERVATION, HOME.
• NOTES: FILED.
• DATE: 770300

ABSTRACT 479

• TITLE: REDUCING FARM ENERGY COSTS.
• AUTHOR: CONSTEIN E J, FRISBY J C, BROOKER D B, STEICHEN J E, CRAWFORD F M.
• SOURCE: SCI AND TECH GUIDE 1240, UNIV OF MISSOURI, COLUMBIA, AUG 1975, 2 PP.
• KEYWORDS: CONSERVATION, TILLAGE, DRYING, ELECTRICAL, IRRIGATION, TRANSPORTATION.
• NOTES: FILED.
• DATE: 750800

ABSTRACT 480

• TITLE: SAVING ENERGY WITH AIR COMPRESSORS.
• AUTHOR: CONSUMERS POWER CO.
• KEYWORDS: CONSERVATION.
• NOTES: FILED.
• DATE: 750100

ABSTRACT 481

• TITLE: IT MAKES SENSE TO SAVE ENERGY.
• AUTHOR: CONSUMERS POWER CO.
• SOURCE: CONSUMERS POWER CO, JACKSON, MI, 1975, 22 PP.
• KEYWORDS: CONSERVATION, HOME, HEAT, APPLIANCES, ELECTRICAL.
• NOTES: FILED.
• DATE: 750100

ABSTRACT 482

• TITLE: USING ENERGY WISELY.
• AUTHOR: CONSUMERS POWER CO.
• SOURCE: CONSUMERS POWER CO, 212 W MICH AVE, JACKSON, MI, 1974.
• KEYWORDS: CONSERVATION, HISTORICAL, HOME, ELECTRICAL.
• NOTES: FILED.
• DATE: 740600

ABSTRACT 483

• TITLE: TRACTOR BALLASTING TO CONSERVE FUEL.
• AUTHOR: CROMWELL R P.
• SOURCE: ENERGY CONSERVATION FACT SHEET EC-19, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
• KEYWORDS: CONSERVATION, TRACTOR.
• NOTES: FILED.
• DATE: 740600

ABSTRACT 484

• TITLE: THE WORD IS SAVE.
• AUTHOR: DOW CHEMICAL CO.
• SOURCE: DOW CHEMICAL CO, MIDLAND, MI, 1974, 17 PP.
• KEYWORDS: CONSERVATION, HOME, GENERAL.
• NOTES: FILED.
• DATE: 740600

ABSTRACT 485

• TITLE: ENERGY CONSERVATION-GUIDELINES FOR ACTION.
• AUTHOR: DOYLE J H.
• SOURCE: MICH ASSOC OF SCHOOL ADMINISTRATORS, REGION 9, ENERGY CONSERVATION CURRICULUM COMMITTEE, 421 WEST KALAMAZOO, LANSING, APRIL 1974, 58 PP.
• KEYWORDS: CONSERVATION, ELEMENTARY SCHOOL, POPULAR ARTICLE, AWARENESS.
• NOTES: FILED.
• DATE: 740400
ABSTRACT 486

**TITLE**: ANALYSIS OF ENERGY USAGE ON LONG ISLAND FROM 1975 TO 1995 - THE OPPORTUNITIES TO REDUCE PEAK ELECTRICAL DEMANDS AND ENERGY CONSUMPTION BY ENERGY CONSERVATION, SOLAR ENERGY, WIND ENERGY, AND TOTAL ENERGY SYSTEMS.

**AUTHOR**: DUBIN F S.
**SOURCE**: DUBIN-MINDELL-BLOOME ASSOCIATES, 42 W 39TH ST, NEW YORK, NY 10018, 1975, 78PP.
**KEYWORDS**: CONSERVATION, ELECTRICAL SUPPLY DEMAND.
**NOTES**: FILED.
**DATE**: 750000

**ABSTRACT 487**

**TITLE**: NEW DEVELOPMENTS FOR ENERGY CONSERVATION AND SUBSTITUTION.
**AUTHOR**: DUNNING R.
**SOURCE**: FOOD AND ENERGY SYMPOSIUM, FARM ELECTRIFICATION COUNCIL, WASHINGTON D C, 20 AUG 1975, 8 PP.
**KEYWORDS**: CONSERVATION, DEVELOPMENT.
**NOTES**: FILED.
**DATE**: 750820

**ABSTRACT 488**

**TITLE**: SAFE LIVING WITH LESS ENERGY.
**AUTHOR**: ENERGY CONSERVATION RESEARCH.
**SOURCE**: ENERGY CONSERVATION RESEARCH, 9 BIRCH RD, MALVERN, PA 19355, 1974, 29 PP.
**KEYWORDS**: CONSERVATION, TRANSPORTATION, AWARENESS, HOME.
**NOTES**: FILED.
**DATE**: 740000

**ABSTRACT 489**

**TITLE**: THE ENERGY CRISIS - WHAT CAN WE DO.
**AUTHOR**: ENERGY CONSERVATION RESEARCH.
**SOURCE**: ENERGY CONSERVATION RESEARCH, 9 BIRCH RD, MALVERN, PA 19355, 1974, 29 PP.
**KEYWORDS**: CONSERVATION, HEAT, COOLING, FOOD ENERGY, HOME.
**NOTES**: FILED.
**DATE**: 740000

**ABSTRACT 490**

**TITLE**: A REPORT ON AUTOMOTIVE FUEL ECONOMY.
**AUTHOR**: US ENVIRONMENTAL PROTECTION AGENCY.
**SOURCE**: US EPA, WASHINGTON DC, 1974, 13 PP.
**KEYWORDS**: CONSERVATION, AUTOMOBILE, PETROLEUM, DESIGN, ENVIRONMENT.
**NOTES**: FILED.
**DATE**: 740000

**ABSTRACT 491**

**TITLE**: SAVE YOUR DOLLAR LEAKS, SAVE ENERGY.
**AUTHOR**: FORTENBERRY F.
**SOURCE**: PUBLICATION 887, EXTENSION SERVICE OF MISSISSIPPI STATE UNIV, 1975.
**KEYWORDS**: CONSERVATION, AWARENESS, HOME, HEAT.
**NOTES**: FILED.
**DATE**: 750000

**ABSTRACT 492**

**TITLE**: ENERGY CONSERVATION PROGRAM GUIDE FOR INDUSTRY AND COMMERCE.
**AUTHOR**: GATES R N, MASSEY R G, ROBERTSON J C.
**SOURCE**: NATIONAL BUREAU OF STANDARDS HANDBOOK 115, USGPO, 1974.
**KEYWORDS**: CONSERVATION, INDUSTRY.
**NOTES**: FILED.
**DATE**: 740000
ABSTRACT 493

• TITLE: WATTS GOING ON WHERE YOU LIVE.
• AUTHOR: GENERAL ELECTRIC CO.
• SOURCE: GENERAL ELECTRIC CO. MAJOR BUSINESS GROUP, LOUISVILLE, KY.
• KEYWORDS: CONSERVATION, POPULAR ARTICLE, ELECTRICAL, HOME, APPLIANCES.
• NOTES: FILED.
• DATE: 

ABSTRACT 494

• TITLE: A TEACHERS GUIDE FOR ENERGY CONSERVATION.
• AUTHOR: GIBBONS J. M., ET AL.
• SOURCE: ENVIR CENTER, UNIV OF TENN, KNOXVILLE, TN, 1975, 147 PP.
• KEYWORDS: CONSERVATION, PETROLEUM, AWARENESS, HISTORICAL, ELEMENTARY SCHOOL.
• BIBLIOGRAPHY.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 495

• TITLE: ENERGY - THE MIDDLE AT THE TOP.
• AUTHOR: GILLETTE R.
• KEYWORDS: CONSERVATION.
• NOTES: FILED.
• DATE: 731228

ABSTRACT 496

• TITLE: ENERGY CONSERVATION RIGHT NOW.
• AUTHOR: GRUMMAN AEROSPACE CORP.
• SOURCE: GRUMMAN AEROSPACE CORP. ENERGY PROGRAMS, BETHPAGE, NY, 1975, 5 PP.
• KEYWORDS: CONSERVATION.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 497

• TITLE: HOW TO SAVE POWER ON YOUR FARM AND GET MORE ACRES PER TANKFUL.
• AUTHOR: HALPERN F.
• SOURCE: MOBIL NEWS RELEASE, MOBIL OIL CORP, 150 EAST 42ND STREET, N Y, 3 MARCH 1975, 8 PP.
• KEYWORDS: CONSERVATION, AGRICULTURE, TRACTOR, ENGINE, PETROLEUM, LOAD SPEED, MINIMUM TILLAGE, LUBRICATION, DIESEL.
• NOTES: FILED.
• DATE: 750303

ABSTRACT 498

• TITLE: ENERGY - FORD FOUNDATION STUDY URGES ACTION ON CONSERVATION.
• AUTHOR: HAMMOND A. L.
• KEYWORDS: CONSERVATION, USA, ECONOMICS, ELECTRICAL.
• NOTES: FILED.
• DATE: 741101

ABSTRACT 499

• TITLE: ENERGY CONSERVATION AND THE CONSUMER.
• AUTHOR: HANNON B. M.
• KEYWORDS: CONSERVATION, LABOR, ECONOMICS.
• NOTES: FILED.
• DATE: 750711

ABSTRACT 500

• TITLE: OPTIONS FOR ENERGY CONSERVATION.
• AUTHOR: HANNON B. M.
• KEYWORDS: CONSERVATION, ECONOMICS, ENERGY ACCOUNTING.
• NOTES: FILED. DISCUSSED IS PRODUCTION EFFICIENCY, PRODUCT USE EFFICIENCY, RATE OF ENERGY USE AND A METHOD FOR DETERMINING THE ENERGY COST OF ONE UNIT OF AN ITEM.
• DATE: 740200
ABSTRACT 501

*TITLE: ENERGY - THE CASE FOR CONSERVATION.
*AUTHOR: HAYES D.
*SOURCE: WORLDWATCH PAPER 4, WORLDWATCH INST.
1776 MASS AVE NW, WASHINGTON, D.C. JAN 1976, 77 PP.
*KEYWORDS: CONSERVATION, TRANSPORTATION, FOOD ENERGY, WASTES.
*NOTES: FILED.
*DATE: 760100

ABSTRACT 502

*TITLE: PUBLIC ATTITUDES TOWARD ENERGY AND ITS CONSERVATION - A STATEWIDE SURVEY OF PUBLIC OPINION.
*AUTHOR: MEDULUND R D, HARM K E, STEIN R M.
*SOURCE: URBAN RESEARCH CENTER, UNIV OF WISCONSIN, MILWAUKEE, WI 53201, 30 JUNE 1977, 124 PP.
*KEYWORDS: CONSERVATION, WISCONSIN.
*NOTES: FILED.
*DATE: 770630

ABSTRACT 503

*TITLE: EFFICIENCY OF ENERGY USE IN THE UNITED STATES.
*AUTHOR: HIRST C, MOYER J C.
*KEYWORDS: CONSERVATION, TRANSPORTATION, AIR CONDITIONING, HEAT, USA.
*NOTES: FILED.
*DATE: 730330

ABSTRACT 504

*TITLE: TEN FUEL AND MONEY SAVING GRAIN DRYING IDEAS.
*AUTHOR: HOOD M.
*KEYWORDS: CONSERVATION, AWARENESS, DRYING.
*NOTES: FILED.
*DATE: 750900

ABSTRACT 505

*TITLE: ENERGY SAVINGS IN AN INSULATED-FAN VENTILATED BROILER HOUSE.
*AUTHOR: HUGHES H A, WEAVER W D.
*SOURCE: ASAE PAPER 75-4533, 9 PP.
*KEYWORDS: CONSERVATION, ANIMAL, FOOD PROCESSING.
*NOTES: FILED.
*DATE: 750800

ABSTRACT 506

*TITLE: EIGHT TIPS FOR OLD-FASHIONED FUEL ECONOMY.
*AUTHOR: INTERNATIONAL HARVESTER.
*KEYWORDS: CONSERVATION, AWARENESS, AGRICULTURE.
*NOTES: FILED.
*DATE: 730800

ABSTRACT 507

*TITLE: ENERGY CONSERVATION TASK FORCE AND GUIDE TO PUBLIC MEETINGS.
*AUTHOR: JAYCEES.
*SOURCE: PROJECT INFO KIT, US JAYCEES, PO BOX 7, TULSA, OK, 15 PP.
*KEYWORDS: CONSERVATION, AWARENESS, HOME, INDUSTRY.
*NOTES: FILED.
*DATE: 750000

ABSTRACT 508

*TITLE: AUTO EFFICIENCY CHECK LANES.
*AUTHOR: JAYCEES.
*SOURCE: US JAYCEES, PO BOX 7, TULSA, OK.
*KEYWORDS: CONSERVATION, AUTOMOBILE.
*NOTES: FILED.
*DATE: 740100
ABSTRACT 509
*TITLE: I WANT YOU TO HELP SAVE ENERGY.
*AUTHOR: JAYCEES.
*S SOURCE: ENERGY, US JAYCEES, PO BOX 7, TULSA, OK, 8 PP.
*KEYWORDS: CONSERVATION.
*NOTE: FILED.
*DATE:

ABSTRACT 510
*TITLE: YOUTH PROGRAM FOR ENERGY EDUCATION AND TEACHER KIT.
*AUTHOR: JAYCEES.
*S SOURCE: US JAYCEES, PO BOX 7, TULSA, OK, 5 PP.
*KEYWORDS: CONSERVATION, ELEMENTARY SCHOOL.
*NOTE: FILED.
*DATE:

ABSTRACT 511
*TITLE: A GUIDE TO MASS MEDIA INFLUENCE IN ENERGY CONSERVATION.
*AUTHOR: JAYCEES.
*S SOURCE: ENERGY AND THE ENVIR, US JAYCEES, PO BOX 7, TULSA, OK, 7 PP.
*KEYWORDS: CONSERVATION.
*NOTE: FILED.
*DATE:

ABSTRACT 512
*TITLE: OPPORTUNITIES TO CONSERVE ENERGY IN DRYER DESIGN.
*AUTHOR: JOHNSON H K.
*S SOURCE: FOR PRESENTATION AT ENERGY FOR AGR CONF, PURDUE UNIV AND CORN REFINERS ASSOC INC, 18-19 SEPT 1973, 10 PP.
*KEYWORDS: CONSERVATION, DRYING.
*NOTE: FILED.
*DATE: 730918

ABSTRACT 513
*TITLE: ENERGY CONSERVATION IS IMPORTANT.
*AUTHOR: JONES K.
*S SOURCE: ENERGY MANAGEMENT LEAFLET 1, OKLAHOMA STATE UNIV, STILLWATER, OK, 2 PP.
*KEYWORDS: CONSERVATION.
*NOTE: FILED.
*DATE:

ABSTRACT 514
*TITLE: ENERGY AND CONSERVATION OF RENEWABLE RESOURCES.
*AUTHOR: JOURNAL OF SOIL AND WATER CONSERVATION.
*KEYWORDS: CONSERVATION, ENERGY SOURCES, LAND USE, ENVIRONMENT.
*NOTE: THE SOIL CONSERVATION SOCIETY OF AMERICA IS CONCERNED ABOUT OUR INCREASING DEPENDENCE ON DWINDLING FINITE SUPPLIES OF ENERGY AND THE NEED TO CONTROL ENVIRONMENTAL DEGRADATION. A DISCUSSION OF ENERGY SOURCES AND USES EMPHASIZES PROBLEMS ASSOCIATED WITH FOSSIL FUELS, NUCLEAR ENERGY, SOLAR ENERGY AND OTHER SOURCES. A NEEDED INTEGRATED APPROACH TOWARD THE USE OF VARIOUS ENERGY SOURCES IS OUTLINED. THREATS TO WILDLIFE FROM ENERGY DEVELOPMENT ARE LISTED, AND THE NEED TO MINIMIZE IMPACTS IS EMPHASIZED. ENERGY CONSERVATION EDUCATION SHOULD RECEIVE MORE ATTENTION.
*DATE: 780300

ABSTRACT 515
*TITLE: ENERGY CONSERVATION TECHNOLOGIES - OPTIMAL SYSTEMS FOR DAIRY PARLORS.
*AUTHOR: KAM G F, PRICE K R.
*S SOURCE: ASAE PAPER 76-3579, 1976, 19 PP.
*KEYWORDS: CONSERVATION, DAIRY, ELECTRICAL.
*NOTE: FILED.
*DATE: 760000
ABSTRACT 516

*TITLE* THE POTENTIAL FOR ENERGY CONSERVATION.
*AUTHOR* KUPPERMAN R.
*SOURCE* STOCK NO 4102-00009; SUPERINTENDENT OF DOCUMENTS, US GOVT PRINTING OFFICE, WASHINGTON DC 20402; 15 PP.
*KEYWORDS* CONSERVATION, INSULATION, HOME, AIR CONDITIONING, TRANSPORTATION.
*DATE* FILED.

ABSTRACT 517

*TITLE* MIDDEN WASTE - POTENTIAL FOR ENERGY CONSERVATION.
*AUTHOR* LARGE D B.
*KEYWORDS* CONSERVATION.
*DATE* 730000

ABSTRACT 518

*TITLE* PLANNING AHEAD TO SAVE ENERGY.
*AUTHOR* LAWLER F K.
*KEYWORDS* CONSERVATION, TRANSPORTATION.
*DATE* FILED.

ABSTRACT 519

*TITLE* ENERGY CONSERVATION.
*AUTHOR* LINCOLN & A.
*KEYWORDS* CONSERVATION, SUPPLY, DEMAND, TRANSPORTATION, INDUSTRY, ELECTRICAL, POLLUTION.
*DATE* FILED.

ABSTRACT 520

*TITLE* HOME HEATING ENERGY CONSERVATION PRACTICES AND THEIR EFFECTIVENESS.
*AUTHOR* LORENZER R T.
*SOURCE* ASAE PAPER 75-4501; 3 PP.
*KEYWORDS* CONSERVATION, INSULATION, HEAT, HOME.
*DATE* FILED.

ABSTRACT 521

*TITLE* ENERGY CONSERVATION IN THE POULTRY PROCESSING INDUSTRY.
*AUTHOR* LOWRY J F, COMBES R S.
*SOURCE* PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON ENERGY AND FOOD, BOSTON; 9-13 AUG 1976, P 139.
*KEYWORDS* CONSERVATION, ANIMAL, INDUSTRY.
*DATE* FILED.

ABSTRACT 522

*TITLE* HOW TO SAVE ON YOUR ELECTRIC BILL.
*AUTHOR* MICHIGAN STATE UNIVERSITY.
*SOURCE* EXTENSION BULLETIN E-776, MICH STATE UNIV, EAST LANSING, MI 48824, NOV 1973, 20PP.
*KEYWORDS* CONSERVATION, HOME, REFRIGERATION, APPLIANCES, HEAT.
*DATE* FILED.
ABSTRACT 523

**TITLE:** LES ECONOMIES DENERGIE.
**AUTHOR:** MINISTRE DE LINDUSTRIE ET DE LA RECHERCHE.
**SOURCE:** LES DOSSIERS DE LENERGIE 11, MINISTRE DE LINDUSTRIE ET DE LA RECHERCHE, LA DOCUMENTATION FRANCAISE, 29-31 QUAI VOLTAIRE, 75340 PARIS CEDEX 07, 1976, 94 PP.
**KEYWORDS:** CONSERVATION, FRANCE, ENERGY CONSUMPTION.
**NOTES:** FILED.
**DATE:** 760000

ABSTRACT 524

**TITLE:** ECONOMIES DENERGIE - LES INDUSTRIES ALIMENTAIRES RELEVENT LE DEFI.
**AUTHOR:** MINISTRE DE LINDUSTRIE ET DE LA RECHERCHE.
**SOURCE:** MINISTRE DE LINDUSTRIE ET DE LA RECHERCHE, INDUSTRIES ALIMENTAIRES, FRANCE, 1975, 32 PP.
**KEYWORDS:** CONSERVATION, FOOD PROCESSING, INDUSTRY, FRANCE.
**NOTES:** FILED.
**DATE:** 750000

ABSTRACT 525

**TITLE:** HOW TO DRIVE FOR MAXIMUM ECONOMY.
**AUTHOR:** MOBIL OIL CORP.
**SOURCE:** MOBIL OIL CORP, PRODUCTS DEPT, 150 E 42ND ST, NEW YORK, NY, 1974.
**KEYWORDS:** CONSERVATION, AUTOMOBILE, PETROLEUM, OPERATING PROCEDURE, LOAD SPEED.
**NOTES:** FILED.
**DATE:** 740000

ABSTRACT 526

**TITLE:** CONSERVATION AND THE NEW REALITIES OF ENERGY.
**AUTHOR:** MORTON R C B.
**SOURCE:** AGR/I/INDUSTRY NEWS, CORN REFINERS ASSOC, 8(1)/1-3, JAN 1976.
**KEYWORDS:** CONSERVATION.
**NOTES:** FILED.
**DATE:** 760100

ABSTRACT 527

**TITLE:** ENERGY CONSERVATION AND THE SHORTAGE OF DISTILLATE FUEL OIL.
**AUTHOR:** MULLER J.
**KEYWORDS:** CONSERVATION, PETROLEUM, INDUSTRY, TRANSPORTATION, FOSSIL FUELS.
**NOTES:** FILED.
**DATE:** 730920

ABSTRACT 528

**TITLE:** A GUIDE TO REDUCING ENERGY USE, BUDGET COSTS.
**AUTHOR:** NATIONAL ASSOCIATION OF COUNTIES, NATIONAL LEAGUE OF CITIES, US-CONFERENCE OF MAYORS.
**SOURCE:** REPORT TO THE FEA CONDUCTED BY THE NAT ASSOC OF COUNTIES, NAT LEAGUE OF CITIES, AND THE US CONF OF MAYORS, 1977, 93 PP.
**KEYWORDS:** CONSERVATION, BUILDINGS, TRANSPORTATION.
**NOTES:** FILED.
**DATE:** 770000

ABSTRACT 529

**TITLE:** SAVING ENERGY SAVING MONEY - IT MAKES SENSE.
**AUTHOR:** OREGON DEPARTMENT OF ENERGY.
**SOURCE:** OREGON DEPT OF ENERGY, 528 COTTAGE ST NE, SALEM, OR 97310, 11 PP.
**KEYWORDS:** CONSERVATION, HOME.
**NOTES:** FILED.
**DATE:**
ABSTRACT 530

TITLE: ENERGY CONSERVATION IN BEEF CATTLE PRODUCTION.

AUTHOR: PACE J E.

SOURCE: FACT SHEET EC-36, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL 32611, 1975, 3 PP.

KEYWORDS: CONSERVATION, ANIMAL PRODUCTION.

NOTES: FILED.

DATE: 760000

ABSTRACT 531

TITLE: THE METER-MINDERS GUIDEBOOK - 67 WAYS TO CONSERVE ENERGY.

AUTHOR: PACIFIC GAS AND ELECTRIC CO.

SOURCE: PACIFIC GAS AND ELECTRIC CO, JUNE 1975, 11 PP.

KEYWORDS: CONSERVATION, HOME, HEAT, REFRIGERATION, APPLIANCES.

NOTES: FILED.

DATE: 750606

ABSTRACT 532

TITLE: EVALUATING ENERGY-SAVING PRACTICES BY SIMULATION.

AUTHOR: PEART R M, DOERING O C.

SOURCE: MSF/RA 770127, ENERGY IN AGR, AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE IN 47907, JUNE 1977, 5 PP.

KEYWORDS: CONSERVATION, ECONOMICS.

NOTES: FILED.

DATE: 760600

ABSTRACT 533

TITLE: DRYING THE CROP WITH LESS FUEL.

AUTHOR: PETERSON W H.

SOURCE: FACT SHEET 607, COOPERATIVE EXTENSION SERVICE, SOUTH DAKOTA STATE UNIV, BROOKINGS, 5 PP, UNDATED.

KEYWORDS: CONSERVATION, DRYING, ELECTRICAL, SOLAR.

NOTES: FILED.

DATE:

ABSTRACT 534

TITLE: HOW TO HAVE A CARFUL OF ENERGY.

AUTHOR: PRESCOTT J A ET AL.

SOURCE: MACOMB COUNTY COOPERATIVE EXTENSION SERVICE, NINTH FLOOR, COUNTY BUILDING, MOUNT CLEMANS, MI 48043, 1P.

KEYWORDS: CONSERVATION, AUTOMOBILE.

NOTES: FILED.

DATE:

ABSTRACT 535

TITLE: REDUCTION OF ENERGY AND DETERGENT USE FOR CLEANING MILK HANDLING EQUIPMENT.

AUTHOR: PRICE D R, WEEKS S A, SOBEL A T, ZALL R R, BROWN D P.

SOURCE: ASAE PAPER 75-3522, 12 PP.

KEYWORDS: CONSERVATION, DAIRY, CHEMICALS.

NOTES: FILED.

DATE: 750000

ABSTRACT 536

TITLE: ENERGY CONSERVATION AT THE DAIRY MILKING CENTER.

AUTHOR: PRICE D R, ZALL R R, BROWN D P, SOBEL A T, WEEKS S A.


KEYWORDS: CONSERVATION, DAIRY.

NOTES: FILED.

DATE: 750000
ABSTRACT 537

**TITLE**: SOME WAYS TO CONSERVE TRACTOR FUEL.

**AUTHOR**: RENOLL E.

**SOURCE**: HIGHLIGHTS OF AGRICULTURAL RESEARCH, AUBURN UNIV, 22(2)/1P, 1975.

**KEYWORDS**: CONSERVATION, TRACTOR, DIESEL, OPERATING PROCEDURE, MINIMUM TILLAGE, LOAD SPEED, MAINTENANCE.

**NOTES**: FILED.

**DATE**: 750000

ABSTRACT 538

**TITLE**: ENERGY EFFICIENCY--OUR MOST UNDERRATED ENERGY RESOURCE.

**AUTHOR**: ROSS M. W. WILLIAMS R. M.

**SOURCE**: BULLETIN OF THE ATOMIC SCIENTISTS, 32(9)/30-38, NOV 1976.

**KEYWORDS**: CONSERVATION, HEAT, COOLING, INDUSTRY, HOME, ELECTRICAL.

**NOTES**: FILED. AGGRESSIVE PURSUIT OF ENERGY CONSERVATION IS A PROMISING ROAD TO ENVIRONMENTAL PROTECTION, NATIONAL ECONOMIC WELL-BEING AND REDUCED DEPENDENCE ON FOREIGN SOURCES. WE CAN HAVE ENERGY ABUNDANCE WITHOUT ENERGY GROWTH.

**DATE**: 761100

ABSTRACT 539

**TITLE**: ENERGY CONSERVATION HANDBOOK FOR LIGHT INDUSTRIES AND COMMERCIAL BUILDINGS.

**AUTHOR**: RUDDY L.

**SOURCE**: OFFICE OF ENERGY PROGRAMS, US DEPT OF COMMERCE, WASHINGTON DC, MAY 1975, 17PP.

**KEYWORDS**: CONSERVATION, INDUSTRY, BUILDINGS.

**NOTES**: FILED.

**DATE**: 740500

ABSTRACT 540

**TITLE**: ENERGY CONSERVATION - ITS NATURE, HIDDEN BENEFITS AND HIDDEN BARRIERS.

**AUTHOR**: SCHIPPER L.


**KEYWORDS**: CONSERVATION, EFFICIENCY, ECONOMICS, ACCOUNTING.

**NOTES**: FILED. THIS REPORT DISCUSSES VARIOUS DEFINITIONS OF ENERGY CONSERVATION AND EFFICIENCY OF ENERGY UTILIZATION. THE ROLES OF PHYSICAL ANALYSIS AS WELL AS ECON AND TECHNICAL PROCEDURE OF OPTIMIZING ENERGY- USING SYSTEMS BASED ON PRESENT AND FUTURE COSTS TO PROVIDE GREATER OUTPUT FOR LOWER ENERGY INPUTS. MANY CONSERVATION STUDIES OF INDIVIDUAL SYSTEMS ARE REFERRED TO, AND ECONOMIC EXAMPLES ARE GIVEN AS WELL.

**DATE**: 760600

ABSTRACT 541

**TITLE**: SAVING FUEL IN YOUR DAILY FARM OPERATIONS.

**AUTHOR**: SCHROCK M. D.

**SOURCE**: ENERGY EFFICIENCY IN KANSAS AGR 7; COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, KS, DEC 1973, 2 PP.

**KEYWORDS**: CONSERVATION, TRACTOR.

**NOTES**: FILED.

**DATE**: 731200

ABSTRACT 542

**TITLE**: SAVING FUEL THROUGH PROPER ENGINE MAINTENANCE.

**AUTHOR**: SCHROCK M. D.

**SOURCE**: ENERGY EFFICIENCY IN KANSAS AGR 6; COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, KS, DEC 1973, 2 PP.

**KEYWORDS**: CONSERVATION, MAINTENANCE.

**NOTES**: FILED.

**DATE**: 731200
ABSTRACT 543

• TITLE: CONSERVATION OF ELECTRICITY IN DAIRY BARNS.
• AUTHOR: SHEA P.
• SOURCE: ASAE PAPER 76-3539, 1976, 13 PP.
• KEYWORDS: CONSERVATION, DAIRY, ELECTRICAL.
• NOTES: FILED.
• DATE: 760000

ABSTRACT 544

• TITLE: THE NATIONAL ENERGY PROBLEM - POTENTIAL ENERGY SAVINGS.
• AUTHOR: SHELL OIL CO.
• SOURCE: SHELL OIL CO, PUBLIC AFFAIRS, PO BOX 2463, HOUSTON, TX, OCT 1975, 28 PP.
• KEYWORDS: CONSERVATION, TRANSPORTATION, INDUSTRY, HOME.
• NOTES: FILED.
• DATE: 751000

ABSTRACT 545

• TITLE: FUEL ECONOMIES IN AGRICULTURE AND HORTICULTURE.
• AUTHOR: SHIPWAY G P.
• SOURCE: EEC COMMITTEE ON AGRICULTURAL PROBLEMS, WOODMORNE, WOLVERHAMPTON, UNITED KINGDOM, 17 JULY 1974, 3 PP.
• KEYWORDS: CONSERVATION, TRACTOR, AGRICULTURE, MAINTENANCE, LOAD SPEED, DRYING, MECHANIZATION, TRANSPORTATION, HEAT, GREENHOUSE.
• NOTES: FILED.
• DATE: 740710

ABSTRACT 546

• TITLE: 350 WAYS TO SAVE ENERGY AND MONEY.
• AUTHOR: SPIES H R, KONSO S, CALVIN J, THOMS W.
• SOURCE: NEW YORK/CROWN PUBLISHERS, 1974, 198 PP.
• KEYWORDS: CONSERVATION, HOME, HEAT, INSULATION, REFRIGERATION, APPLIANCES, AUTOMOBILE, OPERATING PROCEDURE, MAINTENANCE.
• NOTES: FILED.
• DATE: 740000

ABSTRACT 547

• TITLE: RECOMMENDATIONS FOR GREATER ENERGY EFFICIENCY IN LARGE BUILDINGS.
• AUTHOR: TENNESSEE ENERGY OFFICE.
• SOURCE: TENN. ENERGY OFFICE, 250 CAPITOL HILL BLDG, NASHVILLE, TN, 7PP, UNDATED.
• KEYWORDS: CONSERVATION, BUILDINGS.
• NOTES: FILED.
• DATE:

ABSTRACT 548

• TITLE: ENERGY CONSERVATION.
• AUTHOR: TRAIN R E.
• SOURCE: ECO-TIPS NO 5, CONCERN INC, 2233 WISCONSIN AVE N W, WASHINGTON D C.
• KEYWORDS: CONSERVATION, GENERAL, INDUSTRY, HOME.
• NOTES: FILED.
• DATE:

ABSTRACT 549

• TITLE: ALTERNATIVES AND ASSOCIATED FUEL-ENERGY REQUIREMENTS FOR CORN HARVESTING.
• AUTHOR: TURQUIST P K, DURLAND G R.
• SOURCE: FACT SHEET 605, COOPERATIVE EXTENSION SERVICE, SOUTH DAKOTA STATE UNIV, BROOKINGS, 5 PP.
• KEYWORDS: CONSERVATION, DRYING, HARVESTING.
• NOTES: FILED.
• DATE:
ABSTRACT 550

**TITLE**: ENERGY CONSERVATION-COOLING.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, AIR CONDITIONING.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 551

**TITLE**: ENERGY CONSERVATION-HEATING.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 2 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, HOME, HEAT, AWARENESS.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 552

**TITLE**: ENERGY CONSERVATION IN THE HOME.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 3 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, HOME.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 553

**TITLE**: ENERGY CONSERVATION-CONSUMER CHECKLIST.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 4 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 554

**TITLE**: ENERGY CONSERVATION OUTSIDE THE HOME.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 5 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, AWARENESS.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 555

**TITLE**: ENERGY CONSERVATION—THERE IS AN ENERGY CRISIS.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 6 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, AWARENESS.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 556

**TITLE**: ENERGY CONSERVATION—BUILDING AND REMODELING.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 7 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, AWARENESS.

**NOTES**: FILED.

**DATE**: 731100

ABSTRACT 557

**TITLE**: ENERGY CONSERVATION IN THE KITCHEN.

**AUTHOR**: UNIVERSITY OF FLORIDA.

**SOURCE**: EXTENSION INFO SHEET 8 & INST OF FOOD AND AGR SCI.

**UNIV OF FLORIDA, GAINESVILLE, FL, NOV 1973, 2PP.**

**KEYWORDS**: CONSERVATION, HOME, AWARENESS.

**NOTES**: FILED.

**DATE**: 731100
ABSTRACT 558

TITLE: ENERGY CONSERVATION—IRRIGATE EFFICIENCY TO CONSERVE ENERGY.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 11, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, IRRIGATION, EFFICIENCY.
NOTES: FILED.
DATE: 731200

ABSTRACT 559

TITLE: ENERGY CONSERVATION—INSULATION.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 13, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, INSULATION.
NOTES: FILED.
DATE: 731200

ABSTRACT 560

TITLE: ENERGY CONSERVATION—WEATHERSTRIPPING.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 14, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, HOME.
NOTES: FILED.
DATE: 731200

ABSTRACT 561

TITLE: ENERGY CONSERVATION—DRYING AND STORING SOYBEANS.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 15, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, DRYING, STORAGE.
NOTES: FILED.
DATE: 731200

ABSTRACT 562

TITLE: ENERGY CONSERVATION—KEEPING WARM IN A CRISIS.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 16, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, MEAT.
NOTES: FILED.
DATE: 731200

ABSTRACT 563

TITLE: ENERGY CONSERVATION—HOME FURNISHINGS.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 17, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, JAN 1974, 2PP.
KEYWORDS: CONSERVATION, HOME.
NOTES: FILED.
DATE: 740100

ABSTRACT 564

TITLE: ENERGY CONSERVATION ECONO—POT COOKERY.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 18, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, JAN 1974, 2PP.
KEYWORDS: CONSERVATION, COOKING, HOME.
NOTES: FILED.
DATE: 740100

ABSTRACT 565

TITLE: ENERGY CONSERVATION—AUTOMOBILE.
AUTHOR: UNIVERSITY OF FLORIDA.
SOURCE: EXTENSION INFO SHEET 19, INST OF FOOD AND AGR SCI.
UNIV OF FLORIDA, GAINESVILLE, FL, DEC 1973, 2PP.
KEYWORDS: CONSERVATION, AUTOMOBILE, MAINTENANCE.
NOTES: FILED.
DATE: 731200
ABSTRACT 566

*TITLE, IDEAS AND ACTIVITIES FOR TEACHING ENERGY CONSERVATION GRADES 7-12.
*AUTHOR, UNIVERSITY OF TENNESSEE.
*SOURCE, PREPARED BY THE ENVIR CENTER, UNIV OF TENN, KNOXVILLE, TN 37916, 1977, 225 PP.
*KEYWORDS, CONSERVATION, ENERGY SOURCES, GENERAL.
*NOTES, FILED.
*DATE, 770000

ABSTRACT 567

*TITLE, ENERGY MANAGEMENT ON THE FARM.
*AUTHOR, US-DEPARTMENT OF AGRICULTURE.
*SOURCE, OFFICE OF COMMUNICATION, USDA, MARCH 1974, 8 PP.
*KEYWORDS, CONSERVATION, TILLAGE, HARVESTING, PRODUCTION, IRRIGATION, FERTILIZER.
*NOTES, FILED.
*DATE, 740300

ABSTRACT 568

*TITLE, ENERGY MANAGEMENT FOR THE RURAL FAMILY.
*AUTHOR, US-DEPARTMENT OF AGRICULTURE.
*SOURCE, OFFICE OF COMMUNICATION, USDA, WASHINGTON D C, MARCH 1974, 7 PP.
*KEYWORDS, CONSERVATION, HOME, HEAT, AIR CONDITIONING.
*NOTES, FILED.
*DATE, 740300

ABSTRACT 569

*TITLE, FUEL ALLOCATIONS FOR FARMERS.
*AUTHOR, US-DEPARTMENT OF AGRICULTURE.
*SOURCE, USDA, WASHINGTON D C, MARCH 1974, 6 PP.
*KEYWORDS, CONSERVATION, PETROLEUM.
*NOTES, FILED.
*DATE, 740300

ABSTRACT 570

*TITLE, 53 MONEY SAVING WAYS TO CONSERVE ENERGY IN YOUR BUSINESS.
*AUTHOR, US-DEPARTMENT OF COMMERCE.
*SOURCE, OFFICE OF ENERGY PROGRAMS, US DEPT OF COMMERCE, WASHINGTON D C, APRIL 1974, 6 PP.
*KEYWORDS, CONSERVATION, HEAT, INDUSTRY, MAINTENANCE.
*NOTES, FILED.
*DATE, 740400

ABSTRACT 571

*TITLE, GUIDE TO ENERGY CONSERVATION FOR FOOD SERVICE.
*AUTHOR, US-FEDERAL ENERGY ADMINISTRATION.
*SOURCE, ENERGY CONSERVATION AND ENVIRONMENT, OFFICE OF INDUSTRIAL PROGRAMS, FEA, WASHINGTON D C, OCT 1975, 69 PP.
*KEYWORDS, CONSERVATION, APPLIANCES, OPERATING PROCEDURE.
*NOTES, FILED.
*DATE, 751000

ABSTRACT 572

*TITLE, MEASURES FOR REDUCING ENERGY CONSUMPTION FOR HOMEOWNERS AND RENTERS.
*AUTHOR, US-FEDERAL POWER COMMISSION.
*SOURCE, STAFF REPORT, OFFICE OF ENERGY SYSTEMS, FEDERAL POWER COMMISSION, MARCH 1975, 22 PP.
*KEYWORDS, CONSERVATION, HOME, AWARENESS.
*NOTES, FILED.
*DATE, 750300

ABSTRACT 573

*TITLE, A TECHNICAL BASIS FOR ENERGY CONSERVATION.
*AUTHOR, US-FEDERAL POWER COMMISSION.
*SOURCE, STAFF REPORT, OFFICE OF THE CHIEF ENGINEER, FEDERAL POWER COMMISSION, WASHINGTON D C, APRIL 1974, 33 PP.
*KEYWORDS, CONSERVATION.
*NOTES, FILED.
*DATE, 740400
ABSTRACT 574

*TITLE* GUIDELINES FOR ENERGY CONSERVATION FOR IMMEDIATE IMPLEMENTATION - SMALL BUSINESS AND LIGHT INDUSTRIES.

*AUTHOR* US-FEDERAL POWER COMMISSION.

*SOURCE* STAFF REPORT, OFFICE OF THE CHIEF ENGINEER, FEDERAL POWER COMMISSION, WASHINGTON D.C., FEB 1974, 22 PP.

*KEYWORDS* CONSERVATION.

*NOTES* FILED.

*DATE* 740200

ABSTRACT 575

*TITLE* LIGHTING AND THERMAL OPERATIONS GUIDELINES.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* OFFICE OF CONSERVATION AND ENVIR, FEA, WASHINGTON DC, 1974, 18PP.

*KEYWORDS* CONSERVATION, HEAT, COOLING.

*NOTES* FILED.

*DATE* 740000

ABSTRACT 576

*TITLE* INDUSTRIAL ENERGY CONSERVATION REPORT.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* FACT SHEET INDUSTRIAL PROGRAMS, CONSERVATION AND ENVIR, FEA, WASHINGTON DC, NOV 1973, 16 PP.

*KEYWORDS* CONSERVATION, INDUSTRY, ECONOMICS.

*NOTES* FILED.

*DATE* 751100

ABSTRACT 577

*TITLE* COMPARISON OF ENERGY CONSUMPTION BETWEEN WEST GERMANY AND THE UNITED STATES.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* ENERGY CONSERVATION PAPER 33, OFFICE OF MARKETING AND EDUCATION, FEA, WASHINGTON DC, 1975, 13 PP.

*KEYWORDS* CONSERVATION, GERMANY, USA, TRANSPORTATION, INDUSTRY, PETROLEUM.

*NOTES* FILED.

*DATE* 750000

ABSTRACT 578

*TITLE* ENERGY CONSERVATION - UNDERSTANDING AND ACTIVITIES FOR YOUNG PEOPLE.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* OFFICE OF CONSERVATION EDUCATION, FEA, WASHINGTON DC, 1975, 20 PP.

*KEYWORDS* CONSERVATION, GENERAL.

*NOTES* FILED.

*DATE* 750000

ABSTRACT 579

*TITLE* ENERGY MANAGEMENT CASE HISTORIES.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* ENERGY CONSERVATION PAPER 14, OFFICE OF INDUSTRIAL PROGRAMS, FEA, WASHINGTON DC, 15 PP.

*KEYWORDS* CONSERVATION, INDUSTRY.

*NOTES* FILED.

*DATE* 750000

ABSTRACT 580

*TITLE* LIGHTING AND THERMAL OPERATIONS - ENERGY CONSERVATION PRINCIPLES APPLIED TO OFFICE LIGHTING.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* ENERGY CONSERVATION PAPER 18, FEA, WASHINGTON DC, APRIL 1975, 150 PP.

*KEYWORDS* CONSERVATION, HEAT, BUILDINGS, EFFICIENCY.

*NOTES* FILED.

*DATE* 750400

ABSTRACT 581

*TITLE* TIPS FOR ENERGY SAVERS.

*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.

*SOURCE* CONSERVATION AND ENVIR, FEA, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1975, 30 PP.

*KEYWORDS* CONSERVATION, HOME, AWARENESS.

*NOTES* FILED.

*DATE* 750000
ABSTRACT 582
*TITLE* 1975 GAS MILEAGE GUIDE FOR NEW CAR BUYERS.
*AUTHOR* US-FEDERAL ENERGY ADMINISTRATION.
*SOURCE* CONSERVATION AND ENVIR. FEA, WASHINGTON DC, 1975, 30 PP.
*KEYWORDS* CONSERVATION, AUTOMOBILE.
*NOTES* FILED.
*DATE* 750500

ABSTRACT 583
*TITLE* CONSERVATION AND EFFICIENT USE OF ENERGY.
*AUTHOR* US-HOUSE.
*KEYWORDS* CONSERVATION, ECONOMICS, WASTE MEAT.
*NOTES* FILED.
*DATE* 740600

ABSTRACT 584
*TITLE* CONSERVATION AND EFFICIENT USE OF ENERGY.
*AUTHOR* US-HOUSE.
*SOURCE* REPORT 93-790 OF THE COMMITTEE ON SCI AND ASTRONAUTICS, US HOUSE OF REP, 2ND SESSION, 1974, 272 PP.
*KEYWORDS* CONSERVATION, ECONOMICS, INDUSTRY, HOME, WASTE MEAT.
*NOTES* FILED.
*DATE* 740900

ABSTRACT 585
*TITLE* ENERGY CONSERVATION AND CONVERSION ACT OF 1975.
*AUTHOR* US-SENATE.
*KEYWORDS* CONSERVATION.
*NOTES* FILED.
*DATE* 750700

ABSTRACT 586
*TITLE* INDUSTRY EFFORTS IN ENERGY CONSERVATION.
*AUTHOR* US-SENATE.
*KEYWORDS* CONSERVATION.
*NOTES* FILED, 100 LARGEST CORP IN THE US LISTED, RESPONSES TO LETTER FROM SENATOR MAGNUSON.
*DATE* 741200

ABSTRACT 587
*TITLE* PROTEIN AND ENERGY CONSERVATION OF POULTRY AND FRACTIONATED ANIMAL WASTE.
*AUTHOR* WARD G H SECKLER D.
*KEYWORDS* CONSERVATION, POULTRY, ANIMAL WASTE.
*NOTES* FILED.
*DATE* 750600

ABSTRACT 588
*TITLE* THE ENERGY CRUNCH - HOW TO COPE WITH IT.
*AUTHOR* WHITE R G ROBERTSON L S.
*SOURCE* AEIS 287, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JAN 1974, 3 PP.
*KEYWORDS* CONSERVATION.
*NOTES* FILED.
*DATE* 740100

ABSTRACT 589
*TITLE* HOW TO SAVE GASOLINE.
*AUTHOR* WILDMORN S BURRIS B K ENNS J H KIRKWOOD T F.
*SOURCE* R-1569-NSF RAND CORP, SANTA MONICA, CALIF, 1974, 168 PP.
*KEYWORDS* CONSERVATION, PETROLEUM, POLICY, DESIGN, ECONOMICS.
*NOTES* FILED.
*DATE* 740100
ABSTRACT 590

• TITLE: THE ENERGY CONSERVATION PAPERS.
• AUTHOR: WILLIAMS R H.
• SOURCE: CAMBRIDGE, MASS/BALLINGER PUB CO, 1975, 377 PP.
• KEYWORDS: CONSERVATION, TRANSPORTATION, ECONOMICS, ALTERNATIVES.
• NOTE: FILED.
• DATE: 750000

DRIYING 591 — 661

ABSTRACT 591

• TITLE: RADIENT ENERGY AND ITS RELATION TO FORAGE DRYING.
• AUTHOR: AJIBOLA O, KOEGEL R, BRUHN M D.
• SOURCE: ASAE PAPER 78-3551, 1978, 12 PP.
• KEYWORDS: DRYING, RADIATION.
• DATE: 780000

ABSTRACT 592

• TITLE: EVALUATION OF SOLAR REGENERATION OF SILICA GEL AND USE IN GRAIN DRYING.
• AUTHOR: ALDIS D F, BURROUGHS R, HUGHES J W.
• SOURCE: ASAE PAPER 78-3527, 1978, 27 PP.
• KEYWORDS: DRYING, SOLAR, EFFICIENCY.
• NOTE: FILED. SILICA GEL WAS USED TO STORE SOLAR ENERGY FOR DRYING CORN AND MILO.
• DATE: 780000

ABSTRACT 593

• TITLE: MAKE THE MOST OF COSTLY CORN DRYING FUEL.
• AUTHOR: ANON.
• KEYWORDS: DRYING, MICHIGAN, LP6AS.
• NOTE: FILED.
• DATE: 751115

ABSTRACT 594

• TITLE: USE OF A HEAT PUMP TO CONSERVE ENERGY IN GRAIN DRYING.
• AUTHOR: AYERS D L, HOGAN M R, OKOS M R, PEART R M.
• KEYWORDS: DRYING, HEAT PUMPS, CONSERVATION.
• NOTE: FILED.
• DATE: 760809
ABSTRACT 595

• TITLE: SOLAR GRAIN DRYING IN ILLINOIS
• AUTHOR: BAKER J L, SHOVE G C.
• SOURCE: ASAE PAPER 77-3009, 1977, 10PP.
• KEYWORDS: DRYING, SOLAR, HEAT, DESIGN, BUILDINGS.
• NOTES: FILED.

ABSTRACT 596

• TITLE: FEASIBILITY STUDY OF IN-BIN CORN DRYING IN THE MIDWESTERN UNITED STATES USING SOLAR ENERGY.
• AUTHOR: BAKKER-ARKEMA F W.
• SOURCE: DEPT OF AGR (ENR), MICH STATE UNIV, EAST LANSING, MICH 48824, DEC 1976, 17 PP.
• KEYWORDS: DRYING, SOLAR, MODELS, TECHNOLOGY ASSESSMENT.
• NOTES: FILED.
• DATE: 761200

ABSTRACT 597

• TITLE: HIGH TEMPERATURE WHEAT DRYING.
• AUTHOR: BAKKER-ARKEMA F, AMMADIA-SOKHANSANJ A, GREEN R.
• SOURCE: ASAE PAPER 77-3527, 1977, 19 PP.
• KEYWORDS: DRYING.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 598

• TITLE: SIMULATION OF LOW TEMPERATURE DRYING OF SHELLED CORN LEADING TO OPTIMIZATION.
• AUTHOR: BLOOM E P, SHOVE G C.
• KEYWORDS: DRYING, MODELS.
• NOTES: FILED.
• DATE: 720000

ABSTRACT 599

• TITLE: SOLAR ENERGY DRYING AND PROCESS CONTROL WITH MICROCOMPUTER.
• AUTHOR: BOWERS C G, HUANG B K, NASSAR A H.
• SOURCE: ASAE PAPER 78-3537, 1978, 30 PP.
• KEYWORDS: DRYING, GREENHOUSE, SOLAR, MODELS.
• NOTES: FILED.

ABSTRACT 600

• TITLE: FOOD DRYING WITH DIRECT SOLAR AUGMENTED WITH FOSSIL ENERGY.
• AUTHOR: BRYAN W L, WAGNER C J, BERRY R E.
• SOURCE: ASAE PAPER 77-6520, 1977, 6 PP.
• KEYWORDS: DRYING, SOLAR.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 601

• TITLE: UNIVERSITY STUDIES OF SOLAR GRAIN DRYING.
• AUTHOR: BUCKINGHAM F.
• KEYWORDS: DRYING, SOLAR.
• NOTES: FILED.
• DATE: 780107
ABSTRACT 602

TITLE: USE OF SOLAR ENERGY TO CURE PEANUTS.
AUTHOR: BUTLER J L, TROEGER J M.
SOURCE: ASAE PAPER 77-3033, 1977, 9PP.
KEYWORDS: DRYING, SOLAR.
NOTES: FILED. TESTS WERE DONE ON THE ANGLE NEED ON A COLLECTOR IN THE PEANUT PRODUCING AREA TO COLLECT SOLAR ENERGY FOR PEANUT DRYING. ALSO INCLUDED IS THE PERCENT OF HEAT ENERGY THAT WAS SUPPLIED BY SOLAR ENERGY.
DATE: 770000

ABSTRACT 603

TITLE: RICE DRYING WITH SOLAR HEAT.
AUTHOR: CALDERWOOD D L.
SOURCE: ASAE PAPER 77-3003, 1977, 11PP.
KEYWORDS: DRYING, SOLAR, HEAT.
NOTES: FILED. SOLAR HEAT AIDED DEEP-BED RICE DRYING BY REDUCING DRYING TIME AND ELECTRICAL ENERGY CONSUMPTION FOR FAN OPERATION COMPARED WITH UNHEATED AIR DRYING. THIS USE OF SOLAR HEAT CAUSED A SMALL REDUCTION IN MILLING YIELD OF RICE SAMPLES COMPARED TO UNHEATED AIR-DRYED SAMPLES.
DATE: 770000.

ABSTRACT 604

TITLE: SAVE ENERGY - DRY RICE IN THE FIELD.
AUTHOR: CHAU N N, KUNZE O R.
KEYWORDS: DRYING, RICE.
NOTES: FILED.
DATE: 780000.

ABSTRACT 605

TITLE: OPTIMAL MANAGEMENT PROCEDURES FOR SOLAR GRAIN DRYING.
AUTHOR: COLLIVER D G, BROOK R C, HEART A M.
SOURCE: ASAE PAPER 78-3512, 1978, 13PP.
KEYWORDS: DRYING, SOLAR, MODELS.
NOTES: FILED. THE DEVELOPMENT OF A MATHEMATICAL MODEL TO DYNAMICALLY DETERMINE THE LOCAL OPTIMAL MANAGEMENT PROCEDURES TO MINIMIZE THE ENERGY COST IN LOW-TEMPERATURE GRAIN DRYING SYSTEMS IS DEVELOPED. USING THE CRITICAL PATH METHOD OF OPTIMIZATION, THE OPTIMAL MANAGEMENT PROCEDURES THROUGHOUT THE DRYING PERIOD ARE DETERMINED.
DATE: 780000.

ABSTRACT 606

TITLE: IN-SHED GRAIN DRYING ENERGY SAVINGS FROM SOLAR HEAT.
AUTHOR: CONVERSE H M, LAI F S, SAUER D B.
SOURCE: ASAE PAPER 78-3529, 1978, 11PP.
KEYWORDS: DRYING, SOLAR, CONSERVATION.
NOTES: FILED. BATCH IN-BIN GRAIN DRYING TESTS WERE USED TO EVALUATE THE DIFFERENCE IN ENERGY INPUT REQUIRED BY SYSTEMS EMPLOYING SOLAR HEAT AND NATURAL AIR TO DRY COMPAREABLE LOTS OF CORN AND SORGHUM.
DATE: 780000.

ABSTRACT 607

TITLE: AN ENERGY MODEL FOR A MULTI-BARN BULK CURING SYSTEM.
AUTHOR: CUNDIFF J S, THREADGILL E D.
KEYWORDS: DRYING, MODELS.
NOTES: FILED.
DATE: 780000.

ABSTRACT 608

TITLE: THE USE OF SOLAR ENERGY IN CURING TOBACCO.
AUTHOR: DREWS P L, HEATH D G.
KEYWORDS: DRYING, CANADA.
NOTES: FILED.
DATE: 780820.
ABSTRACT 609

**TITLE**: THIN-BED DRYING OF POULTRY MANURE.

**AUTHOR**: FAIRBANK W C, PRICE F C.

**SOURCE**: AGR SANITATION AND WASTE MANAGEMENT SERIES, COOPERATIVE EXTENSION SERVICE, UNIV OF CALIF, JUNE 1973, 6 PP.

**KEYWORDS**: DRYING, MANURE.

**NOTES**: FILED.

**DATE**: 700600.

ABSTRACT 610

**TITLE**: UNDER-CAGE DRYING AND WINDROW COMPOSTING OF MANURE.

**AUTHOR**: FAIRBANK W C, ADOLPH R H.

**SOURCE**: AGR SANITATION AND WASTE MANAGEMENT SERIES, COOPERATIVE EXTENSION SERVICE, UNIV OF CALIF, MAY 1972, 7 PP.

**KEYWORDS**: DRYING, MANURE, OPERATING PROCEDURE.

**NOTES**: FILED.

**DATE**: 720500.

ABSTRACT 611

**TITLE**: TECHNIQUES FOR DRYING PUYCH CONTENTS WITH SOLAR ENERGY.

**AUTHOR**: FARMER D M, BRUSEWITZ G M, MOUSTAFA S M A.

**SOURCE**: ASAE PAPER 77-6523, 1977, 18 PP.

**KEYWORDS**: DRYING, SOLAR, WASTES.

**NOTES**: FILED.

**DATE**: 770000.

ABSTRACT 612

**TITLE**: GRAIN DRYING - REFLECTIONS AND PERSPECTIVES.

**AUTHOR**: FOSTER G H, PEART R M.

**SOURCE**: ASAE PAPER 76-3005, 9 PP.

**KEYWORDS**: DRYING, HISTORICAL.

**NOTES**: FILED.

**DATE**: 760900.

ABSTRACT 613

**TITLE**: SOLAR GRAIN DRYING - PROGRESS AND POTENTIAL.

**AUTHOR**: FOSTER G H, PEART R M.

**SOURCE**: AGR INFO BULLETIN 401, US GOVERNMENT PRINTING OFFICE, WASHINGTON, D C 20402, NOV 1976, 13 PP.

**KEYWORDS**: DRYING, SOLAR.

**NOTES**: FILED.

**DATE**: 761100.

ABSTRACT 614

**TITLE**: SOLAR DRYING OF AGRICULTURAL PRODUCTS.

**AUTHOR**: GARG H P, KRISHNAN A.


**KEYWORDS**: DRYING, AGRICULTURE, DESIGN.

**NOTES**: FILED.

**DATE**: 741200.

ABSTRACT 615

**TITLE**: ENERGY COSTS AND CROP DRYING.

**AUTHOR**: GIBB J A C.

**SOURCE**: SPAN, 18(11)/31, 1975.

**KEYWORDS**: DRYING, ENERGY CONSUMPTION.

**NOTES**: FILED.

**DATE**: 750000.

ABSTRACT 616

**TITLE**: SOLAR GRAIN DRYING AT TWO LOCATIONS IN GEORGIA.

**AUTHOR**: HAMPOND W C, WINSETT I L.

**SOURCE**: ASAE PAPER 76-3516, 1976, 12 PP.

**KEYWORDS**: DRYING, SOLAR, GEORGIA.

**NOTES**: FILED.

**DATE**: 766000.
ABSTRACT 617

*TITLE: SOLAR GRAIN DRYING CONFERENCE PROCEEDINGS.
*AUTHOR: MARTIN J. G. ED.
*SOURCE: DOE, OFFICE OF SOLAR APPLICATIONS, NEW AND INDUSTRIAL PROCESSHEAT BRANCH, 20 MASS AVE, NW WASHINGTON DC, 20545, 2-3 MAY 1976, 150 PP.
*NOTES: FILED.
*KEYWORDS: DRYING, SOLAR, STORAGE, OHIO.
*DATE: 780502

ABSTRACT 618

*TITLE: THE PERFORMANCE AND ECONOMIC FEASIBILITY OF SOLAR GRAIN DRYING SYSTEMS.
*AUTHOR: HEID W. G.
*SOURCE: REPORT 396, USDA, WASHINGTON DC 20250, FEB 1978, 33 PP.
*KEYWORDS: DRYING, ECONOMICS, SOLAR.
*NOTES: FILED.
*DATE: 780200

ABSTRACT 619

*TITLE: DRYING OF LARGE HAY PACKAGES WITH SOLAR HEATED AIR.
*AUTHOR: HENRY Z. BLEDOS B. ELLER D. D.
*SOURCE: ASAE 77, 1977, 17PP.
*KEYWORDS: DRYING, SOLAR, EFFICIENCY, TECHNOLOGY ASSESSMENT.
*NOTES: FILED.
*DATE: 77UD00

ABSTRACT 620

*TITLE: ENERGY USE AND CONSERVATION IN THE POULTRY INDUSTRIES.
*AUTHOR: ROGERS G. B.
*SOURCE: PRESENTED AT NORTH CENTRAL STATES POULTRY EXTENSION WORKSHOP, LINCOLN, NE, 5 MAY 1976, 23 PP.
*KEYWORDS: ANIMAL PRODUCTION, POULTRY, POULTRY AND EGG PRODUCTS, FOOD PROCESSING, ACCOUNTING, ECONOMICS, CONSERVATION, MARKETING.
*NOTES: FILED, ANALYZES ENERGY CONSUMPTION AND COST FOR THE PRODUCTION, PROCESSING AND MARKETING OF VARIOUS POULTRY AND EGG PRODUCTS.
*DATE: 760505

ABSTRACT 621

*TITLE: IMPACT ASSESSMENT OF MICROWAVE-VACUUM GRAIN DRYING CONSERVATION TECHNOLOGY.
*AUTHOR: HITTMAN ASSOCIATES.
*SOURCE: HIT-678, HITTMAN ASSOCIATES, INC, COLUMBIA, MD 21045, DEC 1976, 62 PP.
*KEYWORDS: DRYING, MICROWAVE, MODELS, ALTERNATIVES, ECONOMICS.
*NOTES: FILED. TECHNOLOGICAL AND ECONOMIC FEASIBILITY OF SUBSTITUTING MICROVAVE-VACUUM GRAIN DRYING FOR EXISTING HIGH CAPACITY LP-G, NATURAL GAS- OR OIL-FIRED HOT AIR DRYERS. HIGH COSTS ARE A BARRIER TO PRACTICAL IMPLEMENTATION BASED ON COMPUTER SIMULATION.
*DATE: 761231

ABSTRACT 622

*TITLE: LOW TEMPERATURE GRAIN DRYING.
*AUTHOR: HOLMES E. S.
*SOURCE: KANSAS STATE UNIV, MANHATTAN, SEPT 1974, 10 PP.
*KEYWORDS: DRYING, OPERATING PROCEDURE.
*NOTES: FILED.
*DATE: 740900

ABSTRACT 623

*TITLE: SAVING FUEL IN GRAIN DRYING.
*AUTHOR: HOLMES E. S.
*SOURCE: MF-364A, KANSAS STATE UNIV, MANHATTAN, KS, FEB 1974, 2 PP.
*KEYWORDS: DRYING, AWARENESS.
*NOTES: FILED.
*DATE: 740200

ABSTRACT 624

*TITLE: ENERGY CONSERVATION FOR KANSAS AGRICULTURE - GUIDE TO LOW TEMPERATURE AND AIR DRYING GRAIN.
*AUTHOR: HOLMES E. S., KULMAN D. K.
*SOURCE: DEPT OF AGR ENGR, KANSAS STATE UNIV, MANHATTAN, KS, SEPT 1976, 4 PP.
*KEYWORDS: DRYING, CONSERVATION.
*NOTES: FILED.
*DATE: 760900
ABSTRACT 624

*TITLE*: CIRCUIT SIMULATION ANALYSIS OF HEAT TRANSFER EFFECT IN SOLAR DRYING.
*AUTHOR*: HUANG B K, CHANG-H-S.
*SOURCE*: ASAE PAPER 76-3019, 30 PP.
*KEYWORDS*: DRYING, SOLAR, THERMOELECTRIC.
*NOTES*: FILED.
*DATE*: 760000

ABSTRACT 625

*TITLE*: DRYING CORN WITH A CROP RESIDUE FIRED FURNACE.
*AUTHOR*: KAJEMSKI A H, MARLEY S J, BUCHELE W F.
*SOURCE*: ASAE PAPER 77-3525, 1977, 10 PP.
*KEYWORDS*: DRYING, DESIGN.
*NOTES*: FILED.
*DATE*: 770000

ABSTRACT 626

*TITLE*: ENERGY MANAGEMENT IN CORN DRYING.
*AUTHOR*: KEENER H M.
*KEYWORDS*: DRYING.
*NOTES*: FILED.
*DATE*: 770903

ABSTRACT 627

*TITLE*: SOLAR COLLECTOR COSTS FOR LOW-TEMPERATURE GRAIN DRYING.
*AUTHOR*: KLINE G L, ODEKIRK W L.
*SOURCE*: ASAE PAPER 78-3508, 1978, 30 PP.
*KEYWORDS*: DRYING, SOLAR, ECONOMICS, ELECTRICAL.
*NOTES*: FILED. SIX PROTOTYPE SOLAR COLLECTORS SUITABLE FOR LOW-TEMPERATURE GRAIN DRYING WERE SELECTED FOR COST ANALYSIS. THE COST OF SOLAR GRAIN DRYING IS COMPARED WITH CONVENTIONAL ELECTRIC AND SOLAR-ELECTRIC FOR A REPRESENTATIVE GRAIN DRYING SITUATION.
*DATE*: 780000

ABSTRACT 628

*TITLE*: GRAIN DRYING WITH SUPPLEMENTAL SOLAR HEAT.
*AUTHOR*: KRANZLER G A, BERN C J, KLINE G L.
*SOURCE*: ASAE PAPER 75-3501, 16 PP.
*KEYWORDS*: DRYING, SOLAR, REQUIREMENTS, ELECTRICAL.
*NOTES*: FILED.
*DATE*: 750622

ABSTRACT 629

*TITLE*: IMPROVEMENT IN GRAIN-DRYER FUEL EFFICIENCY THROUGH HEAT RECOVERY.
*AUTHOR*: LAI F S, FOSTER G H.
*SOURCE*: ASAE PAPER 75-3517, 25 PP.
*KEYWORDS*: DRYING, EFFICIENCY, REQUIREMENTS, WASTE HEAT, RECYCLING, DESIGN.
*NOTES*: FILED.
*DATE*: 750000

ABSTRACT 630

*TITLE*: EFFICIENCY OF ENERGY USE - NEW THEME IN GRAIN DRYING.
*AUTHOR*: LEHMERT D.
*KEYWORDS*: DRYING.
*NOTES*: FILED.
*DATE*: 760700
ABSTRACT 631

•TITLE: DRYING AND STORING SHELLED CORN.
•AUTHOR: MADDEX R. L.
•SOURCE: EXTENSION BULLETIN E-799 NO 8, COOPERATIVE EXTENSION SERVICE, MICH STATE UNIV, EAST LANSING, OCT 1974, 4 PP.
•KEYWORDS: DRYING, STORAGE.
•NOTES, FILED.
•DATE: 741000

ABSTRACT 632

•TITLE: PRACTICES FOR THE EFFICIENT UTILIZATION OF ENERGY FOR DRYING CORN.
•AUTHOR: MOREY R V, CLOUD M A, LUESCHEN W E.
•SOURCE: TRANSACTIONS ASAE, 19(1)/151-155, 1976.
•KEYWORDS: DRYING.
•NOTES.
•DATE: 760000

ABSTRACT 633

•TITLE: EVALUATION OF THE FEASIBILITY OF SOLAR ENERGY GRAIN DRYING.
•AUTHOR: MOREY R V, CLOUD M A, GUSTAFSON R J, PETERSEN P W.
•SOURCE: ASAE PAPER 77-3013, 1977, 12PP.
•KEYWORDS: DRYING, SOLAR, ECONOMICS, EFFICIENCY.
•NOTES, FILED.
•DATE: 770000

ABSTRACT 634

•TITLE: THE PROSPECT OF IMPROVING SOLAR DEHYDRATION OF FOODS.
•AUTHOR: HOY J H.
•SOURCE: ASAE PAPER 77-6522, 1977, 13 PP.
•KEYWORDS: DRYING, SOLAR.
•NOTES, FILED.
•DATE: 770000

ABSTRACT 635

•TITLE: EFFECTIVE ENERGY UTILIZATION IN GRAIN DRYING.
•AUTHOR: PATTERSON R J, MADDEX R L.
•SOURCE: ASAE 292, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, MARCH 1974, 5 PP.
•KEYWORDS: DRYING, CONSERVATION.
•NOTES, FILED.
•DATE: 740300

ABSTRACT 636

•TITLE: EVALUATION OF SOLAR GRAIN DRYING BY SIMULATION.
•AUTHOR: PEARL R M, OKOS M R, JUDSON R J.
•SOURCE: PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON ENERGY AND FOOD, BOSTON, 9-13 AUG 1976, P 47.
•KEYWORDS: DRYING, SOLAR.
•NOTES, FILED.
•DATE: 760809

ABSTRACT 637

•TITLE: SOLAR-ELECTRIC DRYING OF CORN IN SOUTH DAKOTA.
•AUTHOR: PETERSON W M, MELICKSON M A.
•KEYWORDS: DRYING, SOLAR.
•NOTES, FILED.
•DATE: 760000

ABSTRACT 638

•TITLE: FAN MANAGEMENT SYSTEMS FOR NATURAL AIR DRYERS.
•AUTHOR: PFOS M H, KAURER S G, GROSH L E, CHUNG D S, FOSTER G H.
•SOURCE: ASAE PAPER 77-3526, 1977, 16 PP.
•KEYWORDS: DRYING.
•NOTES, FILED.
•DATE: 770000
ABSTRACT 639

•Title: Energy Utilization and Efficiency of Crossflow Grain Dryers.
•Author: PIERCE R O, THOMPSON T L.
•Source: ASAE Paper 75-3020, 12 PP.
•Keywords: Drying, Energy Consumption, Technology Assessment.
•Notes: Filed.
•Date: 750000

ABSTRACT 640

•Title: Management of Solar and Low-Temperature Grain Drying Systems Part 1 Strategies with Full Bin.
•Author: PIERCE R O, THOMPSON T L.
•Source: ASAE Paper 78-3513, 1978, 13 PP.
•Keywords: Drying, Solar, Economics.
•Notes: Filed. Minimum airflow requirements are presented for most of the corn producing areas of the United States. Drying performance was also simulated for several full bin management strategies. These managements were studied for a wide range of operating conditions.
•Date: 780000

ABSTRACT 641

•Title: Management of Solar and Low-Temperature Grain Drying Systems Part 2.
•Author: PIERCE R O, THOMPSON T L.
•Source: ASAE Paper 78-3514, 1978, 18 PP.
•Keywords: Drying, Solar, Models.
•Notes: Filed.
•Date: 780000

ABSTRACT 642

•Title: Drying of Carioca Dry Beans with Solar Energy in a Stationary Bin.
•Author: ROA G M, CARVALHO MACEDO J.
•Source: ASAE Paper 76-3021, 1976, 9 PP.
•Keywords: Drying, Brazil, Solar.
•Notes: Filed.
•Date: 760000

ABSTRACT 643

•Title: Drying of Cassava.
•Author: ROA G M, BAKKER-ARKEMA F W, JOHNSON L, BECK J V.
•Keywords: Drying.
•Notes: Filed.
•Date: 740000

ABSTRACT 644

•Title: Energy Use and Conservation in the Poultry Industries.
•Author: ROGERS G B.
•Source: Presented at North Central States Poultry Extension Workshop, Lincoln, NE, 5 May 1976, 23 PP.
•Keywords: Animal Production, Poultry, Poultry and Egg Products, Food Processing, Accounting, Economics, Conservation, Marketing.
•Notes: Filed. Analyzes energy consumption and cost for the production, processing and marketing of various poultry and egg products.
•Date: 760505

•Title: Impact Assessment of Microwave - Vacuum Grain Drying Conservation Technology.
•Author: HITTMAN ASSOCIATES.
•Source: HIT-676, HITTMAN ASSOCIATES, INC, COLUMBIA, MD 21045, 31 Dec 1976, 62 PP.
•Keywords: Drying, Microwave, Models, Alternatives, Economics.
•Notes: Filed. Technological and economic feasibility of substituting microwave-vacuum grain drying for existing high capacity LP, natural gas, or oil-fired hot air dryers. High costs are a barrier to practical implementation. Based on computer simulation.
•Date: 761231

ABSTRACT 645

•Title: Concept of a Solar Drying System for Forage.
•Author: ROVE R J.
•Source: ASAE Paper 76-3016, 15 Aug 1976, 8 PP.
•Keywords: Drying, Solar.
•Notes: Filed.
•Date: 760815
ABSTRACT 646

TITDE: SIMULATION OF SOLAR GRAIN DRYING USING THE LOGARITHMIC MODEL.
AUTHOR: SABBACH M A, KECHNER M A, MAYER G C.
SOURCE: ASAE PAPER 77-3012, 1977, 26PP.
KEYWORDS: DRYING, MODELS, SOLAR.
NOTES: FILED. THE ACCURACY OF USING THE LOG MODEL OF DRYING FOR SIMULATING SOLAR AND NATURAL GRAIN DRYING WAS EXAMINED.
DATE: 770000

ABSTRACT 647

TITDE: LOW TEMPERATURE DRYING OF SHELLED CORN WITH ELECTRIC HEAT.
AUTHOR: SHOVEL G C.
SOURCE: ILLINOIS FARM ELECTRIFICATION COUNCIL, MAY 1973, 5 PP.
KEYWORDS: DRYING, ELECTRICAL, OPERATING PROCEDURE.
NOTES: FILED.
DATE: 730500

ABSTRACT 648

TITDE: MANAGEMENT OF LOW TEMPERATURE CORN DRYING SYSTEMS.
AUTHOR: SHOVEL G C.
SOURCE: DEPT OF AGR ENGR, UNIV OF ILLINOIS, URBANA-CHAMPAIGN, 4 PP, UNDATED.
KEYWORDS: DRYING.
NOTES: FILED.
DATE: 770000

ABSTRACT 649

TITDE: DRYING GRAIN WITH SOLAR ENERGY.
AUTHOR: SHOVEL G C.
KEYWORDS: DRYING, SOLAR, DESIGN.
NOTES: FILED.
DATE: 770000

ABSTRACT 650

TITDE: PROCEEDINGS OF THE SOLAR GRAIN DRYING CONFERENCE.
AUTHOR: SHOVEL G C, ED.
SOURCE: SOLAR GRAIN DRYING CONF SPONSORED BY UNIV OF ILL, ILL FARM ELECTRIFICATION COUNCIL AND THE ASAE, 11-12 JAN 1977, URBANA-CHAMPAIGN, IL, 282PP.
KEYWORDS: DRYING, SOLAR, DESIGN.
NOTES: FILED.
DATE: 770111

ABSTRACT 651

TITDE: DRYING AND STORAGE OF CORN.
AUTHOR: SKINNER T C.
SOURCE: EC-4 INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
KEYWORDS: DRYING.
NOTES: FILED.
DATE: 760000

ABSTRACT 652

TITDE: DRYING AND STORING PEANUTS.
AUTHOR: SKINNER T C.
SOURCE: EC-2 INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
KEYWORDS: DRYING.
NOTES: FILED.
DATE: 760000

ABSTRACT 653

TITDE: DRYING AND STORAGE OF SOYBEANS.
AUTHOR: SKINNER T C.
SOURCE: EC-3 INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
KEYWORDS: DRYING.
NOTES: FILED.
DATE: 760000
ABSTRACT 654

•TITLE: SOLAR CELL POWERED GRAIN DRYING.
•AUTHOR: THOMPSON T L, PIERCE R C.
•SOURCE: ASAE PAPER 76-3509, 1976, 8 PP.
•KEYWORDS: DRYING, SOLAR, PHOTOVOLTAIC.
•NOTES: FILED. THIS PAPER GIVES THE CONCLUSION OF DRYING TESTS CONDUCTED TO STUDY THE PERFORMANCE OF A NATURAL AIR SYSTEM WHERE THE FAN WAS POWERED BY A PHOTOVOLTAIC ARRAY.
•DATE: 760000

ABSTRACT 655

•TITLE: SIMULATION OF SOLAR PEANUT DRYING.
•AUTHOR: TROEGER J R, BUTLER J L.
•SOURCE: ASAE PAPER 77-3587, 1977, 15 PP.
•KEYWORDS: DRYING, SOLAR, MODELS.
•NOTES: FILED.
•DATE: 770000

ABSTRACT 656

•TITLE: SOLAR CURING FACILITIES FOR BURLEY TOBACCO.
•AUTHOR: WALTON L R, HENSON W H, McNEILL S G, PARKER B F, BUNN J M.
•SOURCE: ASAE PAPER 77-3002, 1977, 8 PP.
•KEYWORDS: DRYING, SOLAR, STORAGE, TECHNOLOGY ASSESSMENT.
•NOTES: FILED. A SOLAR-COLLECTOR-ROCKBED-STORAGE SYSTEM FOR CURING BURLEY TOBACCO PROVIDED HEAT TO MODIFY THE ENVIRONMENT DURING CRITICAL PERIODS OF HIGH HUMIDITY.
•DATE: 770000

ABSTRACT 657

•TITLE: ESTIMATED MONTHLY FUEL REQUIREMENTS FOR AGRICULTURAL PRODUCTION INCLUDING ON-FARM AND COMMERCIAL CROP DRYING.
•AUTHOR: WHITE R G, MADDEN R W, PATTERSON R J.
•SOURCE: AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, 31 JULY 1973, 1 PP.
•KEYWORDS: DRYING, REQUIREMENTS.
•NOTES: FILED.
•DATE: 730731

ABSTRACT 658

•TITLE: SOLAR GRAIN DRYING AND COLLECTOR EVALUATION.
•AUTHOR: WILLIAMS E E, CKOS M M, PEART R M, BADENHOP A F.
•SOURCE: ASAE PAPER 76-3512, 1976, 16 PP.
•KEYWORDS: DRYING, SOLAR, HEAT, DESIGN.
•NOTES: FILED.
•DATE: 760000

ABSTRACT 659

•TITLE: ELECTRIC ENERGY SUBSTITUTION ELECTRICITY FOR CROP DRYING.
•AUTHOR: WILSON S E.
•SOURCE: FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, 20 AUG 1975, WASHINGTON D.C, 3 PP.
•KEYWORDS: DRYING, ELECTRICAL.
•NOTES: FILED.
•DATE: 750820

ABSTRACT 660

•TITLE: FEASIBILITY OF USING SOLAR ENERGY FOR LUMBER DRYING IN NORTHWESTERN ONTARIO.
•AUTHOR: YANG K C.
•SOURCE: PRESENTED AT THE 4TH ANNUAL MEETING OF THE SOLAR ENERGY SOC OF CANADA, UNIV OF WESTERN ONTARIO, LONDON, ONTARIO, CANADA, 20-24 AUG 1976, 18 PP.
•KEYWORDS: DRYING, SOLAR, DESIGN, TECHNOLOGY ASSESSMENT, CANADA.
•NOTES: FILED.
•DATE: 780820

ABSTRACT 661

•TITLE: ENGINEERING ANALYSIS OF ENERGY SOURCES FOR LOW TEMPERATURE DRYING.
•AUTHOR: ZINK M, BROOK R C, PEART R M.
•SOURCE: ASAE PAPER 78-3517, 1978, 12 PP.
•KEYWORDS: DRYING, ENERGY SOURCE, ECONOMICS.
•NOTES: FILED. VARIOUS HEAT ENERGY OPTIONS FOR LOW-TEMPERATURE DRYING ARE EVALUATED. PROJECTIONS ARE MADE FOR FEASIBILITY OF THESE OPTIONS, PARTICULARLY AS COMPARED TO GASIFICATION PROCESS. ECONOMIC ANALYSIS USED PRESENT VALUE TECHNIQUES.
•DATE: 780000
ABSTRACT 662

**TITLE:** TWO DIGIT INFLATION.

**AUTHOR:** ABELSON P M.

**SOURCE:** SCIENCE 185(4156)/1 P, 20 SEPTEMBER 1974.

**KEYWORDS:** ECONOMICS.

**NOTES:** FILED.

**DATE:** 740928

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ABSTRACT 663

**TITLE:** ECONOMIC EFFECT ON AGRICULTURAL PRODUCTION OF ALTERNATIVE ENERGY INPUT PRICES - TEXAS HIGH PLAINS.

**AUTHOR:** ADAMS B M, LOCEWELL R D, CONDRA G D.

**SOURCE:** TECH REPORT 73, TEXAS WATER RESOURCES INST, TEXAS A AND M UNIV, COLLEGE STATION, TX, JUNE 1978, 138 PP.

**KEYWORDS:** ECONOMICS, AGRICULTURE, PRODUCTION, ALTERNATIVES, TEXAS.

**NOTES:** FILED.

**DATE:** 760600

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ABSTRACT 664

**TITLE:** ECONOMISTS AND INFLATION - WHICH WAY OUT OF THE WILDERNESS.

**AUTHOR:** ANON.

**SOURCE:** SCIENCE, 186/122-124, 11 OCT 1974.

**KEYWORDS:** ECONOMICS.

**NOTES:** FILED.

**DATE:** 741011

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ABSTRACT 665

**TITLE:** A GIANT STEP IN POWER PRICING.

**AUTHOR:** ANON.

**SOURCE:** SCIENCE, 185/1031, 20 SEPTEMBER 1974.

**KEYWORDS:** ECONOMICS.

**NOTES:** FILED.

**DATE:** 740925

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ABSTRACT 666

**TITLE:** ECONOMIC IMPACTS OF RAPID DEVELOPMENT OF ENERGY RESOURCES - METHODOLOGY AND ISSUES.

**AUTHOR:** ANON.

**SOURCE:** REPORT NO 5, HUMAN RESOURCES AND NATURAL RESOURCES COMMITTEES OF THE WESTERN AGR ECON RESEARCH COUNCIL, 1974, 261 PP.

**KEYWORDS:** ECONOMICS, PETROLEUM, SOCIAL IMPLICATIONS.

**NOTES:** FILED.

**DATE:** 740900

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ABSTRACT 667

**TITLE:** THE ECONOMY CAN GROW WITH LESS USE OF ENERGY.

**AUTHOR:** ANON.

**SOURCE:** CONSERVATION FOUNDATION, MARCH 1978, 8 PP.

**KEYWORDS:** ECONOMICS, ENERGY CONSUMPTION, USA.

**NOTES:** FILED. IN THIS ISSUE THE COMPLEX RELATIONSHIP BETWEEN ENERGY CONSUMPTION AND ECONOMIC GROWTH IS APPRAISED. HISTORY, ECON THEORY, AND ENGR PRACTICE ALL INDICATE THAT THE US ECONOMY HAS GREAT FLEXIBILITY AND THAT WE NEED NOT FEAR SERIOUS ECON CONSEQUENCES FROM CUTS ON ENERGY USAGE.

**DATE:** 780330

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ABSTRACT 668

**TITLE:** ENERGY ECONOMICS IN DRAIN TUBES AND DRAIN TILES PRODUCTION.

**AUTHOR:** BIRNBAUM A.

**SOURCE:** ASAE PAPER 75-2551, 10 PP.

**KEYWORDS:** ECONOMICS.

**NOTES:** FILED.

**DATE:** 750800
ABSTRACT 669

**TITLE**: NATIONS GREATEST NEED - ECONOMIC LITERACY.
**AUTHOR**: PUTZ E L.
**SOURCE**: FARM AND POWER EQUIPMENT, JUNE 1974, PP 44-47.
**KEYWORDS**: ECONOMICS, AWARENESS.
**DATE**: 740600

ABSTRACT 670

**TITLE**: SOME IMPACTS OF THE CHANGING ENERGY SITUATION ON US AGRICULTURE.
**AUTHOR**: CARTER H O, YOUE J G.
**SOURCE**: DEPT OF AGR ECON, UNIV OF CALIF, DAVIS, 1974, 28 PP.
**KEYWORDS**: ECONOMICS, AGRICULTURE, USA.
**DATE**: 740100

ABSTRACT 671

**TITLE**: INCREASING ENERGY PRICES - THE IMPACT ON TRANSPORTATION COSTS AND THE REGIONAL LOCATION OF AGRICULTURAL PRODUCTION.
**AUTHOR**: CASAVANT K, WHITTLESEY N K.
**SOURCE**: FOR PRESENTATION AT THE WESTERN AGR ECON ASSOC MEETINGS, MOSCOW, IDAHO, JULY 1974, 19 PP.
**KEYWORDS**: ECONOMICS, TRANSPORTATION.
**DATE**: 740700

ABSTRACT 672

**TITLE**: IMPACT OF LIMITED FUEL SUPPLIES ON AGRICULTURAL OUTPUT AND NET RETURNS - SOUTHERN HIGH PLAINS OF TEXAS.
**AUTHOR**: CASEY J E, LACEWELL R D, JONES L L.
**SOURCE**: TEXAS AGR EXPT STA, TEXAS A AND M UNIV SYSTEM, COLLEGE STATION, JAN 1975, 45 PP.
**DATE**: 750100

ABSTRACT 673

**TITLE**: RECENT RESOURCE PROBLEMS OF LESS DEVELOPED COUNTRIES.
**AUTHOR**: CASTLE E N.
**SOURCE**: AMER JOURNAL OF AGR ECON, 57(5)/246-248, 1975.
**DATE**: 750800

ABSTRACT 674

**TITLE**: ECONOMICS AND ENERGETICS - SIGATOKA VALLEY, FIJ.
**AUTHOR**: CHANDRO S, DEBOER A J, EVENSON J P.
**SOURCE**: WORLD CROPS, 26(3)/34-37, 1974.
**DATE**: 741000

ABSTRACT 675

**TITLE**: AN ECONOMIC ANALYSIS OF THE UTILIZATION OF MUNICIPAL WASTE WATER FOR CROP PRODUCTION.
**AUTHOR**: CHRISTENSEN L A, CONNOR L J, LIBBY L W.
**SOURCE**: AGR ECON REPORT 292, DEPT OF AGR ECON, MICH STATE UNIV, EAST LANSING, MI 48824, NOV 1975, 40 PP.
**DATE**: 751100
ABSTRACT 676

*TITLE: THE ECONOMIC BACKGROUND OF THE OIL CRISIS*
*AUTHOR: DARSTADTER J., LANDSBERG M. M.*
*KEYWORDS: ECONOMICS, PETROLEUM.*
*NOTES: FILED.*
*DATE: 751100*

ABSTRACT 677

*TITLE: MICHIGAN FARM BUSINESS ANALYSIS SUMMARY - 1973 DATA*
*AUTHOR: DEXTER W. A., SWANSON K. A.*
*SOURCE: AGR ECON REPORT 298, DEPT OF AGR ECON, MICH STATE UNIV, EAST LANSING, MI 48824, AUG 1974, 15 PP.*
*KEYWORDS: ECONOMICS, AGRICULTURE, ANIMAL, LABOR.*
*NOTES: FILED.*
*DATE: 740800*

ABSTRACT 679

*TITLE: ECONOMIC AND ENVIRONMENTAL IMPACTS OF THE ENERGY CRISIS ON AGRICULTURAL PRODUCTION*
*AUTHOR: DVOSKIN D., HEADY E. O.*
*SOURCE: THE CENTER FOR AGR AND RURAL DEV, IOWA STATE UNIV, AMES, MAY 1976, 22 PP.*
*KEYWORDS: ECONOMICS, ENVIRONMENT, AGRICULTURE, PRODUCTION, TILLAGE, FERTILIZER, NITROGEN.*
*NOTES: FILED.*
*DATE: 760500*

ABSTRACT 680

*TITLE: US AGRICULTURAL PRODUCTION UNDER LIMITED ENERGY SUPPLIES, HIGH ENERGY PRICES, AND EXPANDING AGRICULTURAL EXPORTS*
*AUTHOR: DVOSKIN D., HEADY E. O.*
*SOURCE: CARD REPORT 69, CENTER FOR AGR AND RURAL DEV, IOWA STATE UNIV, AMES, NOV 1976, 163 PP.*
*KEYWORDS: ECONOMICS, USA, AGRICULTURE.*
*NOTES: FILED.*
*DATE: 761100*

ABSTRACT 681

*TITLE: HIGHER OIL PRICES AND THE WORLD ECONOMY*
*AUTHOR: FRIED E. R., SCHULTZE C. L.*
*SOURCE: WASHINGTON D C/THE BROOKINGS INST, 1975, 284 PP.*
*KEYWORDS: ECONOMICS, PETROLEUM, INTERNATIONAL.*
*NOTES: FILED.*
*DATE: 750000*

ABSTRACT 682

*TITLE: ENERGY AND ECONOMIC MYTH*
*AUTHOR: GEORGESCU-ROEGEN N.*
*KEYWORDS: ECONOMICS, GENERAL.*
*NOTES: FILED.*
*DATE: 750100*
ABSTRACT 683
• TITLE: EQUIVALENT ENERGY COSTS FOR PUMPING IRRIGATION WATER - NATURAL GAS VERSUS ALTERNATIVE ENERGY SOURCES.
• AUTHOR: MALDERMAN A D.
• SOURCE: COLLEGE OF AGR, UNIV OF ARIZONA, TUSCON, AZ 85721, JAN 1976, 2PP.
• KEYWORDS: ECONOMICS, IRRIGATION, PUMPS.
• NOTES, FILED.
• DATE: 760100

ABSTRACT 684
• TITLE: WORLD ENERGY PRICES AND THEIR IMPACTS ON NEW TECHNOLOGY.
• AUTHOR: HENRY J P.
• SOURCE: STANFORD RESEARCH INST, MENLO PARK, CALIF, 31 MARCH 1976, 14 PP.
• KEYWORDS: ECONOMICS, SUPPLY DEMAND, ENERGY CONSUMPTION, WORLD WIDE.
• DATE: 760331

ABSTRACT 685
• TITLE: ECONOMIC RESTRAINTS ON THE REALLOCATION OF ENERGY FOR AGRICULTURE.
• AUTHOR: MILL L D, ERICKSON S.
• SOURCE: FROM BOOK ENTITLED ENERGY, AGRICULTURE AND WASTE MANAGEMENT, ANN ARBOR, MICH, ANN ARBOR SCI PUB, 1975, PP 105-122.
• KEYWORDS: ECONOMICS, EFFICIENCY, MARKETING, FOSSIL FUELS, PRODUCTION, ENERGY RATIO, WORLD WIDE.
• NOTES, FILED.
• DATE: 750105

ABSTRACT 686
• TITLE: THE DILEMMA OF ECONOMICS AND ENERGY IN WORLD FOOD PRODUCTION.
• AUTHOR: MILL L D.
• SOURCE: PRESENTED AT ENGINEERING FOUNDATIONS CONFERENCE ON ENERGY'S ROLE IN FOOD PRODUCTION, PACIFIC GROVE, CALIF, 9 FEB 1977, 22 PP.
• KEYWORDS: ECONOMICS, FOSSIL FUELS, WORLD WIDE.
• NOTES, FILED.
• DATE: 770209

ABSTRACT 687
• TITLE: ENERGY, GOVERNMENT POLICIES, AND THE STRUCTURE OF THE FOOD AND FIBER SYSTEM.
• AUTHOR: IRWIN G D, PENN J B.
• KEYWORDS: ECONOMICS, POLICY, INDUSTRY.
• NOTES, FILED.
• DATE: 751200

ABSTRACT 688
• TITLE: IMPACT OF INCREASING ENERGY COSTS ON IRRIGATION AND AGRICULTURAL PRODUCTION.
• AUTHOR: LEPORI W A, LACEWELL R D.
• SOURCE: FOR PRESENTATION AT CONFLICTS AND ISSUES IN WATER QUALITY AND USE, DENVER, COLORADO, 7-8 APRIL 1976, 14 PP.
• KEYWORDS: ECONOMICS, IRRIGATION, AGRICULTURE, PRODUCTION, TEXAS.
• NOTES, FILED.
• DATE: 760407

ABSTRACT 689
• AUTHOR: MANDERSCHEID L V.
• KEYWORDS: ECONOMICS.
• NOTES, FILED.
• DATE: 731200
ABSTRACT 690

**TITLE:** THE RELATIONSHIP BETWEEN ENERGY CONSUMPTION, GNP AND EMPLOYMENT.

**AUTHOR:** MCCORMACK W.

**SOURCE:** PAPER PRESENTED AT ENGINEERS PUBLIC AFFAIRS FORUM, 7 JUNE 1977, 17 PP.

**KEYWORDS:** ECONOMICS, POLICY, CONSERVATION, NUCLEAR.

**NOTES:** FILED.

**DATE:** 77J607

ABSTRACT 691

**TITLE:** ENERGY ECONOMICS.

**AUTHOR:** MEERLEIN H A, HARDY W C.

**SOURCE:** HOUSTON, TX/GULF PUBLISHING CO., 1977, 230PP.

**KEYWORDS:** ECONOMICS, ALTERNATIVES, POLICY.

**NOTES:** FILED. ENERGY TOPICS THAT ARE DEALT WITH INCLUDE ALTERNATIVES, INTERNATIONAL MONEY POLICIES, INFLATION, OPEC WEALTH, INDEXATION, CRISIS AND ENERGY AS IT PERTAINS TO THE OVERALL ECONOMY.

**DATE:** 770000

ABSTRACT 692

**TITLE:** IMPLICATIONS OF ENERGY AND ENVIRONMENT UPRON GROWTH IN THE FOOD AND FIBER SECTOR.

**AUTHOR:** MORIAK T F.

**SOURCE:** AMER JOURNAL OF AGR ECON., 57(5)/819-822, 1975.

**KEYWORDS:** ECONOMICS, ENVIRONMENT, INDUSTRY.

**NOTES:** FILED.

**DATE:** 750000

ABSTRACT 693

**TITLE:** VOLUNTARISM AND PRICE RESPONSE - CONSUMER REACTION TO THE ENERGY SHORTAGE.

**AUTHOR:** PECK A E, DICKING O C.

**SOURCE:** DEPT OF AGR ECON., PURDUE UNIV., WEST LAFAYETTE, INDIANA, AUG 1975, 9 PP.

**KEYWORDS:** ECONOMICS, HOME, FUEL CONSUMPTION, SOCIAL IMPLICATIONS.

**NOTES:** FILED.

**DATE:** 750800

ABSTRACT 694

**TITLE:** THE REAL AND FICTITIOUS ECONOMICS OF AGRICULTURE AND ENERGY.

**AUTHOR:** PERELMAN M J.

**SOURCE:** IN THE BOOK ENERGY, AGRICULTURE AND WASTE MANAGEMENT, W J JEWELL ED., ANN ARBOR, MICH/ANN ARBOR SCI PUBLISHERS INC., 1975, PP 133-139.

**KEYWORDS:** ECONOMICS, LABOR.

**NOTES:** FILED.

**DATE:** 750000

ABSTRACT 695

**TITLE:** THE ECONOMICS OF AMERICA'S ENERGY FUTURE.

**AUTHOR:** SIMMONS H.

**SOURCE:** USERDA, OFFICE OF PUBLIC AFFAIRS, WASHINGTON D C, 1975, 60 PP.

**KEYWORDS:** ECONOMICS, USA, ENERGY SOURCES.

**NOTES:** FILED.

**DATE:** 750000

ABSTRACT 696

**TITLE:** HOW TO COMPARE FUEL VALUES.

**AUTHOR:** US-DEPARTMENT OF AGRICULTURE.

**SOURCE:** NORTH CENTRAL FOREST EXPT STA., FOLWELL AVE., ST PAUL, MN, 1975, 7 PP.

**KEYWORDS:** ECONOMICS, FOSSIL FUELS, PETROLEUM.

**NOTES:** FILED.

**DATE:** 750000
ABSTRACT 697

*TITLE: MOTOR GASOLINE
*AUTHOR: US-FEDERAL ENERGY ADMINISTRATION
*SOURCE: FEA MONTHLY ENERGY REVIEW, JAN 1975, 36 PP.
*KEYWORDS: ECONOMICS, FOSSIL FUELS
*NOTES: FILED
*DATE: 750100

ABSTRACT 698

*TITLE: MINNESOTA TRADEOFF MODEL - ENERGY/ECONOMY/ENVIRONMENT
*AUTHOR: VENEGAS E G, MAKI W R, CARTER J E
*SOURCE: MINNESOTA ENERGY AGENCY, RESEARCH DIV, 740 AMERICAN CENTER BLDG, 160 E KELLOGG BLVD, ST PAUL, APRIL 1975, 62 PP.
*KEYWORDS: ECONOMICS, MINNESOTA, POLICY, MODELS
*NOTES: FILED
*DATE: 750430

ABSTRACT 699

*TITLE: ENERGY FACTS AND FIGURES
*AUTHOR: WASHINGTON STATE UNIVERSITY
*SOURCE: COLLEGE OF AGR, WASHINGTON STATE UNIV, PULLMAN, WA, AUG 1975, 18 PP.
*KEYWORDS: ECONOMICS, ENERGY CONSUMPTION, USA, WIND
*NOTES: FILED
*DATE: 750800

ABSTRACT 700

*TITLE: IMPACTS OF ENERGY PRICE CHANGES ON FOOD COSTS
*AUTHOR: WHITTLESEY W K
*SOURCE: COLLEGE OF AGR, RESEARCH CENTER, WASHINGTON STATE UNIV, PULLMAN
*APRIL 1976, 18 PP.
*KEYWORDS: ECONOMICS, FOOD PROCESSING
*NOTES: FILED
*DATE: 760400

ABSTRACT 701

*TITLE: ENERGY - THE ECONOMY AND JOBS
*AUTHOR: WINGER J G, NIELSEN C A
*SOURCE: REPORT FROM CHASE, ENERGY ECON DIV OF THE CHASE MANHATTAN BANK NA, NEW YORK, NY 10015, SEPT 1976, 8 PP.
*KEYWORDS: ECONOMICS, WORLD WIDE, ENERGY CONSUMPTION, LABOR
*NOTES: FILED
*DATE: 761000

ELECTRICAL 702 — 746

ABSTRACT 702

*TITLE: RURAL ELECTRIFICATION IV
*AUTHOR: AGENCY FOR INTERNATIONAL DEVELOPMENT
*SOURCE: AID, MANILA 1976
*KEYWORDS: ELECTRICAL, PHILIPPINES
*NOTES: AID, DOCUMENT ABOUT 1 INCH THICK
*DATE: 760000

ABSTRACT 703

*TITLE: RURAL ELECTRIFICATION
*AUTHOR: ANON
*SOURCE: A WORLD BANK PAPER, OCT 1975, 79 PP
*KEYWORDS: ELECTRICAL, AGRICULTURE, INTERNATIONAL
*NOTES: FILED
*DATE: 751000
ABSTRACT 704

TITLE: SMALL SCALE POWER GENERATION.
AUTHOR: ANON.
KEYWORDS: ELECTRICAL.
NOTES: FILED.
DATE: 670900

ABSTRACT 705

TITLE: ELECTRICITY FROM COAL.
AUTHOR: Battelle Memorial Institute.
KEYWORDS: ELECTRICAL, COAL.
NOTES: FILED.
DATE: 731200

ABSTRACT 706

TITLE: PERSPECTIVE ON POWER.
AUTHOR: Atten€, Memorial Institute.
KEYWORDS: ELECTRICAL, POWER.
NOTES: FILED.
DATE: 731000

ABSTRACT 707

TITLE: ENERGY AND AGRICULTURE - ELECTRICITY.
AUTHOR: Bickert W G, Bakker-Arkenau F W.
KEYWORDS: ELECTRICAL, AGRICULTURE, ENERGY SOURCES.
NOTES: FILED.
DATE: 750200

ABSTRACT 708

TITLE: POWER AND ENERGY REQUIREMENTS OF ELECTRICAL APPLIANCES.
AUTHOR: Carlson A R.
KEYWORDS: ELECTRICAL, ALASKA, HOME, APPLIANCES.
NOTES: FILED.
DATE: 721200

ABSTRACT 709

TITLE: ELECTRICITY DEMAND GROWTH AND THE ENERGY CRISIS.
AUTHOR: Chapman D, Tyrrell T, Mount T.
KEYWORDS: ELECTRICAL.
NOTES: NAS.
DATE: 721117

ABSTRACT 710

TITLE: FARM APPLICATION OF RIPPLE CONTROL IN NEW ZEALAND, AUSTRALIA AND THE UNITED STATES.
AUTHOR: Charlesworth D A.
KEYWORDS: ELECTRICAL, EFFICIENCY, NEW ZEALAND, AUSTRALIA, AGRICULTURE.
NOTES: FILED.
MANAGEMENT OF ELECTRICAL POWER LOAD IN FARMING HAS SHOWN THAT RIPPLE CONTROL CAN PROVIDE SAVINGS FOR THE FARMER AND THE UTILITY BY IMPROVING THE EFFICIENCY OF ELECTRICAL DISTRIBUTION.
DATE: 770900

ABSTRACT 711

TITLE: DIRECT CONVERSION OF ENERGY.
AUTHOR: Corliss W R.
KEYWORDS: ELECTRICAL, CONVERSION, NUCLEAR, GENERAL, FUEL CELL.
NOTES: FILED.
DATE: 640900
ABSTRACT 712

• TITLE: COMPARISON OF COW POWER ELECTRICAL GENERATING SYSTEMS FOR REMOTE APPLICATION.
• AUTHOR: DAVIS J, MORGAN D, SMITH A.
• SOURCE: THERMO ELECTRON CORP, 85 FIRST AVE, WALTHAM, MASS, MARCH 1973, 35 PP.
• KEYWORDS: ELECTRICAL, INTERNATIONAL, DEVELOPING COUNTRIES.
• NOTES: FILE.
• DATE: 730300

ABSTRACT 713

• TITLE: COMPARES, LINE, AND PEOPLE.
• AUTHOR: DETROIT EDISON CO.
• SOURCE: DETROIT EDISON CO, JAN 1974, 20 PP.
• KEYWORDS: ELECTRICAL, GENERAL, NUCLEAR, MICHIGAN.
• NOTES: FILE.
• DATE: 740100

ABSTRACT 714

• TITLE: A SUMMARY OF PROGRAM EMPHASIS FOR 1975.
• AUTHOR: ELECTRIC POWER RESEARCH INSTITUTE.
• SOURCE: ELECTRIC POWER RESEARCH INST, 3412 HILLYVIEW AVE, PO BOX 10412, PALO ALTO, CA, 1975, 48 PP.
• KEYWORDS: ELECTRICAL, DEVELOPMENT, NUCLEAR, FOSSIL FUELS.
• NOTES: FILE.
• DATE: 750200

ABSTRACT 715

• TITLE: ELECTRIC LOAD DIVERSIFICATION.
• AUTHOR: ENDAHL L J.
• SOURCE: ASAE PAPER 78-3532, 1978, 11 PP.
• KEYWORDS: ELECTRICAL, HOME, EFFICIENCY.
• NOTES: FILE. THIS PAPER DESCRIBES A RESEARCH PROGRAM AIMED AT ATTEMPTING TO EVALUATE AND QUANTIFY THE EFFECT OF CONTROLLING CERTAIN MAJOR LOADS REDUCE DEMAND AT THE RESIDENTIAL LEVEL, AND THE RESULTING IMPACT OF THIS POSSIBLE LOAD MANAGEMENT APPROACH ON TOTAL UTILITY LOADS.
• DATE: 780500

ABSTRACT 716

• TITLE: RADIO CONTROL - A METHOD OF LOAD MANAGEMENT.
• AUTHOR: EVAN J G.
• SOURCE: ASAE PAPER 78-3022, 1978, 13 PP.
• KEYWORDS: ELECTRICAL, LOAD MANAGEMENT MAY BE A WAY TO MEET PEAK DEMANDS FOR ELECTRICAL ENERGY. CENTRAL ILL LIGHT CO RADIO CONTROL TEST OF RESIDENTIAL AIR CONDITIONERS AND WATER HEATERS HAS SHOWN THAT CUSTOMERS WILL ACCEPT CONTROL AND THAT FURTHER TESTING MUST BE DONE TO QUANTIFY HOW MUCH LOAD REDUCTION CAN BE ACCOMPLISHED.
• DATE: 780500

ABSTRACT 717

• TITLE: POLICY OPTIONS TO REDUCE CONSUMPTION OF ELECTRICITY.
• AUTHOR: FAVERO P.
• SOURCE: SPECIAL PAPER NO 257, CENTER FOR RURAL MANPOWER AND PUBLIC AFFAIRS, AGR ECON DEPT, MICH STATE UNIV, EAST LANSING, MI, FEB 1978, 10 PP.
• KEYWORDS: ELECTRICAL, POLICY, CONSERVATION.
• NOTES: FILE.
• DATE: 780500

ABSTRACT 718

• TITLE: RESEARCH, STRATEGY FOR ELECTRIC POWER NEEDS OF THE FUTURE - CONFERENCE SUMMARY.
• AUTHOR: HALL C W.
• SOURCE: RESEARCH DIV, COLLEGE OF ENGR, WASHINGTON STATE UNIV, PULLMAN, 18 OCT 1972, 12 PP.
• KEYWORDS: ELECTRICAL, REQUIREMENTS.
• DATE: 721018
ABSTRACT 719

TITLE: STATEMENT BY JOHN R. WAMANN BEFORE THE GOVERNORS ADVISORY COMMISSION ON ELECTRIC POWER ALTERNATIVES.

AUTHOR: WAMANN J. R.
SOURCE: PRESIDENT AND CHIEF OPERATING OFFICER, DETROIT EDISON, DETROIT, MICH. 29 SEPT 1975 36 PP.
KEYWORDS: ELECTRICAL, SUPPLY DEMAND.
NOTES: FILED.
DATE: 750929

ABSTRACT 720

TITLE: ELECTRICITY'S ROLE IN THE FUTURE FOOD-ENERGY EQUATION.

AUTHOR: HAUSER L. G.
SOURCE: ASAE PAPER 77-3038, 1977 13PP.
KEYWORDS: ELECTRICAL, FOSSIL FUELS, FUEL CONSUMPTION.
NOTES: FILED. THE PROPER APPLICATION OF ELECTRICITY TO THE FOOD SYSTEM CAN CONSERVE THE PETROLEUM FUELS AND INCREASE WORLD FOOD PRODUCTION.
DATE: 770600

ABSTRACT 721

TITLE: RADIO CONTROL OF APPLIANCES

AUTHOR: HISON D. J.
SOURCE: ASAE PAPER 77-3050, 1977 7PP.
KEYWORDS: ELECTRICAL, APPLIANCES.
NOTES: FILED. THIS PAPER SHOWS HOW A RELATIVELY SMALL ELECTRIC UTILITY CAN EFFECTIVELY REDUCE ITS WHOLESALE POWER COSTS, LOWER PEAK DEMANDS FOR ELECTRICITY WITHOUT SIGNIFICANTLY ALTERING LIFESTYLES, AND CONSERVE ENERGY RESOURCES.
DATE: 770800

ABSTRACT 722

TITLE: DEBUNKING MADISON AVENUE.

AUTHOR: HIRST E.
SOURCE: ENVIRONMENTAL ACTION 25 JAN 1974 2 PP.
KEYWORDS: ELECTRICAL, AGRICULTURE, INDUSTRY.
NOTES: FILED.
DATE: 740125

ABSTRACT 723

TITLE: COSTS AND BENEFITS OF RURAL ELECTRIFICATION - A CASE STUDY IN EL SALVADOR.

AUTHOR: INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT.
SOURCE: IBRD, PU REPORT RES 5 28 FEB 1975 124 PP.
KEYWORDS: ELECTRICAL, ECONOMICS, INTERNATIONAL.
NOTES: AID.
DATE: 750228

ABSTRACT 724

TITLE: PEAK SHAVINGS - A WEAPON TO FIGHT PEAK LOADS.

AUTHOR: JACK C. F.
SOURCE: ASAE PAPER PRESENTED AT GOSHEN IN 26 APRIL 1975 8 PP.
KEYWORDS: ELECTRICAL, ECONOMICS, CONSERVATION.
NOTES: FILED.
DATE: 750426

ABSTRACT 725

TITLE: THE DESIGN AND APPLICATION OF INDUCTION MOTORS FOR EFFICIENT ENERGY UTILIZATION.

AUTHOR: LINDHORST P. H.
SOURCE: ASAE PAPER 76-3538, 1976 7 PP.
KEYWORDS: ELECTRICAL, ENERGY CONSUMPTION.
NOTES: FILED.
DATE: 760800
ABSTRACT 726

•TITLE• FUEL CELLS - DISPERSED GENERATION OF ELECTRICITY.
•AUTHOR• MAUGH T M.
•SOURCE• SCIENCE, 178/1273-1274, 22 DEC 1972.
•KEYWORDS• ELECTRICAL, FUEL CELL.
•NOTES• FILED.
•DATE• 721222

ABSTRACT 727

•TITLE• MAJOR CONCERNS OF THE ELECTRIC ENERGY INDUSTRY AND IMPLICATIONS FOR AGRICULTURAL ENGINEERS.
•AUTHOR• MCFATE K L, PRICE D R, MANSEN M J, WINSETT J L.
•SOURCE• ASAE PAPER 75-3524, 8 PP.
•KEYWORDS• ELECTRICAL, INDUSTRY, FOOD PROCESSING.
•NOTES• FILED.
•DATE• 750000

ABSTRACT 728

•TITLE• IMPLEMENTATION OF LOAD MANAGEMENT IN THE MINNKOTA POWER COOPERATIVE SYSTEM.
•AUTHOR• NELSON N D.
•SOURCE• ASAE PAPER 77-3043, 1977, 9PP.
•KEYWORDS• ELECTRICAL, ECONOMICS.
•NOTES• FILED. A BROAD OVERVIEW OF THE MINNKOTA POWER COOPERATIVES SYSTEM-WIDE PROGRAM OF LOAD MANAGEMENT, EMBRACING THE INTERDEPENDENT AREAS OF RATE DESIGN, A CONTROL METHOD AND MANAGEABLE LOADS ARE PRESENTED.
•DATE• 770606

ABSTRACT 729

•TITLE• ELECTRIC ENERGY.
•AUTHOR• PARADY W M, TURNER J H, ED.
•SOURCE• AMER ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS, 120 ENGINEERING CENTER, ATHENS, GEORGIA 30602, 1976, 48 PP.
•KEYWORDS• ELECTRICAL, FOSSIL FUELS, NUCLEAR, GEOTHERMAL, ENVIRONMENT.
•NOTES• FILED.
•DATE• 760000

ABSTRACT 730

•TITLE• LOAD MANAGEMENT - YOUR SILENT WORKER.
•AUTHOR• PASCHEN A J.
•SOURCE• ASAE PAPER 78-3026, 1978, 14 PP.
•KEYWORDS• ELECTRICAL.
•NOTES• FILED. LOAD MANAGEMENT IS VERY IMPORTANT TO HUMANITY BECAUSE IT USES EXISTING EQUIPMENT AND UTILITIES DO NOT HAVE TO ADD ADDITIONAL EQUIPMENT TO TRANSMISSION AND DISTRIBUTION SYSTEMS. THE LOAD MANAGEMENT SYSTEM - LEVELOAD - IS ONE ANSWER TO ELECTRIC UTILITIES PROBLEMS IN CONTROLLING PEAK LOADS.
•DATE• 780000

ABSTRACT 731

•TITLE• ENERGY FORUM - THE ROLE OF ELECTRIC POWER IN TOTAL ENERGY NEEDS.
•AUTHOR• PRICE D R.
•SOURCE• COLLEGE TASK FORCE ON ENERGY AND AGR, NEW YORK STATE COLLEGE OF AGR AND LIFE SCI, CORNELL UNIV, ITHACA, NY 14853, 14 JAN 1975, 59 PP.
•KEYWORDS• ELECTRICAL, NEW YORK, WORLD WIDE, ECONOMICS.
•NOTES• FILED.
•DATE• 750114

ABSTRACT 732

•TITLE• THE IMPELLING SHORTAGE OF ELECTRICITY.
•AUTHOR• REICHEL L F C.
•SOURCE• ELECTRIC PERSPECTIVES 78/4, EDISON ELECTRIC INST, 1140 CONN AVE, NW, WASHINGTON, DC 20036, 1978, 7 PP.
•KEYWORDS• ELECTRICAL, POLICY, COAL, NUCLEAR.
•NOTES• FILED.
•DATE• 76020C
ABSTRACT 733

**TITLE:** THE ELECTRIC AUTOMOBILE.
**AUTHOR:** REID W T.
**SOURCE:** ENERGY PERSPECTIVES 9; Battelle Memorial Inst.; 505 King Ave., Columbus, OH, PP 1-5, April 1974.
**KEYWORDS:** ELECTRICAL; AUTOMOBILE.
**NOTES:** FILED.
**DATE:** 740403

ABSTRACT 734

**TITLE:** AGRICULTURAL RESEARCH NEEDS AS EXPRESSED BY ELECTRIC INDUSTRY.
**AUTHOR:** RIDGE T J.
**SOURCE:** ASAE Paper 77-3037, 1977, 16PP.
**KEYWORDS:** ELECTRICAL; AGRICULTURE.
**NOTES:** FILED.

ABSTRACT 735

**TITLE:** THE CAPITAL AND ENERGY CRISIS OF KILOWATTS.
**AUTHOR:** ROSENBERG W G.
**SOURCE:** Graduate School of Business, Columbia Univ., 17 Jan 1975, 13 PP.
**KEYWORDS:** ELECTRICAL; MICHIGAN; LEGISLATION.
**DATE:** 750117

ABSTRACT 736

**TITLE:** STANDBY ELECTRIC POWER EQUIPMENT FOR THE FARM.
**AUTHOR:** THOMPSON J F; CURLEY R G.
**KEYWORDS:** ELECTRICAL; AGRICULTURE.
**DATE:** 771106

ABSTRACT 737

**TITLE:** UNDERSTANDING ELECTRICITY AND ELECTRICAL TERMS.
**AUTHOR:** TURNER J M, ED.
**SOURCE:** Instructional Materials Inst., Amer Assoc for Vocational Instructional Materials, Engr Center, Athens, GA 30602, 1974, 46PP.
**KEYWORDS:** ELECTRICAL; GENERAL.
**NOTES:** FILED.

ABSTRACT 738

**TITLE:** ENERGY NEEDS CAN BE MANAGED TO IMPROVE UTILITY LOAD FACTOR.
**AUTHOR:** TURREL J.
**SOURCE:** ASAE Paper 76-3015, 7 PP.
**KEYWORDS:** ELECTRICAL; AGRICULTURE; ECONOMICS.
**DATE:** 760900

ABSTRACT 739

**TITLE:** ELECTRICITY ECONOMICS.
**AUTHOR:** TURVEY R; ANDERSON D.
**SOURCE:** Baltimore, MD/John Hopkins Univ Press, 1977, 364PP.
**KEYWORDS:** ELECTRICAL; ECONOMICS; DEVELOPING COUNTRIES; THAILAND; TUNISIA; SUDAN; TURKEY.
**NOTES:** FILED.

The study of cost of electrical use and development.
**DATE:** 770000

*Electricity tariffs.* Case studies given on several countries.
ABSTRACT 740

*TITLE: AGRICULTURAL IMPLICATIONS FROM THE EPRI RATE DESIGN STUDY
*AUTHOR: UHLE R G
*SOURCE: ASAE PAPER 77-3040, 1977, 10PP.
*KEYWORDS: ELECTRICAL, ACCOUNTING, EFFICIENCY
*NOTES: FILED. THE AGRICULTURAL ENGINEER HAS MADE AND, STILL DOES MAKE, IMPORTANT CONTRIBUTIONS IN THE AREAS OF MACHINERY, BUILDINGS, IRRIGATION, SOIL CONSERVATION, ELECTRIC POWER AND FOOD PROCESSING.
*DATE: 770600

ABSTRACT 741

*AUTHOR: UN-ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC.
*SOURCE: ESCAP, UN, BANGKOK, 1974, 94 PP.
*KEYWORDS: ELECTRICAL, INTERNATIONAL
*NOTES: FILED.
*DATE: 740000

ABSTRACT 742

*TITLE: ELECTRIC ENERGY IN AFRICA - DEVELOPMENT AND PROSPECTS.
*AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL.
*SOURCE: ECON COMMISSION FOR AFRICA, SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976, 24 PP.
*KEYWORDS: ELECTRICAL, AFRICA, ENERGY CONSUMPTION, PRODUCTION, THERMOELECTRIC
*NOTES: FILED.
*DATE: 760301

ABSTRACT 743

*TITLE: THE U.S. ELECTRIC POWER SUPPLY.
*AUTHOR: UNION CARBIDE CORP
*SOURCE: UNION CARBIDE CORP, SEP 1975, 9 PP.
*KEYWORDS: ELECTRICAL, USA, GENERAL
*NOTES: FILED.
*DATE: 750900

ABSTRACT 744

*TITLE: PRINCIPAL ELECTRIC FACILITIES - GREAT LAKES REGION, MAP.
*AUTHOR: FEDERAL POWER COMMISSION.
*KEYWORDS: ELECTRICAL, INDUSTRY
*NOTES: FILED.
*DATE: 750000

ABSTRACT 745

*TITLE: PRINCIPAL ELECTRIC FACILITIES - NORTH CENTRAL REGION, MAP.
*AUTHOR: FEDERAL POWER COMMISSION.
*KEYWORDS: ELECTRICAL, INDUSTRY
*NOTES: FILED.
*DATE: 750000

ABSTRACT 746

*TITLE: ELECTRIC ENERGY AND FUTURE FOOD SUPPLIES - INDUSTRY VIEWPOINTS.
*AUTHOR: SCHMIDT A D
*SOURCE: PRESENTED AT THE ENERGY FORUM, ASAE CHICAGO MEETING, 19 DEC 1978, 7 PP.
*KEYWORDS: ELECTRICITY, SOCIAL IMPLICATIONS, GENERAL
*NOTES: FILED.
*DATE: 781219
ABSTRACT 747

*TITLE: MATERIALS, ENVIRONMENT, ENERGY - ONE VAST SYSTEM.*
*AUTHOR: AZAROFF L V.*
*KEYWORDS: ENVIRONMENT, POLICY, ENERGY CONSUMPTION.*
*NOTES: FILED. REPORT ON THE SYMPOSIUM OF THE RELATION OF ENERGY, ENVIRONMENT AND MATERIALS AT THE INST OF MATERIALS SCI, UNIV OF CONNECTICUT.*
*DATE: 760300*
BACHER

ABSTRACT 748

*TITLE: IMPACT OF ENVIRONMENTAL CONTROL TECHNOLOGIES ON THE ENERGY CRISIS.*
*AUTHOR: BENSON T W, HUFFMAN G L.*
*SOURCE: NEWS OF ENVIRONMENTAL RESEARCH IN CINCINNATI, EPA, 11 JAN 1974, 7 PP.*
*KEYWORDS: ENVIRONMENT, ENERGY CONSUMPTION.*
*NOTES: FILED.*
*DATE: 740111*

ABSTRACT 749

*TITLE: ENVIRONMENTAL IMPACTS OF INCREASING THE WORLDS FOOD PRODUCTION.*
*AUTHOR: BISWAS A K, BISWAS M R.*
*KEYWORDS: ENVIRONMENT, WORLD WIDE.*
*NOTES:*
*DATE: 750000*

ABSTRACT 750

*TITLE: LAND USE - ISSUES AND RESEARCH NEEDS FOR PLANNING, POLICY, AND ALLOCATION.*
*AUTHOR: BOUMAN G A.*
*SOURCE: COLLEGE OF AGR, WASHINGTON STATE UNIV, PULLMAN, FEB 1976, 78 PP.*
*KEYWORDS: ENVIRONMENT, LAND USE, AGRICULTURE.*
*NOTES: FILED.*
*DATE: 760200*

ABSTRACT 751

*TITLE: ENVIRONMENT - A LESSON FOR THE PEOPLE OF PLENTY.*
*AUTHOR: CARTER L J.*
*KEYWORDS: ENVIRONMENT.*
*NOTES: FILED.*
*DATE: 731220*

ABSTRACT 752

*TITLE: RESOURCES AND MAN.*
*AUTHOR: CLOUD P, BATES M, CHAPMAN J D, HENDRICKS S B.*
*SOURCE: SAN FRANCISCO/W H FREEMAN AND CO, 1969, 259 PP.*
*KEYWORDS: ENVIRONMENT, FOOD ENERGY, ENERGY SOURCES.*
*NOTES: FILED, NAC.*
*DATE: 690000*
ABSTRACT 753
TITLE: ENERGY AND TODAY'S ENVIRONMENT
AUTHOR: CONSUMERS POWER CO.
SOURCE: CONSUMERS POWER CO. 212 W MICH AVE. JACKSON, MI 49201 16 PP.
KEYWORDS: ENVIRONMENT, ENERGY SOURCES.
NOTES: FILED.
DATE: 720000

ABSTRACT 754
TITLE: AN ECOLOGICAL PERSPECTIVE
AUTHOR: COOPER W E.
KEYWORDS: ENVIRONMENT, EFFICIENCY.
NOTES: FILED.
DATE: 750000

ABSTRACT 755
TITLE: GLOBAL COOLING
AUTHOR: DAMON P E KUHN S M
KEYWORDS: ENVIRONMENT, GREENHOUSE, COOLING.
NOTES: FILED.
DATE: 760806

ABSTRACT 756
TITLE: SYMBIOSIS BETWEEN THE EARTH AND HUMANKIND
AUTHOR: DUBOS R.
KEYWORDS: ENVIRONMENT, LAND USE.
NOTES: FILED.
DATE: 760806

ABSTRACT 757
TITLE: LOSING GROUND ENVIRONMENTAL STRESS AND WORLD FOOD PROSPECTS
AUTHOR: ECKHOLM E P.
SOURCE: NEW YORK/W NORTON CO 1976: 223 PP.
KEYWORDS: ENVIRONMENT, FOOD PROCESSING, CONSERVATION.
NOTES: FILED.
DATE: 760600

ABSTRACT 758
TITLE: POWER GENERATION AND THE ENVIRONMENT
AUTHOR: ELIASSEN R.
KEYWORDS: ENVIRONMENT, ELECTRICAL, NUCLEAR.
NOTES: FILED.
DATE: 710900

ABSTRACT 759
TITLE: HEALTH: ENVIRONMENTAL EFFECTS AND CONTROL TECHNOLOGY OF ENERGY USE
AUTHOR: US ENVIRONMENTAL PROTECTION AGENCY.
KEYWORDS: ENVIRONMENT, CONSERVATION, SOCIAL IMPLICATIONS.
NOTES: FILED.
DATE: 763211

ABSTRACT 760
TITLE: CLEAN AIR AND YOUR CAR
AUTHOR: US ENVIRONMENTAL PROTECTION AGENCY.
KEYWORDS: ENVIRONMENT, AUTOMOBILE.
NOTES: FILED.
DATE: 750600
ABSTRACT 761

*TITLE: EPA'S POSITION ON THE ENERGY CRISIS*
*AUTHOR: US ENVIRONMENTAL PROTECTION AGENCY*
*SOURCE: EPA, OFFICE OF PUBLIC AFFAIRS, WASHINGTON D.C., MARCH 1974, 16 PP.*
*KEYWORDS: ENVIRONMENT, LEGISLATION*
*NOTES: FILED*
*DATE: 740300*

ABSTRACT 762

*TITLE: HUMAN POPULATION AND THE GLOBAL ENVIRONMENT*
*AUTHOR: MOLDEN J P, EHRlich P R*
*SOURCE: AMER SCIENTIST, 62/2/262-251, MAY-JUNE 1974*
*KEYWORDS: ENVIRONMENT, POPULATION, WORLD IDE*
*NOTES: FILED*
*DATE: 740500*

ABSTRACT 763

*TITLE: ENVIRONMENTALLY APPROPRIATE TECHNOLOGY*
*AUTHOR: MCCALLUM B*
*SOURCE: ADVANCED CONCEPTS CENTER, OFFICE OF SCI ADVISOR, DEPT OF THE ENVIRONMENT, OTTAWA, ONTARIO, CANADA, MAY 1974, 93 PP.*
*KEYWORDS: ENVIRONMENT, INTERNATIONAL*
*NOTES: AID*
*DATE: 741000*

ABSTRACT 764

*TITLE: ENERGY, ENVIRONMENT, PRODUCTIVITY*
*AUTHOR: NATIONAL SCIENCE FOUNDATION*
*SOURCE: PROCE OF THE 1ST SYMPOSIUM ON RANN, NSF, WASHINGTON D.C., 18-20 NOV 1973*
*KEYWORDS: ENVIRONMENT, CONSERVATION, COAL, GEOTHERMAL, SOLAR, POLICY*
*NOTES: FILED*
*DATE: 751116*

ABSTRACT 765

*TITLE: PUBLIC HEALTH HAZARDS FROM ELECTRICITY-PRODUCING PLANTS*
*AUTHOR: NEYMAN J*
*SOURCE: SCIENCE, 195/4280/754-758, 25 FEB 1977*
*KEYWORDS: ENVIRONMENT, SAFETY, NUCLEAR, ELECTRICAL*
*NOTES: FILED. THE HAZARDS FROM BOTH CONVENTIONAL AND NUCLEAR PLANTS SHOULD BE COMPARED IN AN EPIDEMIOLOGICAL STUDY*
*DATE: 770225*

ABSTRACT 766

*TITLE: ENERGY BASIS FOR MAN AND NATURE*
*AUTHOR: ODUK H T, ODuk E C*
*SOURCE: NEW YORK/McGRAW-HILL BOOK CO, 1976, 297 PP*
*KEYWORDS: ENVIRONMENT*
*NOTES: FILED*
*DATE: 760000*

ABSTRACT 767

*TITLE: ENERGY AND THE WEATHER*
*AUTHOR: PETERSON J T*
*SOURCE: ENVIRONMENT, 158/4-9, OCT 1975*
*KEYWORDS: ENVIRONMENT, HEAT, INTERNATIONAL*
*NOTES: NAS*
*DATE: 751000*

ABSTRACT 768

*TITLE: ENERGY NEEDS AND THE ENVIRONMENT*
*AUTHOR: SEALE R L, SIERRA R A*
*SOURCE: TUSCON/UNIV OF ARIZONA PRESS, 1973, 349 PP*
*KEYWORDS: ENVIRONMENT, ENERGY SOURCES, REQUIREMENTS*
*NOTES: FILED*
*DATE: 730000*
ABSTRACT 769

•TITLE: USING TECHNOLOGY TO SOLVE ENVIRONMENTAL PROBLEMS.
•AUTHOR: SERDON E. G.
•KEYWORDS: ENVIRONMENT, TECHNOLOGY ASSESSMENT.
•NOTES: FILED.
•DATE: 741000

ABSTRACT 770

•TITLE: ENERGY AND ENVIRONMENT - A PRIMER FOR SCIENTISTS AND ENGINEERS.
•AUTHOR: THORNDIKE E. M.
•SOURCE: READING, MASS./ADDISON-WESLEY PUB CO, 1976. 286 PP.
•KEYWORDS: ENVIRONMENT, ENERGY SOURCES, CONSERVATION.
•NOTES: FILED.
•DATE: 760000

ABSTRACT 771

•TITLE: ENVIRONMENTAL IMPACT OF ENERGY DEVELOPMENT AND UTILIZATION IN AFRICA.
•AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL.
•SOURCE: UN ECONOMIC AND SOCIAL COUNCIL, ECON COMMISSION FOR AFRICA, SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976. 27 PP.
•KEYWORDS: ENVIRONMENT, AFRICA, POLLUTION, POLICY.
•NOTES: FILED.
•DATE: 760301

ABSTRACT 772

•TITLE: ENVIRONMENTAL IMPACTS OF ENERGY PRODUCTION AND UTILIZATION ON THE AFRICAN CONTINENT.
•AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL.
•SOURCE: UN ECONOMIC AND SOCIAL COUNCIL, ECON COMMISSION FOR AFRICA, SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976. 23 PP.
•KEYWORDS: ENVIRONMENT, FOSSIL FUELS, AFRICA, GEOTHERMAL, SOLAR, WIND, NUCLEAR, LEGISLATION.
•NOTES: FILED.
•DATE: 760301

ABSTRACT 773

•TITLE: ENERGY AND THE ENVIRONMENT.
•AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE: REDA, CITIZENS WORKSHOP HANDBOOK, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1975. 31 PP.
•KEYWORDS: ENVIRONMENT, GENERAL.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 774

•TITLE: REVIEW OF THE IMPACT OF PRODUCTION AND USE OF ENERGY ON THE ENVIRONMENT AND THE ROLE OF UNEP.
•AUTHOR: USMANI I. M.
•SOURCE: UNITED NATIONS ENVIRONMENT PROGRAMME, 15 JAN 1976. 88 PP.
•KEYWORDS: ENVIRONMENT, ENERGY SOURCES, NUCLEAR, PRODUCTION, RENEWABLE ENERGY, WORLD WIDE.
•NOTES: FILED.
•DATE: 760115

ABSTRACT 775

•TITLE: GLOBAL EFFECTS OF HUMAN PRODUCTION OF ENERGY.
•AUTHOR: WINSBERG A. H.
•KEYWORDS: ENVIRONMENT, WORLD WIDE.
•NOTES: FILED.
•DATE: 741018

ABSTRACT 776

•TITLE: THE ENERGY-ENVIRONMENT-ECONOMIC TRIANGLE.
•AUTHOR: WHITE D. C.
•KEYWORDS: ENVIRONMENT, ECONOMICS.
•NOTES: FILED.
•DATE: 731220.
ABSTRACT 777

*TITLE* ECOLOGIC DILEMNAS
*AUTHOR* WOLMAN A.
*SOURCE* SCIENCE, 193(4255)/740-742, 27 AUG 1976.
*KEYWORDS* ENVIRONMENT, WASTES, POLLUTION.
*NOTES* FILED.
*DATE* 760827

FERTILIZER 778 -- 829

ABSTRACT 778

*TITLE* THE EFFECT OF SOILS AND FERTILIZERS ON HUMAN AND ANIMAL NUTRITION.
*AUTHOR* ALLAWAY, W H.
*SOURCE* AGR INFO BULLETIN NO 378, AGR RESEARCH SERVICE AND SOIL CONSERVATION SERVICE, USDA, MARCH 1975, 52 PP.
*KEYWORDS* FERTILIZER, NITROGEN.
*NOTES* FILED.
*DATE* 750300

ABSTRACT 779

*TITLE* FERTILIZER - HIGHEST RETURN INPUT.
*AUTHOR* AKOCO OIL CO.
*SOURCE* AGRONOMICS 1, AKOCO OIL CO., 200 E RANDOLPH DR, CHICAGO, IL 60601, 1978, 16 PP.
*KEYWORDS* FERTILIZER.
*NOTES* FILED.
*DATE* 780500

ABSTRACT 780

*TITLE* ENERGY--FERTILIZER ON THE FRONT BURNER
*AUTHOR* ANON.
*SOURCE* FARM. CHEM, 140(6)/98 PP, JUNE 1977.
*KEYWORDS* FERTILIZER, ENERGY CONSUMPTION, CONSERVATION.
*NOTES* FILED. MAGAZINE FOCUSES ON INDUSTRY REACTION TO THE ENERGY PROGRAM PROPOSED BY PRESIDENT CARTER, ON ENERGY CONSUMPTION BY THE INDUSTRY, AND WAYS TO SAVE ENERGY.
*DATE* 770600

ABSTRACT 781

*TITLE* ECONOMIC IMPACT OF SHORTAGES ON THE FERTILIZER INDUSTRY.
*AUTHOR* ARTHUR D LITTLE INC.
*SOURCE* REPORT TO FEA, BY ARTHUR D LITTLE INC, JAN, 1975.
*KEYWORDS* FERTILIZER, ECONOMICS, ENERGY SOURCES, POLICY.
*NOTES* FILED.
*DATE* 750100

ABSTRACT 782

*TITLE* EFFECTS OF INCREASED ENERGY COSTS ON FERTILIZER PRODUCTION COSTS AND TECHNOLOGY.
*AUTHOR* BLOUIN G M.
*SOURCE* NATIONAL FERTILIZER DEV CENTER, TVA, MUSCLE SHOALS, ALABAMA, PP 3-30.
*KEYWORDS* FERTILIZER, NITROGEN, PHOSPHATE, POTASH, PRODUCTION, ECONOMICS.
*NOTES* FILED.
*DATE*
ABSTRACT 783

*TITLE* ENERGY REQUIREMENTS FOR THE PRODUCTION AND DISTRIBUTION OF CHEMICAL FERTILIZERS IN THE UNITED STATES.

*AUTHOR* BLOUIN G M, DAVIS C M.

*SOURCE* DIV OF CHEMICAL DEV, NATIONAL FERTILIZER DEV CENTER, TVA, MUSCLE SHOALS, ALABAMA, PP 51-67, UNDATED.

*KEYWORDS* FERTILIZER REQUIREMENTS, PRODUCTION, CHEMICALS, USA.

*NOTES* FILED.

*DATE* 783

ABSTRACT 784

*TITLE* ENERGY CONSUMPTION IN THE U.S. CHEMICAL FERTILIZER SYSTEM FROM THE GROUND TO THE GROUND.

*AUTHOR* DAVIS C M, BLOUIN G M.

*SOURCE* DIV OF CHEMICAL DEV, TVA, MUSCLE SHOALS, ALABAMA, 16-19 JUNE 1976, 26 PP.

*KEYWORDS* FERTILIZER, ENERGY CONSUMPTION, CHEMICALS, USA.

*NOTES* FILED.

*DATE* 760610

ABSTRACT 785

*TITLE* FERTILIZER SITUATION.

*AUTHOR* DAVIS J F.

*SOURCE* REPORT TO THE MICH STATE UNIV ENERGY TASK FORCE, CROP AND SOIL SCI DEPT, EAST LANSING, 7 AUG 1974, 4 PP.

*KEYWORDS* FERTILIZER, AWARENESS, NITROGEN, MICHIGAN.

*NOTES* FILED.

*DATE* 740807

ABSTRACT 786

*TITLE* THE NITROGEN CYCLE.

*AUTHOR* DELWICHE C C.

*SOURCE* SCIENTIFIC AMERICAN, SEPT 1970, PP 137-146.

*KEYWORDS* FERTILIZER, NITROGEN.

*NOTES* FILED.

*DATE* 700900

ABSTRACT 787

*TITLE* FERTILIZER AND FUEL SUPPLY EFFECTS ON AGRICULTURE.

*AUTHOR* DONALDSON G F.

*SOURCE* IBRD UNPUBLISHED PAPER, 14 FEB 1974, 26 PP.

*KEYWORDS* FERTILIZER, ECONOMICS.

*NOTES* FILED.

*DATE* 740214

ABSTRACT 788

*TITLE* ENHANCING BIOLOGICAL NITROGEN FIXATION.

*AUTHOR* EVANS M J.

*SOURCE* DIVISION OF BIOLOGICAL AND MEDICAL SCI OF THE NSF, WASHINGTON D C, JUNE 1975, 32 PP.

*KEYWORDS* FERTILIZER, NITROGEN.

*NOTES* FILED.

*DATE* 750600

ABSTRACT 789

*TITLE* THE EFFECTS OF ALTERNATIVE NATURAL GAS PRICING POLICIES ON THE MARKET FOR ANHYDROUS AMMONIA FERTILIZER.

*AUTHOR* EVERT H W, DOERING D C.

*SOURCE* DEPT OF AGR ECON, PURDUE UNIV, LAFAYETTE, INDIANA, 12 PP.

*KEYWORDS* FERTILIZER, NITROGEN, NATURAL GAS, POLICY, ECONOMICS.

*NOTES* FILED.

*DATE* 790510
ABSTRACT 790
•TITLE: PROPER FERTILIZER MANAGEMENT SAVES ENERGY.
•AUTHOR: FOLLETT N.
•SOURCE: MF 499, COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV,
MANHATTAN, KS, AUG 1977, 6 PP.
•KEYWORDS: FERTILIZER, EFFICIENCY, WASTES, NITROGEN.
•NOTES: FILED.
•DATE: 770800

ABSTRACT 791
•TITLE: CHANGES IN FERTILIZER USAGE AND CROP PRODUCTION UNDER SCARCE ENERGY SUPPLIES.
•AUTHOR: FORSTER D L, RASK N.
•SOURCE: UNPUBLISHED, DEPT OF AGR ECON AND RURAL SOCIOLOGY, THE OHIO STATE UNIV,
•KEYWORDS: FERTILIZER, PRODUCTION, MODELS.
•NOTES: FILED.
•DATE:

ABSTRACT 792
•TITLE: GENETIC MODIFICATION ON N2-FIXING BACTERIA.
•AUTHOR: GORDON J K, VACEK T J, MAIER R J, BRILL U J, BISHOP P E.
•SOURCE: DEPT OF MICROBIOLOGY AND CENTER FOR STUDIES OF NITROGEN FIXATION, UNIV
OF WIS, MADISON, 6 PP, UNDATED.
•KEYWORDS: FERTILIZER, NITROGEN.
•NOTES: FILED.
•DATE:

ABSTRACT 793
•TITLE: NITROGEN FIXATION RESEARCH - A KEY TO WORLD FOOD.
•AUTHOR: HARDY R W F, HAVELKA U O.
•KEYWORDS: FERTILIZER, NITROGEN.
•NOTES: FILED.
•DATE: 750509

ABSTRACT 794
•TITLE: DO FERTILIZERS WASTE ENERGY.
•AUTHOR: HOEFT R G, SIEMENS J C.
•KEYWORDS: FERTILIZER, ENERGY CONSUMPTION, ECONOMICS.
•NOTES: FILED.
•DATE: 751100

ABSTRACT 795
•TITLE: ENERGY CONSUMPTION AND RETURN FROM ADDING NITROGEN TO CORN.
•AUTHOR: HOEFT R G, SIEMENS J C.
•SOURCE: ILLINOIS RESEARCH, UNIV OF ILL AGR EXPT STA, 17(11)/10-11, WINTER 1975.
•KEYWORDS: FERTILIZER, ENERGY CONSUMPTION, NITROGEN.
•NOTES: FILED.
•DATE: 750915

ABSTRACT 796
•TITLE: PRINCIPAL ISSUES FACING THE WORLD FERTILIZER ECONOMY.
•AUTHOR: HUGHES H, PEARSON S.
•SOURCE: A REPORT ON A SEMINAR ON FERTILIZER HELD BY THE AGR DEV COUNCIL AND THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEV, PRINCETON, N J, 23-25 MAY
1974, 11 PP.
•KEYWORDS: FERTILIZER, WORLD WIDE, SUPPLY DEMAND, NITROGEN.
•NOTES: FILED.
•DATE: 740523
ABSTRACT 797
*TITLE, LIMITATIONS OF ANIMAL WASTE REPLACEMENT FOR INORGANIC FERTILIZERS.*
*AUTHOR,* LAUER D A.
*KEYWORDS,* FERTILIZER, ANIMAL WASTE, NITROGEN.
*NOTE,* FILED.
*DATE,* 750900

ABSTRACT 798
*TITLE,* SOIL CARBON DYNAMICS AND CROPPING PRACTICES*
*AUTHOR,* LUCAS R E, HOLTZMAN J B, CONNOR L J
*SOURCE,* PROC OF THE ENERGY AND AGR CONF, ACADEMIC PRESS, INC, IN PRESS.
*KEYWORDS,* FERTILIZER.
*NOTE,* FILED.
*DATE,*

ABSTRACT 799
*AUTHOR,* MAHAN J N, STROIKE H L
*SOURCE,* AGR STABILIZATION AND CONSERVATION SERVICE, USDA, WASHINGTON D C, JULY 1974, 23 PP
*KEYWORDS,* FERTILIZER, SUPPLY DEMAND, NITROGEN, PHOSPHATE, POTASH.
*NOTE,* FILED.
*DATE,* 740700

ABSTRACT 800
*TITLE,* THE FERTILIZER SUPPLY 1974-75.
*AUTHOR,* MAHAN J N, STROIKE H L.
*SOURCE,* AGR STABILIZATION AND CONSERVATION SERVICE, USDA, WASHINGTON D C, APRIL 1975, 22 PP.
*KEYWORDS,* FERTILIZER, SUPPLY DEMAND, NITROGEN, PHOSPHATE, POTASH.
*NOTE,* FILED.
*DATE,* 750400

ABSTRACT 801
*TITLE,* THE FERTILIZER SUPPLY 1976-77.
*AUTHOR,* MAHAN J N, STROIKE H L.
*SOURCE,* AGR STABILIZATION AND CONSERVATION SERVICE, USDA, WASHINGTON D C, D C 20013, 1977, 23 PP.
*KEYWORDS,* FERTILIZER, NITROGEN, PHOSPHATE, POTASH, SUPPLY DEMAND, WORLD WIDE.
*NOTE,* FILED.
*DATE,* 770600

ABSTRACT 802
*TITLE,* AVOIDING A FERTILIZER SHORTAGE - WHAT ARE THE ALTERNATIVES.
*AUTHOR,* MARTEN J F, DONNEY W D.
*SOURCE,* DEPT OF AGR ECON, PURDUE UNIV, LAFAYETTE, INDIANA, OCT 1973, 10 PP.
*KEYWORDS,* FERTILIZER, ALTERNATIVES.
*NOTE,* FILED.
*DATE,* 731000

ABSTRACT 803
*TITLE,* NITROGEN FIXATION - RESEARCH EFFORTS INTENSIFY.
*AUTHOR,* MARX J L.
*KEYWORDS,* FERTILIZER, NITROGEN.
*NOTE,* FILED.
*DATE,* 740712
ABSTRACT 804

*TITLE* NITROGEN FIXATION—PROSPECTS FOR GENETIC MANIPULATION.
*AUTHOR* MARX, J. L.
*KEYWORDS* FERTILIZER, NITROGEN FIXATION.
*DATE* 770506

ABSTRACT 805

*TITLE* CONSERVING ENERGY WITH NITRIFICATION INHIBITORS.
*AUTHOR* NELSON, D. M.; SOMERS, L. E.; HUBER, D. M.; WARREN, H. L.
*SOURCE* INDIANA AGR EXPT STA, PURDUE UNIV, WEST LAFAYETTE, 19 PP, UNDATED.
*KEYWORDS* FERTILIZER, NITROGEN, CONSERVATION.
*DATE* 770524

ABSTRACT 806

*TITLE* THE WASTE PRODUCTS OF AGRICULTURE.
*AUTHOR* O'CALLAGHAN, J. R.
*SOURCE* J OF ROYAL SOCIETY OF ARTS, FEB 1975, PP 139-149.
*KEYWORDS* FERTILIZER, AGRICULTURE, UNITED KINGDOM, NETHERLANDS.
*DATE* 770829

ABSTRACT 807

*TITLE* THE CHANGING US FERTILIZER INDUSTRY.
*AUTHOR* PAUL, D. A.; KILMER, R. L.; ALTOBELLO, M. A.; HARRINGTON, D. N.
*SOURCE* AGR ECON REPORT 378, US DEPT OF AGR, ECON RESEARCH SERVICE, WASHINGTON DC 20250, AUG 1977, 103 PP.
*KEYWORDS* FERTILIZER, INDUSTRY, ECONOMICS, NITROGEN, PHOSPHATE, POTASH, NATURAL GAS.
*DATE* 770800

ABSTRACT 808

*TITLE* FOOD, NITROGEN, AND ENERGY.
*AUTHOR* PIMENTEL, D.
*SOURCE* NEW YORK STATE COLLEGE OF AGR AND LIFE SCI, CORNELL UNIV, ITHACA, NEW YORK, 14855, 18 PP.
*KEYWORDS* FERTILIZER, ENERGY CONSUMPTION, ALTERNATIVES, NITROGEN.
*DATE* 771020

ABSTRACT 809

*TITLE* ALTERNATIVE N SOURCE.
*AUTHOR* ROLOFSON, D. E.; GILBERTSON, C. B.
*SOURCE* FARM ENERGY TIPS CC276, INST OF AGR AND NAT RESOURCES, UNIV OF NEBR, LINCOLN, NE, 2 PP.
*KEYWORDS* FERTILIZER, NITROGEN.
*DATE* 771020

ABSTRACT 810

*TITLE* SOIL TESTING.
*AUTHOR* ROLOFSON, D. E.; KNUDSEN, D.
*SOURCE* FARM ENERGY TIPS CC274, INST OF AGR AND NAT RESOURCES, UNIV OF NEBR, LINCOLN, NE, 4 PP.
*KEYWORDS* FERTILIZER.
*DATE* 771020
ABSTRACT 811
TITLE: WATER TESTING.
AUTHOR: ROLOFSON D E, KNUDSEN D.
SOURCE: FARM ENERGY TIPS CC275 INST OF AGR AND NAT RESOURCES, UNIV OF NEBR, LINCOLN, NE, 2 PP.
KEYWORDS: FERTILIZER.
NOTES: FILED.
DATE:

ABSTRACT 812
TITLE: FERTILIZER MANAGEMENT.
AUTHOR: ROLOFSON D E, WIESE R A.
SOURCE: FARM ENERGY TIPS CC272 INST OF AGR AND NAT RESOURCES, UNIV OF NEBR, LINCOLN, NE, 2 PP.
KEYWORDS: FERTILIZER.
NOTES: FILED.
DATE:

ABSTRACT 813
TITLE: INDIAN CORN CULTIVATION.
AUTHOR: RUSSELL H S.
KEYWORDS: FERTILIZER.
NOTES: FILED.
DATE: 750919

ABSTRACT 814
TITLE: PROPER FERTILIZER MANAGEMENT SAVES ENERGY.
AUTHOR: SARTAIN J B.
SOURCE: ENERGY CONSERVATION FACT SHEET EC-27, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP.
KEYWORDS: FERTILIZER, CONSERVATION.
NOTES: FILED.
DATE: 761000

ABSTRACT 815
TITLE: ENERGY BALANCE IN THE USE OF FERTILIZERS.
AUTHOR: SCHUFFELEN A C.
KEYWORDS: FERTILIZER, ENERGY CONSUMPTION.
NOTES: FILED.
DATE: 751000

ABSTRACT 816
TITLE: SOLAR PROTEIN.
AUTHOR: BHANNUBAR K T, VALENTINE A C.
KEYWORDS: FERTILIZER, NITROGEN FIXATION.
NOTES: FILED.
DATE: 761100

ABSTRACT 817
TITLE: ENERGY USE AND ECONOMICS IN THE MANUFACTURE OF FERTILIZERS.
AUTHOR: SHERFF J L.
SOURCE: ARTHUR D LITTLE INC, CAMBRIDGE, MASS, 11 PP.
KEYWORDS: FERTILIZER, ECONOMICS, ENERGY CONSUMPTION, EFFICIENCY.
NOTES: FILED.
DATE:
ABSTRACT 818

•TITLE: NITROGEN FIXATION IN GRASSES INOCULATED WITH SPIRILLUM LIPOFERUM
•AUTHOR: SMITH R L ET AL.
•KEYWORDS: FERTILIZER, NITROGEN FIXATION.
•NOTES: FILED.
•DATE: 760910

ABSTRACT 819

•TITLE: THE ENERGY INPUT TO A BAG OF FERTILIZER.
•AUTHOR: TATCHELL A.
•SOURCE: IMPERIAL CHEMICAL INDUSTRIES LIMITED, AGR DIV, PO BOX NO 1, BILLINGHAM, CLEVELAND, TS23 1LB ENGLAND, 12 PP, UNDATED.
•KEYWORDS: FERTILIZER, PRODUCTION.
•NOTES: FILED.
•DATE.

ABSTRACT 820

•TITLE: 1974 ILLINOIS FERTILIZER CONFERENCE.
•AUTHOR: UNIVERSITY OF ILLINOIS.
•SOURCE: CONF SPONSORED BY UNIV OF ILL, URBANA, IL, 23-24 JAN 1974, 68 PP.
•KEYWORDS: FERTILIZER, NITROGEN.
•NOTES: FILED.
•DATE: 740123

ABSTRACT 821

•TITLE: UNITED STATES AND WORLD FERTILIZER OUTLOOK, 1974 AND 1980.
•AUTHOR: US DEPARTMENT OF AGRICULTURE.
•SOURCE: AGR ECON REPORT 257, ECON RESEARCH SERVICE, USGA, WASHINGTON DC, MAY 1974, 65 PP.
•KEYWORDS: FERTILIZER, USA, WORLD WIDE, NITROGEN, PHOSPHATE, POTASH.
•NOTES: FILED.
•DATE: 740500

ABSTRACT 822

•TITLE: EFFECT OF NITROGEN FERTILIZER ON CORN YIELD.
•AUTHOR: VITOSH M L, LUCAS R E, BLACK R J.
•SOURCE: EXTENSION BULLETIN E-802, FARM SCI SERIES, MICH STATE UNIV, EAST LANSING, MI 48824, NOV 1974, 6 PP.
•KEYWORDS: FERTILIZER, NITROGEN.
•NOTES: FILED.
•DATE: 741100

ABSTRACT 823

•TITLE: LONG TERM EFFECTS OF FERTILIZER, MANURE AND PLOWING DEPTH ON CORN.
•AUTHOR: VITOSH M L, DAVIS J F, KNEZIK B D.
•SOURCE: RESEARCH REPORT 19B, FARM SCI, AGR EXPT STA, MICH STATE UNIV, EAST LANSING, MI 48824, NOV 1972, 6 PP.
•KEYWORDS: FERTILIZER, MANURE, AGRICULTURE.
•NOTES: FILED.
•DATE: 721100

ABSTRACT 824

•TITLE: FERTILIZER - N, P, AND K.
•AUTHOR: WHITE R G.
•SOURCE: PRESENTED AT MEETING OF ASAE ENERGY TASK FORCE SUBCOMMITTEE ON CONSERVATION AND ALTERNATIVES TO CURRENT PRACTICES, 11 DEC 1974, CHICAGO, ILL, 6 PP.
•KEYWORDS: FERTILIZER, NITROGEN, PHOSPHATE, POTASH.
•NOTES: FILED.
•DATE: 741221

ABSTRACT 825

•TITLE: FIELD EFFICIENCY GUIDES.
•AUTHOR: WHITE R G.
•SOURCE: INFO SERIES 100, COOPERATIVE EXTENSION SERVICE, MICH STATE UNIV, EAST LANSING, MI 48824, APRIL 1966, 2 PP.
•KEYWORDS: FERTILIZER, EFFICIENCY.
•NOTES: FILED.
•DATE: 66040C
ABSTRACT 826

TITLE: ENERGY REQUIREMENTS FOR THE PRODUCTION OF PHOSPHATE FERTILIZERS.
AUTHOR: WHITE W C. JOHNSON K T.
SOURCE: THE FERTILIZER INST. 1015 18TH STREET N W, WASHINGTON D C. 16 PP.
UNDATED.
KEYWORDS: FERTILIZER, REQUIREMENTS, PRODUCTION, PHOSPHATE, CONSERVATION.
NOTES: FILED.
DATE: 741224

ABSTRACT 827

TITLE: ENERGY PROBLEMS AND CHALLENGES IN FERTILIZER PRODUCTION.
AUTHOR: WHITE W C.
KEYWORDS: FERTILIZER, CONSERVATION, PRODUCTION.
NOTES: FILED.
DATE: 74 1204

ABSTRACT 828

TITLE: SELECTING THE TIME AND METHOD OF FERTILIZER APPLICATION.
AUTHOR: WHITNEY D A., MURPHY L S.
SOURCE: ENERGY EFFICIENCY IN KANSAS AGR ND 2, COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, DEC 1973, 2 PP.
KEYWORDS: FERTILIZER, CONSERVATION.
NOTES: FILED.
DATE: 73 1200

ABSTRACT 829

TITLE: BIOLOGICAL NITROGEN FIXATION.
AUTHOR: WITTWER S H.
SOURCE: PAPER PRESENTED AT FERTILIZER INPUTS PROJECT, EAST-WEST FOOD INSTITUTE OF THE EAST-WEST CENTER, HONOLULU, HAWAII, 10 JUNE 1976, 11 PP.
KEYWORDS: FERTILIZER, NITROGEN FIXATION.
NOTES: FILED.
DATE: 76 0610

FOOD PROCESSING 830 -- 959

ABSTRACT 830

TITLE: AMI DESCRIBES HOW MEAT PLANTS HAVE SAVED ENERGY / MORE SUGGESTIONS HOW TO SAVE ENERGY -- FROM AMI TASK FORCE.
AUTHOR: AMERICAN MEAT INSTITUTE.
KEYWORDS: FOOD PROCESSING, MEAT PACKING, MEAT PRODUCTS, CONSERVATION, ECONOMICS.
NOTES: FILED. TWELVE CASE STUDIES ON ENERGY CONSERVATION FROM THE AMI ENERGY TASK FORCE, DESCRIBING ACTUAL PLANT EXPERIENCES. EACH STUDY HAS SIX SECTIONS -- DESCRIPTION, APPLICABILITY, OPERATIONS PRIOR TO PROJECT, REVISIONS MADE, COMPARISON OF ENERGY USE BEFORE AND AFTER INSTALLATION, AND COMPARISON OF ENERGY AND OTHER SAVINGS TO CAPITAL AND OTHER OPERATING COSTS.
DATE: 77 0220

ABSTRACT 831

TITLE: CONSERVING ENERGY WITHIN THE BAKERY.
AUTHOR: ANDERSON R C.
KEYWORDS: FOOD PROCESSING, BAKERY PRODUCTS, MEAT, CONSERVATION.
NOTES: FILED. ENERGY-SAVING TIPS FOR COMMERCIAL BAKERIES, TRADE JOURNAL.
DATE: 73 0830
ABSTRACT 832

TITLE: A STUDY OF ENERGY CONSERVATION POTENTIAL IN THE BAKING INDUSTRY.

AUTHOR: ANON.

SOURCE: STOCH NO 041-018-00117-4; US GOVT PRINTING OFFICE; WASHINGTON DC 20405; NOV 1976; 263 PP.

KEYWORDS: FOOD PROCESSING; BAKERY PRODUCTS; BREAD; COOKIES; CRACKERS; ACCOUNTING; CONSERVATION.

NOTES: DR DAWSON PILOT ENERGY AUDITS OF FIVE REPRESENTATIVE BAKERIES - ONE LARGE CAKE PLANT; ONE BREAD PLANT; ONE BISCUIT AND CRACKER PLANT; AND TWO SMALL RETAIL BAKERIES. THIS COMPREHEND ON INCREASING ENERGY EFFICIENCY THROUGH DIFFERENT TIME FRAMES, A SUGGESTED REPORTING AND MONITORING SYSTEM FOR TRACKING ENERGY CONSUMPTION, AND ILLUSTRATIVE APPENDICES.

DATE: 761100

ABSTRACT 833

TITLE: ENERGY SAVINGS DURING FROZEN FOOD STORAGE.

AUTHOR: ASHBY B; BENNETT W; BAILEY W; HANDLEY A; KRAPER A.

SOURCE: ASAE PAPER 77-6527; DEC 1977; 19 PP.

KEYWORDS: FOOD PROCESSING; FREEZING; FROZEN STORAGE; FRUITS AND VEGETABLES.

NOTES: FILED. CONTROLLED AT A CONSTANT TEMPERATURE IN ONE ROOM AND AT DIFFERENT LOW DAYTIME TEMPERATURES AND HIGH NIGHTTIME TEMPERATURES IN THREE OTHER ROOMS FOR A ONE-YEAR PERIOD. WITHIN CERTAIN CONSTRAINTS, A NET ENERGY SAVINGS WAS REALIZED BY CONTROLLING HIGHER OVERNIGHT TEMPERATURES WITHOUT SERIOUS QUALITY DAMAGE.

DATE: 771200

ABSTRACT 834

TITLE: ENERGY REQUIREMENTS FOR PRODUCTION AND PROCESSING OF SUGARBEETS IN CALIFORNIA.

AUTHOR: AVLANI P; SINGH R; CHANCELLOR W.

SOURCE: PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON ENERGY AND FOOD; BOSTON, MA; 9-13 AUG 1976; 25 PP.

KEYWORDS: FOOD PROCESSING; BEET SUGAR; ENERGY CONSUMPTION; ENERGY ACCOUNTING; CALIFORNIA.

NOTES: FILED.

DATE: 760809

ABSTRACT 835

TITLE: THERMODYNAMICS OF FOOD FREEZING.

AUTHOR: BAIRD D; GRESSGOTT H.

SOURCE: ASAE PAPER 78-6544; 1978; 9 PP.

KEYWORDS: FREEZING; FOOD PROCESSING; ENERGY FLOW.

NOTES: FILED. A LABORATORY EXERCISE IN FOOD FREEZING, INCLUDING AN INTRODUCTION TO THE THERMODYNAMICS OF FREEZING AND SAMPLE CALCULATIONS FOR FREEZING TIMES.

DATE: 781019

ABSTRACT 836

TITLE: ENERGY COSTS OF A CONVENTIONAL AND AIR RECYCLING CROSS FLOW RICE DRYER.

AUTHOR: BAKSHI A S; SINGH R P; WANG C Y; STEFFE J F.

SOURCE: ASAE PAPER 78-311; JUNE 1978; 22 PP.

KEYWORDS: FOOD PROCESSING; DRYING; RICE MILLING; EFFICIENCY.

NOTES: FILED. ENERGY NEEDED FOR DRYING RICE IN A CROSS FLOW DRYER, WITH AND WITHOUT RECYCLING OF EXHAUST AIR, UNDER VARIOUS DRYING CONDITIONS ARE DISCUSSED. DIFFERENT RECYCLING CONFIGURATIONS ARE CONSIDERED. RECYCLING REDUCES THE ENERGY REQUIREMENT AND RESULTS IN MORE UNIFORM RICE DRYING WITH NO HEAT LOSS IN RICE MILLING QUALITY.

DATE: 780680

ABSTRACT 837

TITLE: OPTIMIZATION OF SUGAR FACTORY STATIONS WITH REFERENCE TO THE POWER HOUSE ECONOMY.

AUTHOR: BALOH A.


KEYWORDS: FOOD PROCESSING; BEET SUGAR; ACCOUNTING; CONSERVATION; GERMANY.

NOTES: FILED. DISCUSSES OPTIMIZATION OF EVAPORATOR STATION IN RESPECT TO POWER HOUSE ECONOMY, CONSIDERING ALSO OPERATION AND PLANT COSTS IN GERMAN; BRIEF ENGLISH SUMMARY.

DATE: 760800
ABSTRACT 838

**TITLE:** AN EXPERIMENTAL APPARATUS FOR DIRECT SOLAR DRYING.
**AUTHOR:** BEACH C.
**SOURCE:** FLORIDA SOLAR ENERGY CENTER, 300 STATE RD 401, CAPE CANAVERAL, FL, OCT 1978, 7 PP.
**KEYWORDS:** FOOD PROCESSING, SOLAR, DEHYDRATION.
**NOTES:** FILLED. AN EXPERIMENTAL SOLAR DRYER WAS DESIGNED TO BE USED IN FINDING THE BEST WAY TO USE SOLAR RADIATION IN COMBINATION WITH HEATED AIR FOR DRYING A VARIETY OF FOOD PIECES.
**DATE:** 781000

ABSTRACT 839

**TITLE:** ENERGY THRIFT IN PACKAGING AND MARKETING.
**AUTHOR:** BERRY S, MAKINO H.
**SOURCE:** TECHNOLOGY REVIEW, FEB 1974, PP 32-43.
**KEYWORDS:** FOOD PROCESSING, ENERGY ACCOUNTING, MARKETING.
**NOTES:** FILED. ANALYZED ARE THE ENERGY COSTS OF PRODUCTION, USE, AND DISPOSAL OF PACKAGING OF CONSUMER GOODS. ENERGY SAVINGS VIA RECYCLING, REUSING, AND THE INCINERATION OF PACKAGING MATERIALS ARE CONSIDERED.
**DATE:** 740200

ABSTRACT 840

**TITLE:** HEAT RECOVERY IN A CHEESE PLANT.
**AUTHOR:** BEUZIT P, CROTTEAU J.
**SOURCE:** REVUE LAITIERE FRANCAISE, 352/222-227, APRIL 1977.
**KEYWORDS:** FOOD PROCESSING, CHEESE, HEAT, CONSERVATION, ACCOUNTING, FRANCE.
**NOTES:** FILED. DISCUSSES ENERGY USE AND HEAT FLOW WITHIN A CHEESE OPERATION, AND WAYS TO INCREASE HEAT EFFICIENCY.
**DATE:** 770400

ABSTRACT 841

**TITLE:** ENERGY - ITS EFFICIENT USE AND CONSERVATION IN THE FOOD AND DAIRY INDUSTRY (A SYMPOSIUM).
**AUTHOR:** BLAXTER K L, STARKIE G L, HARDING F, BUNT B P, WESTON M B.
**KEYWORDS:** FOOD PROCESSING, DAIRY PRODUCTS, PACKAGING, CONSERVATION, WATER USE.
**NOTES:** FILED. FIVE PAPERS. ENERGY AND THE PRODUCTIVITY OF AGRICULTURE BY BLAXTER (ABSTRACTED). SOME ASPECTS OF ENERGY CONSERVATION IN DAIRY PROCESS PLANT BY STARKIE. CONSERVATION OF RAW MATERIALS BY HARDING. THE ENERGY USED BY PACKAGING AND ITS MINIMIZATION BY BUNT. FUEL - ITS EFFICIENT USE -- PRESENT AND FUTURE BY WESTON.
**DATE:** 751200

ABSTRACT 842

**TITLE:** MODIFICATION OF FOOD PROCESSING FOR REDUCED ENERGY CONSUMPTION AND EFFLUENT GENERATION.
**AUTHOR:** BOMBEN J L.
**SOURCE:** ASAE PAPER 75-6515, DEC 1975.
**KEYWORDS:** FOOD PROCESSING, BLANCHING, FRUITS AND VEGETABLES, WATER USE, ALTERNATIVES, SOLAR, DEHYDRATION.
**NOTES:** FILED. FOOD PROCESSING MODIFICATIONS THAT COULD REDUCE WASTE GENERATION AND ENERGY CONSUMPTION ARE DESCRIBED BRIEFLY -- VIBRATORY SPIRAL BLANCHER-COOLER, DECENTRALIZED TOMATO PROCESSING, COUNTER-CURRENT DE SALTING, UNIT KERNEL CORN, FLEXIBLE POUCHES, DEHYDRATION WITH SOLAR ENERGY, AND FUEL FROM AGRICULTURAL WASTES.
**DATE:** 751220

ABSTRACT 843

**TITLE:** RESOURCE IMPLICATIONS WITH PARTICULAR REFERENCE TO ENERGY REQUIREMENTS FOR GLASS AND PLASTIC MILK BOTTLES.
**AUTHOR:** BOUSTEAD I.
**SOURCE:** J OF THE SOC OF DAIRY TECH, 27(3)/159-165, 1974.
**KEYWORDS:** FOOD PROCESSING, PACKAGING, DAIRY PRODUCTS, UNITED KINGDOM.
**NOTES:** FILED. DISCUSSES ENERGY REQUIREMENTS FOR MILK BOTTLING IN UK INCLUDING MATERIAL USED, RETURNABLE OR NON-RETURNABLE NATURE OF BOTTLES, TRIPAGE AND DELIVERY SYSTEM AS CRITERIA. FUTURE IMPLICATIONS.
**DATE:** 740900
ABSTRACT 844

• TITLE: UTILITY USAGE IN SMALL SLAUGHTER PLANTS.
• AUTHOR: BRASINGTON C F.
• SOURCE: ARS-1751-AGR RESEARCH SERVICE, USDA, MARCH 1976, 17 PP.
• KEYWORDS: FOOD PROCESSING; ELECTRICAL; MEAT PACKING.
• NOTES: FILED.
• DATE: 760300

ABSTRACT 845

• TITLE: DRYING BEEF PACKING PLANT WASTES BY DIRECT APPLICATION OF SOLAR ENERGY.
• AUTHOR: BRUSENWITZ G M, FARMER D W.
• KEYWORDS: FOOD PROCESSING; MEAT PACKING, DEHYDRATION, SOLAR, WASTES.
• NOTES: FILED.
• DATE: 771224

ABSTRACT 846

• TITLE: RECOVERY OF WASTE HEAT FROM DRYING CITRUS BY-PRODUCTS.
• AUTHOR: BRYANT W L.
• SOURCE: US CITRUS AND SUBTROPICAL PRODUCTS LABORATORY, WINTER HAVEN, FL, 1975, 31 PP.
• KEYWORDS: FOOD PROCESSING, DEHYDRATION, WASTE HEAT.
• NOTES: FILED.
• DATE: 750200

ABSTRACT 847

• TITLE: WATER RECYCLE IMPROVES DISC CLEANING OF TOMATOES.
• AUTHOR: CARRAD P A, ROSE W W.
• SOURCE: FOOD TECH, 31(3)/92-96, MARCH 1977.
• KEYWORDS: FOOD PROCESSING; FRUITS AND VEGETABLES, ECONOMICS, CONSERVATION, WATER USE.
• NOTES: FILED.
• DATE: 770300

ABSTRACT 848

• TITLE: WATER/ENERGY TRADE-OFF IN CLEANING TOMATOES.
• AUTHOR: CARRAD P A, KROCHTA J M, ROSE W W.
• SOURCE: FOOD TECH, 30(3)/24-26, MARCH 1976.
• KEYWORDS: FOOD PROCESSING; FRUITS AND VEGETABLES, CONSERVATION, WATER USE.
• NOTES: FILED.
• DATE: 760300

ABSTRACT 849

• TITLE: ENERGY SAVING TECHNIQUES FOR THE FOOD INDUSTRY.
• AUTHOR: CASPER R E.
• SOURCE: PARK RIDGE, NJ 07656/NOTES DATA CORP, 1977, 657 PP.
• KEYWORDS: FOOD PROCESSING; ACCOUNTING, CONSERVATION, MEAT PRODUCTS, POULTRY AND EGG PRODUCTS, DAIRY PRODUCTS, FRUITS AND VEGETABLES, GRAIN MILL PRODUCTS, BAKERY PRODUCTS, SUGAR AND CONFECTIONERY PRODUCTS, FATS AND OILS, BEVERAGES, FISH, SEAFOOD, MISCELLANEOUS FOOD PRODUCTS.
• NOTES: FILED.
• DATE: 770300
ABSTRACT 850
• TITLE: ANALYSIS OF ENERGY UTILIZATION IN SPINACH PROCESSING
• AUTHOR: CHINNAN R S, SINGH R P, PEDERSEN L O, CARRAD P D, ROSE W M, JACOB N L
• SOURCE: ASAE PAPER 78-6524, 1978, 23 PP
• KEYWORDS: FOOD PROCESSING, ENERGY ACCOUNTING, CANNING
• NOTES: FILED. AN ENERGY ACCOUNTING STUDY WAS CONDUCTED ON CANNING OF SPINACH. BOTH STEAM AND ELECTRICAL ENERGY USED BY VARIOUS UNIT OPERATIONS WERE MEASURED. ENERGY INTENSIVE UNIT OPERATIONS INCLUDE BLANCHING, HEATING IN EXHAUST BOXES, AND RETORTING.
• DATE: 781218

ABSTRACT 851
• TITLE: ERDA PROGRAMS AND OBJECTIVES - ENERGY CONSERVATION IN FOOD PROCESSING
• AUTHOR: CLARK S J
• SOURCE: PREPARED BY WASH SCI MARKETING, INC. FOR ERDA, DIV. OF INDUSTRIAL ENERGY CONSERVATION, JULY 1977
• KEYWORDS: FOOD PROCESSING, CONSERVATION
• NOTES: FILED
• DATE: 770708

ABSTRACT 852
• TITLE: ENERGY AUDIT IN FOOD PLANT DESIGN - APPLICATION TO A MALT PLANT
• AUTHOR: COLLINS C J
• SOURCE: ASAE PAPER 78-6520, 21 PP
• KEYWORDS: FOOD PROCESSING, ENERGY ACCOUNTING, DESIGN
• NOTES: FILED
• DATE: 781218

ABSTRACT 853
• TITLE: INVESTIGATION OF THE INFLUENCE OF SOME FACTORS ON ENERGY REQUIREMENTS AND DUST PRODUCTION IN PULP DRYING PLANTS, ESPECIALLY WITH REGARD TO THE RETENTION TIME OF THE PULP
• AUTHOR: CROCE W, T, MULLER G, BISSINGER B, STADLER F
• SOURCE: ZUCKER, 28(18)/401-410, 1975
• KEYWORDS: FOOD PROCESSING, BEET SUGAR, ACCOUNTING, DEHYDRATION, GERMANY
• NOTES: FILED. OPTIMAL DRYER EFFICIENCY DEPENDED ON THE SPECIFIC ECAPORATION, THE RATE OF BOILER FLUE GAS ADDITION, THE RATE OF DRUM ROTATION, RETENTION TIME, AND GAS VELOCITY.
• DATE: 750020

ABSTRACT 854
• TITLE: REFRIGERATION ENERGY IN RAW MILK STORAGE
• AUTHOR: CURRIER J U
• SOURCE: BULLETIN DE L INSTITUT DU FROID ANNEXE, 1/173-178, 1976
• KEYWORDS: FOOD PROCESSING, FLUID MILK STORAGE, REFRIGERATION, NEW ZEALAND
• NOTES: FILED. COMPARING ENERGY EFFICIENCY OF ALTERNATIVE MILK-COOLING SYSTEMS
• DATE: 761000

ABSTRACT 855
• TITLE: ENERGY CONSUMPTION IN THE SUGAR INDUSTRY
• AUTHOR: DAMBRE P P
• SOURCE: INDUSTRIES ALIMENTAIRES ET AGRICOLES, 91(7)/807-811, 1976
• KEYWORDS: FOOD PROCESSING, BEET SUGAR, CONSERVATION, DEHYDRATION, FRANCE
• NOTES: FILED. DESCRIBES A PROCESS INNOVATION IN BEET SUGAR EVAPORATION, WHICH INVOLVES CONTINUOUS CRYSTALLIZATION AND HEAT RECOVERY FROM EVAPORATED VAPORS, AND WHICH PERMITS A 30-35 PERCENT REDUCTION IN ENERGY CONSUMPTION AT THIS PROCESSING POINT.
• DATE: 760000

ABSTRACT 856
• TITLE: A SIMULATION STUDY OF DECISION STRATEGIES FOR A HOG PROCESSING PLANT CONSTRAINED BY ENERGY SUPPLY REGULATIONS
• AUTHOR: DAVIS G A, CONNOR L J
• SOURCE: AGR ECON REPORT 326, DEPT. OF AGR ECON, MICH STATE UNIV., EAST LANSING, MI, AUG 1977, 41 PP
• KEYWORDS: FOOD PROCESSING, ECONOMICS, CONSERVATION, OPERATING PROCEDURE
• NOTES: FILED. THE POTENTIAL EFFECTS OF ALTERNATIVE ENERGY CONSERVATION STRATEGIES OF A MEDIUM-SIZED MIDWESTERN HOG PROCESSING PLANT, WITH THE HELP OF A SIMULATED COMPUTER MODEL. A 12 PERCENT-energy reduction was achieved.
• DATE: 770800
ABSTRACT 857
• TITLE: ENERGY SAVINGS IN PULP DRYING.
• AUTHOR: DEMEUX P M, TACCARO M.
• SOURCE: INDUSTRIES ALIMENTAIRES ET AGRICOLES, 94(7-8)/737-747, 1977.
• KEYWORDS: FOOD PROCESSING, BEET SUGAR, DEHYDRATION, CONSERVATION, FRANCE.
• NOTES: FILED. THE ECONOMICS OF BEET PULP DRYING IS DISCUSSED AND POTENTIAL ENERGY-SAVING ALTERNATIVES ARE EXAMINED. IN FRENCH.
• DATE: 770000

ABSTRACT 858
• TITLE: BAKERY OVENS AND THE ENERGY CRISIS.
• AUTHOR: DERSCH J A.
• KEYWORDS: FOOD PROCESSING, BAKERY PRODUCTS, CONSERVATION.
• NOTES, FILED. COMPARES CHARACTERISTICS OF EIGHT DIFFERENT COMMERCIAL BAKERY OVEN TYPES, IN TERMS OF ENERGY CONSERVATION.
• DATE: 740700

ABSTRACT 859
• TITLE: INDUSTRIAL ENERGY STUDY OF SELECTED FOOD INDUSTRIES.
• AUTHOR: DEVELOPMENT PLANNING AND RESEARCH ASSOCIATES INC.
• SOURCE: US DEPT OF COMMERCE, NTIS, 5255 PORT ROYAL RD, SPRINGFIELD, VA 22161, JULY 1974, 580 PP.
• KEYWORDS: FOOD PROCESSING, INDUSTRY, ANIMAL.
• NOTES, FILED.
• DATE: 740700

ABSTRACT 860
• TITLE: AGR-INDUSTRIAL UTILIZATION OF REJECT HEAT AND WATER.
• AUTHOR: DIVINE T E, DEMMITT T F.
• KEYWORDS, FOOD PROCESSING, MODELS, HEAT, WATER USE, CONSERVATION.
• NOTES, FILED. ALTERNATIVE AGR-INDUSTRIAL PRODUCTION UNITS ARE IDENTIFIED FOR INCLUSION IN A COMPLEX TO MAKE USE OF REJECT HEAT AND WATER. AN ANALYTICAL APPROACH IS DISCUSSED FOR DEVELOPING AN OPTIMAL CONFIGURATION FOR MODELING OF SUCH A COMPLEX. THIS OPTIMAL CONFIGURATION IS EXPECTED TO USE THE CHARACTERISTIC OF THE PROPOSED COMPLEX IN WHICH PRODUCTION UNITS ARE SEQUENTIALLY ORDERED FROM HIGH TEMPERATURE USES TO LOW TEMPERATURE USES. AN INVERSE WATER CONSUMPTION RELATIONSHIP IS EXPECTED TO RESULT WITH HIGH VOLUME WATER USE CORRESPONDING TO LOW TEMPERATURE USES.
• DATE: 741200

ABSTRACT 861
• TITLE: ENERGY WASTAGE IN FOOD PROCESSING.
• AUTHOR: DUCOT E, LEVIS I S, LEVIS A M.
• KEYWORDS: FOOD PROCESSING, CONSERVATION, CANNING, FREEZING, DEHYDRATION.
• NOTES, FILED. DESCRIBES ENERGY INPUT DURING CANNING, DRYING, AND FREEZING OF FEAS, AND DISCUSSES AREAS FOR ENERGY CONSERVATION.
• DATE: 770400

ABSTRACT 862
• TITLE: ALINET - A DYNAMIC NETWORK MODEL OF THE FOOD PROCESSING AND DISTRIBUTION SECTOR.
• AUTHOR: ODE P E.
• KEYWORDS: FOOD PROCESSING, MARKETING, TRANSPORTATION, ACCOUNTING, MODELS, GRAIN MILL PRODUCTS, DAIRY PRODUCTS, MEAT PRODUCTS, POLICY, POULTRY AND EGG PRODUCTS.
• NOTES, FILED. FATIONALE AND DEVELOPMENT OF A COMPUTER SIMULATION MODEL OF FOOD PROCESSING AND DISTRIBUTION, FOR EVALUATING THE IMPACT OF POLICY DECISIONS.
• DATE: 780400

ABSTRACT 863
• TITLE: IDENTIFICATION OF MAJOR AREAS OF ENERGY UTILIZATION IN THE FOOD PROCESSING/FOOD SERVICE INDUSTRY.
• AUTHOR: OMEY S J, ET AL.
• SOURCE: NSF/RA-770029, NATIONAL SCI FOUNDATION, WASHINGTON DC, JAN 1977, 350 PP.
• KEYWORDS: FOOD PROCESSING, ACCOUNTING, MODELS.
• NOTES, FILED. CHICKEN PRODUCTS AND BY PRODUCTS WERE USED AS AN ENERGY ACCOUNTING MODEL FOR THE FOOD PROCESSING/FOOD SERVICE INDUSTRY TO IDENTIFY AREAS FOR IMPROVING THERMODYNAMIC EFFICIENCY, TO REDUCE ENERGY CONSUMPTION AND TO TRANSLATE ENERGY BENEFITS TO CONSUMERS AND OTHERS.
• DATE: 770100
• TITLE: REDUCTION OF RATES OF FOSSIL FUEL CONSUMPTION BY ENERGY CONSERVATION AND SOLAR ASSISTS IN FOOD CANNING OPERATIONS.
  • AUTHOR: ELKINS E P, RAILS J W, McMULLIN S L.
  • KEYWORDS: FOOD PROCESSING, FOSSIL FUELS, ENERGY CONSUMPTION, CONSERVATION, SOLAR.
  • NOTES: FILED.
  • DATE: 760809.

• TITLE: SAFEWAY PLANS NEW SAN LEANDRO PLANT AS ENERGY SAVER.
  • AUTHOR: ELLIOTT R A.
  • SOURCE: AHER DAIRY REVIEW, 7 PP.
  • KEYWORDS: FOOD PROCESSING, DAIRY PRODUCTS, WATER USE.
  • NOTES: FILED.
  • DATE: 730528.

• TITLE: HEAT RECOVERY IN PROCESS PLANTS.
  • AUTHOR: FANARITIS J P, STREICH H J.
  • KEYWORDS: FOOD PROCESSING, HEAT, CONSERVATION.
  • NOTES: GENERAL PRINCIPLES AND ALTERNATIVE METHODS FOR OPTIMUM RECOVERY AND USE OF HEAT FROM ELEVATED-TEMPERATURE PROCESS STREAMS ARE PRESENTED.
  • DATE: 770100.

• TITLE: SOME ASPECTS OF ENERGY COSTS IN FOOD PROCESSING.
  • AUTHOR: FARRER K T M.
  • SOURCE: FOOD TECH IN AUSTRALIA, 29(1)/7-13; JAN 1977.
  • KEYWORDS: FOOD PROCESSING, CANNING, GENERAL ECONOMICS, AUSTRALIA.
  • NOTES: FILED.
  • DATE: 770100.

• TITLE: STANDARDIZED TESTS COMPARE ENERGY CONSUMPTION RATES FOR STERILIZING EQUIPMENT.
  • AUTHOR: FERRUA J P, COL H M.
  • SOURCE: CANNER/PACKER, 144(1)/44, 1975.
  • KEYWORDS: FOOD PROCESSING, FRUITS AND VEGETABLES, STERILIZATION, CANNING.
  • NOTES: FILED.
  • DATE: 750000.

• TITLE: REFRIGERATION DEMANDS FOR MEAT PROCESSING.
  • AUTHOR: FLEMING A K.
  • KEYWORDS: FOOD PROCESSING, REFRIGERATION, MEAT PACKING, MEAT.
  • NOTES: FILED.
  • DATE: 760000.

• TITLE: ENERGY ANALYSIS IN DEHYDRATION PROCESSES.
  • AUTHOR: FLINK J H.
  • SOURCE: FOOD TECH, 31(3)/77-84, MARCH 1977.
  • KEYWORDS: FOOD PROCESSING, DEHYDRATION, ACCOUNTING.
  • NOTES: FILED.
  • DATE: 770306.
ABSTRACT 871

**TITLE:** DIRECT STEAM INJECTION WATER HEATER CUTS FUEL COSTS 7 PERCENT, INCREASES PRODUCTION 10 PERCENT / STEAM INJECTION HEATERS SUPPLY MORE WATER CONTINUOUSLY WITH CLOSER TEMPERATURE CONTROL.

**AUTHOR:** FOOD PROCESSING.

**SOURCE:** FOOD PROCESSING 37(111)1976 and 33(11)1972.

**KEYWORDS:** FOOD PROCESSING, CONSERVATION, POULTRY SLAUGHTER.

**NOTES:** FILED. DESCRIBES WATER HEATER SYSTEM DESIGNED FOR PET FOOD PLANT WHICH IS NEEDED TO MAINTAIN WATER AT A CONSTANT TEMPERATURE FOR INGREDIENT AND PROCESS USE. SYSTEM ELIMINATED HUGE HOLDING TANK, THUS FREEING FLOOR SPACE, AS WELL AS REDUCED WATER HAHHER. PROCESS SLOW-DOWNS AND FUEL COSTS. SECOND ARTICLE DESCRIBES SIMILAR INSTALLATION IN A POULTRY PROCESSING PLANT.

**DATE:** 761130

ABSTRACT 872

**TITLE:** NEW BOILER SAVES $48,000 IN FIRST YEAR.

**AUTHOR:** FOOD PROCESSING.

**SOURCE:** FOOD PROCESSING 38/11/1687 1977.

**KEYWORDS:** FOOD PROCESSING, CONSERVATION, HEAT, FRUITS AND VEGETABLES.

**NOTES:** FILED. INSTALLATION OF NEW 800 HP GAS/OIL BOILER WHICH OPERATES AT 85 PERCENT FUEL TO STEAM EFFICIENCY SIMULTANEOUSLY WITH HEAT EXCHANGE TO PREHEAT BOILER WATER FROM PROCESS WASTEWATER, RESULTED IN INCREASED PLANT CAPACITY 121,000 MORE CASES FOR FEWER THERMS (173,654 FEWER) AND LOWER FUEL COSTS ($28,300).

**DATE:** 771000

ABSTRACT 873

**TITLE:** VENTURI STEAM BLANCHER SAVES 50 PERCENT IN FUEL COSTS.

**AUTHOR:** FOOD PROCESSING.

**SOURCE:** FOOD PROCESSING 38/77/96-97 1977.

**KEYWORDS:** FOOD PROCESSING, FRUITS AND VEGETABLES, BLANCHING.

**NOTES:** FILED. NEW BLANCHER DESIGN REDUCES FUEL COSTS 50 PERCENT WHILE INCREASING PRODUCT VOLUME AND IMPROVING QUALITY. RECIRCULATES STEAM INSIDE TOTALLY ENCLOSED HOODED UNIT. HAS WATER-SEALED PRODUCT ENTRANCE AND EXIT, AND STEAMS ON DEMAND ONLY.

**DATE:** 771000

ABSTRACT 874

**TITLE:** CONSERVE ENERGY, INCREASE EFFICIENCY.

**AUTHOR:** FOOD PROCESSING INDUSTRY.

**SOURCE:** FOOD PROCESSING INDUSTRY 46(5431/7 PP, 1977.

**KEYWORDS:** FOOD PROCESSING, ACCOUNTING, CONSERVATION, SOLAR.

**NOTES:** FILED. DESCRIBES HOW TO PREPARE AN ENERGY AUDIT AND HOW TO INCREASE ENERGY EFFICIENCY THROUGH CONSERVATION METHODS. ALSO GIVES CASE STUDY OF SOLAR ENERGY USED ON A BROILER HOUSE.

**DATE:** 771000

ABSTRACT 875

**TITLE:** OPTIMIZATION OF DRY MILK PROCESS.

**AUTHOR:** FOUTS D A, OKOS M R, PEART R M.

**SOURCE:** ASAE PAPER 78-6523 1978 0 10 PP.

**KEYWORDS:** FOOD PROCESSING, FLUID MILK, DRYING.

**NOTES:** FILED. THE MILK DRYING PROCESS INVOLVES THE OPERATIONS OF EVAPORATION AND SPRAY DRYING. BOTH OPERATIONS ARE HIGHLY ENERGY INTENSIVE AND A SURVEY IS MADE OF ALTERNATIVE PROCESSES WHICH WILL SAVE ENERGY OR SUBSTITUTE FOR THESE OPERATIONS.

**DATE:** 781218

ABSTRACT 876

**TITLE:** ENERGY USE AND CONSERVATION IN THE FOOD INDUSTRY - UNITED STATES AND INDIA.

**AUTHOR:** GOEL V K.

**SOURCE:** UNIV MICROFILMS INTERNATIONAL, 300 N ZEEB RD, ANN ARBOR, MI 48106, AUG 1978, 253 PP.

**KEYWORDS:** FOOD PROCESSING, USA, INDIA, ENERGY CONSUMPTION, TRANSPORTATION, CONSERVATION, DAIRY, FLUID MILK, CHEESE, HEAT, EFFICIENCY.

**NOTES:** FILED.

**DATE:** 760800

ABSTRACT 877

**TITLE:** ENERGY PROFILE ANALYSIS IN DAIRY MANUFACTURING PLANTS.

**AUTHOR:** GOEL V K, JORDAN W K, RAD M A.

**SOURCE:** ASAE PAPER 78-6529 1978, 10 PP.

**KEYWORDS:** FOOD PROCESSING, DAIRY, ENERGY USE.

**NOTES:** FILED. ENERGY USE IN A DAIRY PLANT FOR PROCESSING, PACKAGING AND TRANSPORTATION IS PRESENTED. SOURCES OF THERMAL ENERGY LOSSES WERE IDENTIFIED. DISCARDED HOT WATER WAS THE MAJOR SOURCE OF THERMAL ENERGY LOSS. DATA FROM THE DAIRY PLANT ARE COMPARED WITH THOSE FROM FLUID MILK PLANTS.

**DATE:** 782030
ABSTRACT 878

• TITLE: ENERGY USE IN ABATTOIRS AND THE POTENTIAL FOR ENERGY CONSERVATION BY WASTE HEAT RECOVERY.
• AUTHOR: GRAHAM A.
• SOURCE, ABSTRACTED IN FOOD TECH IN AUSTRALIA: 29(8)/326, AUG 1977.
• KEYWORDS: FOOD PROCESSING, WASTE HEAT.
• NOTES: FILED. ENERGY COSTS ARE LESS THAN FIVE PERCENT OF THE TOTAL COST OF AUSTRALIAN HEAT PRODUCTION AND THEREFORE OF LOW PRIORITY. A REASONABLE ESTIMATE FOR THE ENERGY CONSUMED IN PROCESSING ANIMALS IN ABATTOIRS WOULD APPEAR TO BE 4.0 MJ/KG OF DRESSED CARCASS WEIGHT. 3.6 MJ FROM FUELS AND 1.4 MJ FROM ELECTRICITY.
• DATE: 77080.

ABSTRACT 879

• TITLE: ENERGY CONSERVATION PROGRAM SAVES TVG $500,000 IN 1976.
• AUTHOR: GRIFFITH, H., STOBA, K., HALSETH, D., ROBE, K.
• KEYWORDS: FOOD PROCESSING, ENERGY CONSERVATION.
• NOTES: FILED. DESCRIBES TRI-VALLEY GROWERS ENERGY CONSERVATION PROGRAM.
• DATE: 77080.

ABSTRACT 880

• TITLE: ENERGY USAGE IN FOOD PROCESSING AND DISTRIBUTION.
• AUTHOR: HAWTHORN, J.
• KEYWORDS: FOOD PROCESSING, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 751100.

ABSTRACT 881

• TITLE: ENERGY CONSUMPTION IN THE TOTAL PRODUCTION CYCLE OF VARIOUS FOOD PRODUCTS.
• AUTHOR: HENIG, Y. S., SCHOEN, M.
• SOURCE: GENERAL FOODS CORP., CENTRAL RESEARCH DEPT., WHITE PLAINS, N Y, NOV 1975, 29 PP.
• KEYWORDS: FOOD PROCESSING, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 751100.

ABSTRACT 882

• TITLE: ENERGY REQUIREMENTS - FREEZING VS CANNING.
• AUTHOR: HENIG, Y. S., SCHOEN, M., LONDAHL, G.
• SOURCE: FOOD ENGR 48(9)/54-57, SEPT 1976.
• KEYWORDS: FOOD PROCESSING, FREEZING, CANNING, FRUITS AND VEGETABLES.
• NOTES: FILED. THREE ARTICLES. FROZEN VS CANNED CORN BY HENIG AND SCHOEN, FROZEN VS CANNED PEAS BY LONDAHL, MEAT ANALOGS VS FRESH MEAT BY HENIG AND SCHOEN.
• DATE: 760900.

ABSTRACT 883

• TITLE: NEW TECHNIQUES FOR TEMPERATURE CONTROL OF PERISHABLE GOODS IN TRANSPORT AND STORAGE APPLICABLE TO THE LESS DEVELOPED AREAS.
• AUTHOR: JORDAN, R. C.
• SOURCE: UN CONF ON SCI AND TECH FOR DEV, PARIS, 1962, PP 120-132.
• KEYWORDS: FOOD PROCESSING, REFRIGERATION, INSULATION, TRANSPORTATION, STORAGE, DEVELOPING COUNTRIES.
• NOTES: FILED. THIS ARTICLE IS CONCERNED WITH RECENT TECHNICAL DEVELOPMENTS WHICH HAVE OCCURRED IN THE UNITED STATES AND WHICH MAY AFFECT MATERIALLY THE FUTURE DEVELOPMENT OF REFRIGERATION SYSTEMS FOR PERISHABLE PRODUCTS.

ABSTRACT 884

• TITLE: HEAT PUMP APPLICATION IN HEAT PROCESSING INDUSTRY.
• AUTHOR: KARMAN, V. D.
• SOURCE: ASAE PAPER 76-6516, 1976, 11 PP.
• KEYWORDS: FOOD PROCESSING, HEAT PUMPS.
• NOTES: FILED. AN ECONOMIC FEASIBILITY STUDY IS PRESENTED WHICH SHOWS THAT AN INDUSTRIAL HEAT PUMP SYSTEM FOR A HEAT PROCESSING FACILITY IS HIGHLY ATTRACTIVE. FREE WASTE ENERGY FROM THE PLANT REFRIGERATION SYSTEM CONDENSERS ARE USED AS THE SOURCE ENERGY FOR THE SYSTEM WHICH MEATS PLANT HOT WATER.
• DATE: 781218.
ABSTRACT 885

•TITLE: ENERGY CONSUMPTION AND CONSERVATION IN SEPARATION PROCESSES.
•AUTHOR: KING C. J.
•KEYWORDS: FOOD PROCESSING, SEPARATION, CONSERVATION, DEHYDRATION.
•NOTES: FILED. PRINCIPLES OF ENERGY CONSUMPTION IN DIFFERENT SEPARATION PROCESSES. DEWATERING, EXTRACTION, EVAPORATION, RECOVERY FROM WASTE WATER. IN SPECIAL SECTION ON ENERGY.
•DATE: 770306

ABSTRACT 886

•TITLE: ENERGY UTILIZATION IN A DAIRY PROCESSING PLANT.
•AUTHOR: KNOPF F., WILSON P., WILDKES M.
•SOURCE: ASAE PAPER 78-652; 1978 29 PP.
•KEYWORDS: FOOD PROCESSING, DAIRY, ENERGY USE.
•NOTES: FILED. PAPER DESCRIBES HOW A DETAILED ENERGY AUDIT WAS PERFORMED IN A DAIRY PLANT. THE AMOUNT OF ENERGY NECESSARY TO PRODUCE FLUID MILK PRODUCTS, ICE CREAM AND COTTAGE CHEESE IS QUANTIFIED FOR EACH UNIT OPERATION.
•DATE: 781218

ABSTRACT 887

•TITLE: REDUCTION OF ENERGY IN WET CORN MILLING.
•AUTHOR: KROCHTA K. M., LOOK K. T.
•KEYWORDS: FOOD PROCESSING, WET CORN MILLING, ENERGY ACCOUNTING.
•NOTES: FILED. WET CORN MILLING IS AN ENERGY INTENSIVE PROCESS DUE TO THE NEEDED AND CONCENTRATE THE RESULTING PRODUCTS. MODEST INCREASES IN DEWATERING EFFICIENCY AND DRYER EFFICIENCY COULD PRODUCE ENERGY SAVINGS OF 18 AND 14 PERCENT RESPECTIVELY. IN ADDITION, MODIFICATIONS TO THE STEEPING PRETREATMENT BEFORE MILLING COULD REDUCE OR ELIMINATE THE ENERGY REQUIREMENT FOR STEEP-WATER CONCENTRATION. WITH ENERGY SAVINGS UP TO 17 PERCENT.
•DATE: 771024

ABSTRACT 888

•TITLE: SOLAR - ENERGY COOLING AND FREEZING OF FOOD - A COMPUTER ANALYSIS.
•AUTHOR: KROCHTA J. M., TUMSET R. A.
•SOURCE: FOOD TECH. 31(3):61-64; MARCH 1977.
•KEYWORDS: FOOD PROCESSING, SOLAR, CHILLING, FREEZING, ACCOUNTING, MODELS.
•NOTES: FILED. ANALYZES AND DISCUSSES TECHNICAL AND ECONOMIC FEASIBILITY OF SOLAR-ABSORPTION REFRIGERATION, SHOWING THAT IT IS MARGINALLY FEASIBLE FOR FREEZING OR FROZEN STORAGE AND QUITE FEASIBLE FOR REFRIGERATION, THOUGH EXPENSIVE.
•DATE: 770530

ABSTRACT 889

•TITLE: REDUCTION OF ENERGY IN WET CORN MILLING.
•AUTHOR: KROCHTA J. M., LOOK K. T.
•KEYWORDS: FOOD PROCESSING.
•NOTES: FILED.
•DATE: 771024

ABSTRACT 890

•TITLE: ENERGY USE IN FRUITS AND VEGETABLE PROCESSING.
•AUTHOR: LANG D.
•KEYWORDS: FOOD PROCESSING, FRUITS AND VEGETABLES, GENERAL, HEAT, WATER USE, GERMANY.
•NOTES: FILED. DISCUSSES METHODS OF INCREASING EFFICIENCY OF HEATING WATER TO APPROPRIATE PROCESSING TEMPERATURES, INCLUDING HEAT EXCHANGERS AND HEAT PUMPS. IN GERMANY.
•DATE: 750600

ABSTRACT 891

•TITLE: ENERGY AND FOOD PRODUCTION.
•AUTHOR: LEACH G.
•SOURCE: IPC SCI AND TECH PRESS LTD. IPC HOUSE, 32 HIGH ST. GUILDFORD, SURREY, ENGLAND GUI 3EW 1976, 157PP.
•KEYWORDS: FOOD PROCESSING, UNITED KINGDOM, HISTORICAL, ENERGY BUDGET.
•NOTES: FILED. PROVIDES INFORMATION ON THE RANGE OF ENERGY INPUTS TO PRODUCE DIFFERENT KINDS OF FOOD BY THE FULL SPECTRUM OF METHODS. IT EXPLORES RELATIONSHIPS BETWEEN ENERGY, LAND AND LABOUR USAGE. IT RELATES THE AMOUNTS OF ENERGY TO TRANSPORT, COOK, STORE, AND PROCESS FOODSTUFFS. POINTS OUT OPPORTUNITIES FOR CONSERVING FUELS.
•DATE: 760600
ABSTRACT 892

*TITLE* WASTE HEAT CAPTURED.
*AUTHOR* LEAVITT P F.
*SOURCE* FOOD ENGR MARCH 1977, P 89.
*KEYWORDS* FOOD PROCESSING, HEAT, CONSERVATION.
*NOTES* FILED. ENERGY CONSERVATION THROUGH WASTE HEAT RECOVERY AT GERBER PRODUCTS.
*DATE* 770300

ABSTRACT 893

*TITLE* BOILER MAINTENANCE AND OPERATIONS.
*AUTHOR* LIND J E.
*SOURCE* ASAE PAPER 7B-6514, 1978, 3 PP.
*KEYWORDS* FOOD PROCESSING, CONSERVATION.
*NOTES* FILED. A DETAILED APPROACH TO ESTABLISHING A WORKABLE MAINTENANCE AND ENERGY CONSERVATION PROGRAM. SUGGESTIONS ON THE PROPER SELECTION OF EQUIPMENT; THE NECESSARY STEPS TO TRAIN OPERATING PERSONNEL; NECESSARY TOOLS AND TEST EQUIPMENT ARE GIVEN IN DETAIL. A 12 POINT LIST OF MAJOR AREAS THAT ENERGY AND MAINTENANCE SAVINGS CAN BE MADE SUMMARIZES THE PROGRAM.
*DATE* 781218

ABSTRACT 894

*TITLE* FREEZING PRESERVATION IN THE FUTURE.
*AUTHOR* LONDAML G.
*KEYWORDS* FOOD PROCESSING, FREEZING, FRUITS AND VEGETABLES, SWEDEN.
*NOTES* FILED. DISCUSSES FACTORS INVOLVED IN ESTIMATING FEASIBILITY OF FREEZING FOOD IN THE FUTURE. INCLUDES COMPARISONS OF VARIOUS STEPS AND ALTERNATIVE PROCESSES AND PACKAGING, FOR ENERGY USAGE, STORAGE LIFE, NUTRITIONAL VALUE AND SENSORY PROPERTIES.
*DATE* 760000

ABSTRACT 895

*TITLE* FEASIBILITY OF USING SOLAR ENERGY IN A CANNING PLANT AND MEAT PROCESSING PLANT.
*AUTHORS* LUND D B, DUFFIE J A, LEVONOVICH P, HEIDEMANN R, BUELOW F M.
*SOURCE* ASAE PAPER 77-651B, 1977, 25 PP.
*KEYWORDS* FOOD PROCESSING, SOLAR, MODELS.
*NOTES* FILED.
*DATE* 770000

ABSTRACT 896

*TITLE* COMPATIBILITY OF SOLAR ENERGY SUPPLY, COLLECTION AND STORAGE WITH FOOD PROCESSING ENERGY DEMANDS.
*AUTHORS* LUND D D, BUELOW F B, DUFFIE J.
*KEYWORDS* FOOD PROCESSING, SOLAR, MODELS, MEAT, DAIRY, FRUITS AND VEGETABLES.
*NOTES* FILED.
*DATE* 771024

ABSTRACT 897

*TITLE* COMPATIBILITY OF SOLAR ENERGY SUPPLY, COLLECTION AND STORAGE WITH FOOD PROCESSING ENERGY DEMANDS.
*AUTHORS* LUND D B.
*SOURCE* DEPT OF FOOD SCI, UNIV OF WISC, MADISON, WI 53706, 1977, 154 PP.
*KEYWORDS* FOOD PROCESSING, SOLAR, MEAT PACKING, CANNING, ECONOMICS.
*NOTES* FILED. REPORT CONTAINS THE RESULTS OF A STUDY ON THE ENERGY DEMANDS OF A CANNING PLANT AND A MEAT PROCESSING PLANT. MODELS OF SOLAR ENERGY SUPPLY AND COLLECTION ARE INCORPORATED. THE ECONOMIC FEASIBILITY OF USING SOLAR ENERGY IN SELECTED FOOD PROCESSING SYSTEMS IS ANALYZED.
*DATE* 770300

ABSTRACT 898

*TITLE* IMPACT OF THE ENERGY CRISIS ON FOOD PACKAGING.
*AUTHOR* MALLOY J C.
*SOURCE* SOC OF THE PLASTICS INDUSTRY INC, 250 PARK AVE, NEW YORK, NY 10017, 10 JUNE 1976, 7 PP.
*KEYWORDS* FOOD PROCESSING, PACKAGING.
*NOTES* FILED.
*DATE* 760610
**ABSTRACT 899**

*TITLE*. TECHNICAL AND ENGINEERING ASPECTS OF REFRIGERATED FOOD PRESERVATION.

*AUTHOR*. NATAROLO L.


*KEYWORDS*. FOOD PROCESSING, REFRIGERATION.

*NOTES*. FILED. OVERALL COLD-CHAIN EFFICIENCY DEPENDS ON ENERGY SAVING AND SYSTEM RELIABILITY. THESE FACTORS ARE DISCUSSED IN DEPTH.

*DATE*. 760000

**ABSTRACT 900**

*TITLE*. TECHNICAL AND ENGINEERING ASPECTS OF REFRIGERATED FOOD PRESERVATION.

*AUTHOR*. ATTARD LO.


*KEYWORDS*. FOOD PROCESSING, REFRIGERATION.

*NOTES*. FILED. OVERALL COLD-CHAIN EFFICIENCY DEPENDS ON ENERGY SAVING AND SYSTEM RELIABILITY. THESE FACTORS ARE DISCUSSED IN DEPTH.

*DATE*. 760000

**ABSTRACT 901**

*TITLE*. ENERGY CONSERVATION AND ITS RELATION TO MATERIALS HANDLING IN THE FOOD INDUSTRY.

*AUTHOR*. MATTHEWS R F.

*SOURCE*. INST OF FOOD AND AGR SCI. UNIV OF FLORIDA. GAINESVILLE. 1975. 143 PP.

*KEYWORDS*. FOOD PROCESSING, SOLAR, CONVERSION, FOSSIL FUELS, CONSERVATION.

*NOTES*. FILED. RESULTS FROM A SURVEY OF ENERGY USE BY CITRUS PACKING PLANTS ARE ANALYZED. A PROCEDURE TO DETERMINE OPTIMUM CONDITIONS FOR SURFACE MOISTURE REMOVAL OF WAXED CITRUS IS PRESENTED. USE OF HEAT DISCHARGED IN A REFRIGERATION SYSTEM IS EXPLORED.

*DATE*. 750000

**ABSTRACT 902**

*TITLE*. ENERGY CONSERVATION IN THE CANNING INDUSTRY.

*AUTHOR*. NATIONAL CANNERS ASSOCIATION.

*SOURCE*. ASAE PAPER 78-6539, 1978. 24 PP.

*KEYWORDS*. FOOD PROCESSING, CANNING, CONSERVATION.

*NOTES*. FILED. PAMPHLET. CONTAINS A COLLECTION OF INDUSTRIAL CONCEPTS AND IDEAS FOR REDUCING ENERGY CONSUMPTION IN CANNING PLANTS.

*DATE*. 780000

**ABSTRACT 903**

*TITLE*. ASHRAE MEMBERS GET TIPS ON SAVING BOTH ENERGY AND MONEY.

*AUTHOR*. NATIONAL PROVISIONER.


*KEYWORDS*. FOOD PROCESSING, MEAT PACKING, CONSERVATION.

*NOTES*. FILED. SUMMARIES OF PAPERS PRESENTED DURING ASHRAE SEMINAR ON ENERGY CONSERVATION IN MEAT PACKING PLANTS. TIPS TO MANAGEMENT, COVERING FACILITIES, WATER USE, UTILITIES - ENERGY CONSUMPTION AND LOSS, LEAKS OF AIR, STEAM AND WATER - REFRIGERATION SAVINGS DUE TO HOT-BONING - HISTORICAL ENERGY PROFILE AND CONSERVATION TARGETS FOR THE INDUSTRY.

*DATE*. 770402

**ABSTRACT 904**

*TITLE*. TOTAL ENERGY TO PRODUCE FOOD SERVINGS AS A FUNCTION OF PROCESSING AND MARKETING MODES.

*AUTHOR*. OLABODE H A, STANDING C N, CHAPMAN P A.

*SOURCE*. J OF FOOD SCI. 42(3)/768-774. 1977.

*KEYWORDS*. FOOD PROCESSING, GENERAL, ACCOUNTING, FRUITS AND VEGETABLES, CANNING, FREEZING, PEELING, TRANSPORTATION, MARKETING, POTATOES, DEHYDRATION.

*NOTES*. FILED. DETAILED ENERGY ACCOUNTING WAS DONE FOR ALL MAJOR PROCESSING AND MARKETING NOTES FROM POINT OF HARVEST TO POINT OF CONSUMPTION. FOR TEN PRODUCE PRODUCTS - FRESH, BLANCHED, CONSERVED, GRANULATED, SPRAY-DRIED, FREEZE-DRIED, CANNED, RETORT POUCHED, REFRIGERATED, AND FROZEN.

*DATE*. 770000

**ABSTRACT 905**

*TITLE*. ENERGY USE AND CONSERVATION IN THE PROCESSING WORKS OF THE NEW ZEALAND MEAT INDUSTRY.

*AUTHOR*. PEARSON R G, PILLING R G.

*SOURCE*. LINCOLN COLLEGE, CANTERBURY, NEW ZEALAND. DEC 1975. 79 PP.

*KEYWORDS*. FOOD PROCESSING, CONSERVATION, NEW ZEALAND.

*NOTES*. FILED.

*DATE*. 751220
ABSTRACT 906

TITLE: IMPROVED OPERATIONS OF ATMOSPHERIC COOKER CUTS ENERGY BILL BY $3900/SEASON.

AUTHOR: PHILPOT J L.

SOURCE: PARDEE ENGR, 935 PARDEE ST, BERKELEY, CA 94710. 6 PP.

KEYWORDS: FOOD PROCESSING, CANNING, CONSERVATION.

NOTES: FILED.

DATE: 751100

ABSTRACT 907

TITLE: DIRECT ENERGY INPUTS TO FOOD PRODUCTION.

AUTHOR: PRICE D R, GUNKEL W W, CASLER G L.


KEYWORDS: FOOD PROCESSING, PRODUCTION.

NOTES: FILED.

DATE: 760809

ABSTRACT 908

TITLE: SOLAR ENERGY FOR THE AUSTRALIAN FOOD PROCESSING INDUSTRY.

AUTHOR: PROCTOR D, HORSE R.


KEYWORDS: FOOD PROCESSING, SOLAR, AUSTRALIA, ECONOMICS.

NOTES: FILED.

DATE: 760000

ABSTRACT 909

TITLE: ENERGY-HOARDING NEW IQF FREEZER SAVES OVER 20 PERCENT COMPRESSOR HP.

AUTHOR: QUICK FROZEN FOODS.


KEYWORDS: FOOD PROCESSING, FRUITS AND VEGETABLES, FREEZING, CONSERVATION.

NOTES: FILED.

DATE: 751100

ABSTRACT 910

TITLE: ENERGY ECONOMY IN INDUSTRIAL DRYING.

AUTHOR: RAME J M.


KEYWORDS: FOOD PROCESSING, DEHYDRATION, CONSERVATION, FRANCE, MEAT.

NOTES: FILED.

DATE: 770400

ABSTRACT 911

TITLE: APPLICATION OF PRODUCT RETURN OSMOSIS TO REDUCE ENERGY IN SUGAR PROCESSING.

AUTHOR: RANDALL J M, CAMIRAND W M, POPPER K.


KEYWORDS: FOOD PROCESSING, CONSERVATION.

NOTES: FILED.

DATE: 771024

ABSTRACT 912

TITLE: THERMAL ENERGY LOSSES AND CONSERVATION IN VEGETABLE CANNERIES OF NORTHEAST USA.

AUTHOR: RAO M A.


KEYWORDS: FOOD PROCESSING, MEAT, CONSERVATION, USA.

NOTES: FILED.

DATE: 760809
ABSTRACT 913

• TITLE: ENERGY CONSERVATION IN FOOD CANNERIES - THERMODYNAMIC AND ECONOMIC CONSIDERATIONS.
• AUTHOR: RAO H A, GOEL V K, KATZ J.
• KEYWORDS: FOOD PROCESSING, CONSERVATION.
• NOTES: FILED.
• DATE: 771224

ABSTRACT 914

• TITLE: THERMAL ENERGY LOSSES AND CONSERVATION IN SAUERKRAUT PROCESSING PLANTS.
• AUTHOR: RAO H A, KATZ J, KENNY J F, DOWNING D L.
• SOURCE: J OF MLIR FOOD TECH, 39(6)/543-545, AUG 1976.
• KEYWORDS: FOOD PROCESSING, CANNING, HEAT, PICKLED FRUITS AND VEGETABLES.
• NOTES: FILED. SOURCES AND MUKSITUDES OF THERMAL ENERGY LOSSES IN THREE SAUERKRAUT PROCESSING PLANTS IN WESTERN NEW YORK. FUELS FOR THIS HEAT ENERGY ACCOUNTED FOR 86-95 PERCENT OF ALL ENERGY PURCHASED BY THE PLANTS. REDUCTION OF HEAT ENERGY USAGE WITH APPROPRIATE CONSERVATION METHODS IS POTENTIALLY 6-33 PERCENT, DEPENDING ON PLANT CHARACTERISTICS.
• DATE: 760800

ABSTRACT 915

• TITLE: THERMAL ENERGY LOSSES IN VEGETABLE CANNING PLANTS.
• AUTHOR: RAO H A, KATZ J, KENNY J F, DOWNING D L.
• SOURCE: FOOD TECH, 30(1)/27/4 PP, 1976.
• KEYWORDS: FOOD PROCESSING, FRUITS AND VEGETABLES, CANNING, CONSERVATION, HEAT, ACCOUNTING.
• NOTES: FILED. ENERGY AUDIT AND IDENTIFICATION OF POTENTIAL CONSERVATION MEASURES IN FOUR VEGETABLE CANNERIES. THE AVERAGE HEAT LOSSES FOR ALL PLANTS WAS 13.2 PERCENT OF NET HEAT INPUT, WHILE THAT FOR HOT WATER WAS 17.3 PERCENT.
• DATE: 760300

ABSTRACT 916

• TITLE: COMPUTER ESTIMATION OF HEAT LOSSES IN FOOD PROCESSING PLANTS.
• AUTHOR: RAO H A, KATZ J.
• SOURCE: FOOD TECH, 30(3)/36-39, 42 MARCH 1976.
• KEYWORDS: FOOD PROCESSING, HEAT, MODELS, ACCOUNTING, CONSERVATION.
• NOTES: FILED. BASED ON MODEL VEGETABLE PROCESSING PLANT, COMPUTER GENERATED ENERGY LOSS DATA FROM DISCARDED HOT WATER, EQUIPMENT, STEAM PIPES, CEILING, AND SIDE WALLS.
• DATE: 760300

ABSTRACT 917

• TITLE: STEAM BLANCHER USES 50 PERCENT LESS ENERGY.
• AUTHOR: RAY A.
• SOURCE: FOOD PROCESSING, JAN 1975.
• KEYWORDS: FOOD PROCESSING, BLANCHING, FRUITS AND VEGETABLES.
• NOTES: BASED ON MODEL UNITS, STEAM BLANCHER/COOLER COMBINES ALL THREE FUNCTIONS IN ONE UNIT. PRODUCTION CAPACITY IS INCREASED, REQUIRED FLOOR SPACE IS REDUCED, AND STEAM REQUIREMENT PER LB OF PRODUCT IS HALVED.
• DATE: 750100

ABSTRACT 918

• TITLE: ENERGY EFFICIENCY IN SUPPLYING RECOMMENDED DIETARY ALLOWANCE.
• AUTHOR: REMKUGLER G E.
• SOURCE: ASAE PAPER T6•6521, 1976, 18 PP.
• KEYWORDS: FOOD PROCESSING, SUPPLY DEMAND.
• NOTES: FILED.
• DATE: 760000

ABSTRACT 919

• TITLE: ENERGY CONSUMPTION AND ACCEPTABILITY - COMPARISON OF COOKING METHODS AND APPLIANCES FOR BEEF PATTIES.
• AUTHOR: RHCE K S, DREW F.
• SOURCE: CONSUMER RESEARCH CENTER, TEXAS AGR EXPT STA, TEXAS A AND M UNIV, COLLEGE STATION, TX 77843, JUNE 1977, 14 PP.
• KEYWORDS: FOOD PROCESSING, COOKING, ENERGY CONSUMPTION, MEAT PRODUCTS.
• NOTES: FILED.
• DATE: 770600
ABSTRACT 920

•TITLE: THE EFFECT OF PROCESSING OPERATIONS ON THE ENERGY AVAILABLE FROM FOOD.
•AUTHOR: RICE E E.
•SOURCE: FOOD TECHNOLOGY, 21(259)/41-44, MARCH 1967.
•KEYWORDS: FOOD PROCESSING, FOOD ENERGY.
•NOTE: ENERGY AVAILABLE FROM A CONSUMED FOOD IS OFTEN INCREASED BY PROCESSING WHICH IMPROVES DIGESTIBILITY.
•DATE: 670300

ABSTRACT 921

•TITLE: YOU CAN ESTIMATE THE VALUE OF PIPE INSULATION.
•AUTHOR: RIPPEN A L.
•SOURCE: PRODUCTION TIPS, THE NATIONAL ICE CREAM RETAILERS ASSOC, INC., FEB 1978, 4 PP.
•KEYWORDS: FOOD PROCESSING, INSULATION.
•NOTE: FILED.
•DATE: 780200

ABSTRACT 922

•TITLE: CONSERVING ENERGY IN THE DAIRY PLANT.
•AUTHOR: RIPPEN A L.
•SOURCE: DAIRY AND ICE CREAM INDUSTRY, 15(2)/36, 97, FEB 1975.
•KEYWORDS: FOOD PROCESSING, DAIRY PRODUCTS, CONSERVATION.
•NOTE: FILED. PRACTICAL TIPS FOR DAIRY FOOD PLANT OPERATIONS.
•DATE: 750200

ABSTRACT 923

•TITLE: ENERGY CONSERVATION IN THE FOOD PROCESSING INDUSTRY.
•AUTHOR: RIPPEN A L.
•SOURCE: J MILK FOOD TECHNOLOGY, 38(11)/715-720, NOV 1975.
•KEYWORDS: FOOD PROCESSING, GENERAL, ACCOUNTING, CONSERVATION.
•NOTE: FILED. DESCRIBES ENERGY USAGE TRENDS IN THE FOOD PROCESSING INDUSTRY AND SUGGESTS CONSERVATION MEASURES.
•DATE: 751100

ABSTRACT 924

•TITLE: MAKING ICE CREAM WITH LESS ENERGY.
•AUTHOR: RIPPEN A L.
•KEYWORDS: FOOD PROCESSING, FROZEN DAIRY PRODUCTS, CONSERVATION.
•NOTE: FILED. TRADE JOURNAL INFORMATION TO PROCESSORS ON REDUCING ENERGY CONSUMPTION THROUGH IN-PLANT AWARENESS.
•DATE: 770400

ABSTRACT 925

•TITLE: FUEL - HANDLE WITH CARE.
•AUTHOR: RIPPEN A L.
•SOURCE: AMERICAN DAIRY REVIEW, 36(5)/4 PP, MAY 1974.
•KEYWORDS: FOOD PROCESSING, GENERAL, CONSERVATION.
•NOTE: FILED. HOW TO REDUCE ENERGY USE THROUGH USE OF BUILDING INSULATION, INFRARED HEAT, STEAM PIPE INSULATION, COMPLETE COMBUSTION, LOW PRESSURE STEAM AND MANAGEMENT AND EMPLOYEE COMMITMENT.
•DATE: 740500

ABSTRACT 926

•TITLE: OUR INDUSTRY TODAY - INFLUENCE OF FUTURE ENERGY SUPPLIES ON PROCESSING PROCEDURES AND COSTS.
•AUTHOR: RIPPEN A L.
•SOURCE: J OF DAIRY SCIENCE, 62(1)/91-95, JAN 1979.
•KEYWORDS: FOOD PROCESSING, DAIRY.
•NOTE: FILED.
•DATE: 790100

ABSTRACT 927

•TITLE: EFFECT OF MILLING CONDITIONS ON YIELDS, MILLING TIME AND ENERGY REQUIREMENTS IN A PILOT SCALE ENGELBERG RICE MILL.
•AUTHOR: ROBERTS J L, WASSERMAN T.
•SOURCE: J OF FOOD SCIENCE, 42(3)/3 PP, 1977.
•KEYWORDS: FOOD PROCESSING, RICE MILLING, CONSERVATION.
•NOTE: FILED. REDUCTION IN ENERGY REQUIREMENTS AND INCREASED YIELDS CAN BE ACHIEVED BY PROPER MILL ADJUSTMENTS AND THE USE OF VARIOUS ADJUVANTS. FURTHER EVALUATION NEEDED TO SELECTION OPTIMUM VARIABLE COMBINATIONS.
•DATE: 770800
**TITLE:** Freeze Dried Vegetables
**AUTHOR:** ROBERTSON G M.
**SOURCE:** USDA WESTERN REGIONAL RESEARCH CENTER, 800 BUCHANAN ST, BERKELEY, CA 94710, REPORTED IN AGRICULTURAL RESEARCH, MARCH 1978, 13 PP.
**KEYWORDS:** FOOD PROCESSING, FREEZING, FRUITS AND VEGETABLES.
**NOTES:** VEGETABLES FROZEN IN LIQUID FREEZANT REQUIRE 25 PERCENT LESS ENERGY THAN THOSE FROZEN BY AIR BLAST, WITH FREEZING TIME REDUCED FROM 25 TO AS FEW AS 2 MINUTES. THE FREEZANT CONSISTS OF 15 PERCENT SALT, 15 PERCENT ALCOHOL, AND WATER AT -20 DEGREES C. VEGETABLES ARE THOROUGHLY AGITATED IN THE LIQUID THEN DRAINED AND SPUN DRY. QUALITY IS EQUAL TO CONVENTIONALLY FROZEN PRODUCTS.
**DATE:** 780300

**ABSTRACT**

**TITLE:** ENERGY REQUIREMENTS AND CONSERVATION IN THE MEAT PACKING INDUSTRY.
**AUTHOR:** ROSSOFF M D, RIES K M.
**SOURCE:** PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON ENERGY AND FOOD, BOSTON, 9-13 AUG 1976, P 145.
**KEYWORDS:** FOOD PROCESSING, REQUIREMENTS, CONSERVATION, INDUSTRY.
**NOTES:** FILED.
**DATE:** 760909

**ABSTRACT**

**TITLE:** Automatic Boiler Blowdown Control Achieves Fuel Savings.
**AUTHOR:** ROUSE M, TAYLOR T, MANSFIELD D.
**SOURCE:** PULP AND PAPER, AUG 1974, 2 PP.
**KEYWORDS:** FOOD PROCESSING, HEAT, CONSERVATION.
**NOTES:** FILED. CONTINUOUS MONITORING AND CONTROL OF TOTAL DISSOLVED SOLIDS WITH AN AUTOMATIC BOILER BLOWDOWN SYSTEM MAXIMIZES ENERGY USE. APPLICATION IN PAPER MILL IS DESCRIBED; ALTHOUGH OTHER APPLICATIONS ARE FEASIBLE.
**DATE:** 740800

**ABSTRACT**

**TITLE:** A Review of Microwaves for Food Processing.
**AUTHOR:** SALE A J H.
**SOURCE:** J OF FOOD TECH, 11(4)319-329, 1976.
**KEYWORDS:** FOOD PROCESSING, MICROWAVES.
**NOTES:** FILED. DESCRIBES MANY DIFFERENT APPLICATIONS OF MICROWAVES IN FOOD PROCESSING ALONE AND WITH CONVENTIONAL HEAT SOURCES.
**DATE:** 760909

**ABSTRACT**

**TITLE:** Energy Requirements for Liquid Food Concentration.
**AUTHOR:** SCHWARTZBERG H E.
**SOURCE:** FOOD TECH, 31(3)67-76, MARCH 1977.
**KEYWORDS:** FOOD PROCESSING, CONCENTRATION, ACCOUNTING.
**NOTES:** FILED. ANALYZES ENERGY REQUIRED TO REMOVE WATER BY SEVERAL METHODS AND METHODS TO OPTIMIZE EFFICIENCY. IN A SPECIAL SECTION ON ENERGY.
**DATE:** 770830

**ABSTRACT**

**TITLE:** Energy Use and Conservation in Food Process Industry.
**AUTHOR:** SINGH R P.
**SOURCE:** DEPT OF AGR ENGR, UNIV OF CALIF, DAVIS, CA 95616, JAN 1979, 29 PP.
**KEYWORDS:** FOOD PROCESSING, ENERGY CONSUMPTION, CONSERVATION.
**NOTES:** FILED.
**DATE:** 790100

**ABSTRACT**

**TITLE:** Compatibility of Solar Energy with Fluid Milk Processing Energy Demands.
**AUTHOR:** SINGH R P, LUND D B, BUCHOLZ F M.
**SOURCE:** ASAE PAPER 78-6526, 1978, 15 PP.
**KEYWORDS:** FOOD PROCESSING, SOLAR, DAIRY.
**NOTES:** FILED. COMPATIBILITY OF SOLAR ENERGY COLLECTION, STORAGE AND SUPPLY WITH ENERGY DEMANDS FOR A FLUID MILK PROCESSING PLANT WAS ASSESSED USING TRANSIENT SIMULATION PROGRAM AND F-CHART ECONOMIC ANALYSIS PROGRAM. THE RESULTS SHOW THAT SOLAR ENERGY CAN SUPPLY UP TO 34 PERCENT OF THE PROCESSING ENERGY DEMAND BUT THAT THE ECONOMIC CLIMATE MUST CHANGE MARKEDLY FOR THE SYSTEM TO BE ECONOMICALLY FEASIBLE.
**DATE:** 781218
ABSTRACT 935

**TITLE**: ENERGY CONSUMPTION AND CONSERVATION IN FOOD STERILIZATION.

**AUTHOR**: SINGH R P.

**SOURCE**: FOOD TECH, 31(13)/57-60, MARCH 1977.

**KEYWORDS**: FOOD PROCESSING, STERILIZATION, ACCOUNTING, CONSERVATION.

**NOTES**: FILED. ENERGY ANALYSIS OF THE FOOD STERILIZATION UNIT, USING A CONTINUOUS ATMOSPHERIC RETORT AS A MODEL. IN A SPECIAL SECTION ON ENERGY.

**DATE**: 770300

ABSTRACT 936

**TITLE**: ENERGY ACCOUNTING IN FOOD PROCESS OPERATIONS.

**AUTHOR**: SINGH R P.

**SOURCE**: FOOD TECH, APRIL 1978, PP 48 - 46.

**KEYWORDS**: FOOD PROCESSING, ENERGY ACCOUNTING.

**NOTES**: FILED.

**DATE**: 780400

ABSTRACT 927

**TITLE**: DIRECT ENERGY CONSUMPTION IN LEMON AND ORANGE PACKING PLANTS.

**AUTHOR**: SINGH R P, HAYCU L P, OBER I M.

**SOURCE**: PRESENTED AT THE FIFTH INTERNATIONAL CONGRESS OF FOOD SCI AND TECH, KYOTO, JAPAN, 17-22 SEPT 1978, 18 PP.

**KEYWORDS**: FOOD PROCESSING, FRUITS AND VEGETABLES, PACKAGING, ENERGY CONSUMPTION, ELECTRICAL, NATURAL GAS.

**NOTES**: FILED. A STUDY ON CONSUMPTION OF ENERGY IN LEMON AND ORANGE PACKING PLANTS WAS CONDUCTED WITH THE FOLLOWING OBJECTIVES, (1) TO COLLECT AND ANALYZE MONTHLY ELECTRICAL AND NATURAL GAS USE DATA FROM SEVERAL PACKING PLANTS. (2) TO DEVELOPE AN ENERGY USE PROFILE FOR ORANGE AND LEMON PACKING HOUSE OPERATIONS. ENERGY DATA FOR THE PERIOD JULY 1976 TO JULY 1977 WERE OBTAINED FROM 17 CITRUS PACKING PLANTS REPRESENTING THREE DIFFERENT GEOGRAPHICAL REGIONS IN CALIFORNIA.

**DATE**: 780917

ABSTRACT 938

**TITLE**: ENERGY USE AND CONSERVATION IN THE FOOD PROCESS INDUSTRY.

**AUTHOR**: SINGH R P, STOUT B A.

**SOURCE**: DEPT OF AGR ENGR, MICH STATE UNIV, EAST LANSING, MI 48824, 15 MARCH 1979, 31 PP.

**KEYWORDS**: FOOD PROCESSING, CONSERVATION, ENERGY CONSUMPTION, ENERGY ACCOUNTING, STERILIZATION.

**NOTES**: FILED.

**DATE**: 790319

ABSTRACT 939

**TITLE**: ENERGY AND ENGINEERING TRADE-OFFS IN TOMARROWS FOOD PLANT.

**AUTHOR**: SLATER L E.

**SOURCE**: FOOD ENGR, RADNOR, PA 19089, 10 JUNE 1975, 19 PP.

**KEYWORDS**: FOOD PROCESSING, CONSERVATION. PROCESSING, CONSERVATION.

**NOTES**: FILED. AUTHOR SUGGESTS THAT THE ENERGY CRUNCH OF 1973 MAY BE A POSITIVE FORCE IN FOOD PROCESS ENGINEERING.

**DATE**: 750610

ABSTRACT 940

**TITLE**: SAVING ENERGY - A CORPORATE COMMITMENT.

**AUTHOR**: SLATER L E, WESTENBERGER J A, DIJNAGE D F, HEGGENANN W.

**SOURCE**: FOOD ENGR, 47(12)/47-58, DEC 1975.

**KEYWORDS**: FOOD PROCESSING, CONSERVATION, DEMOTION, ECONOMICS, WASTES.

**NOTES**: FILED. INTRODUCTION TO SPECIAL SECTION ON ENERGY CONSERVATION WITH THREE ARTICLES - CUTTING DOWN PROCESS FUEL REQUIREMENTS BY WESTENBERGER, HOW TO DESIGN FOR ECONOMIC EVAPORATION BY DIJNAGE, TRASH BECOMES PLANT ENERGY SOURCE BY HEGGENANN.

**DATE**: 751200

ABSTRACT 941

**TITLE**: THE EFFECTS OF WATER POLLUTION CONTROL ON ENERGY CONSUMPTION.

**AUTHOR**: STEVENS J J, KUSIK C I.

**SOURCE**: CHEM ENGR, 15 AUG 1977.

**KEYWORDS**: FOOD PROCESSING, WATER USE.

**NOTES**: FILED. THE COSTS OF POLLUTION CONTROL (WASTEWATER TREATMENT) TAKE UP A LARGER PERCENTAGE OF TOTAL OPERATING COSTS IN THE HIGH-ENERGY, BASIC INDUSTRIES THAN FOR THE INDUSTRY AS A WHOLE.

**DATE**: 770815

ABSTRACT 942

**TITLE**: THE COST OF ENERGY.

**AUTHOR**: SUPERMARKET NEWS.

**SOURCE**: SUPERMARKET NEWS, (2)/56 PP, 23 OCT 1976.

**KEYWORDS**: FOOD PROCESSING, CONSERVATION, MARKETING.

**NOTES**: FILED. 15 ARTICLES ON ENERGY USE IN SUPERMARKETS.

**DATE**: 761023
ABSTRACT 943

**Title**: Characteristics of Power Demand Variation with Time During Churning in a Biconical Churn.

**Author**: Synott E C.


**Keywords**: Food Processing; Butter; Conservation.

**Notes**: Filed. An analysis of energy usage during butter churning noted two peaks, at the whipping and breaking points of the cream.

**Date**: 760800

ABSTRACT 944

**Title**: Energy Analysis in Heating and Cooling Processes.

**Author**: Thompson D R.

**Source**: Food Tech, 31(3)/51-56, March 1977.

**Keywords**: Food Processing; Heat; Conservation.

**Notes**: Filed. Analyzes the different types of heat exchangers used in food processing for application, heat transfer, and energy optimization.

**Date**: 770320

ABSTRACT 945

**Title**: Energy Utilization in the Leading Energy Consuming Food Processing Industries.

**Author**: Ungar S G.

**Source**: Food Technology, Dec 1975, pp 33-45.

**Keywords**: Food Processing; Agriculture; Food Energy.

**Notes**: Filed.

**Date**: 751220

ABSTRACT 946

**Title**: Preservation of Fresh Solid Foods by Gas Exchange.

**Author**: University of Maryland.

**Source**: Doc Contract EC 77-5-01-5-73, University of Maryland, College Park, MD 20742, April 1976, 74 pp.

**Keywords**: Food Processing; Fruits and Vegetables; Meat Alternatives; Conservation.

**Notes**: Filed. Series of process reportson a project designed to demonstrate that substantial energy saving are possible if foods are processed through gas exchange rather than through conventional canning and freezing methods. Foods so processed would require no refrigeration, would retain the sensory, physical, and nutritional qualities of fresh foods, and thus could be expected to have high consumer acceptance.

**Date**: 780400

ABSTRACT 947

**Title**: Identification of Direct Energy Utilization for Chicken Processing and Distribution.

**Author**: Unklesbay K, Unklesbay M, Dwyer S J.


**Keywords**: Food Processing.

**Notes**: Filed.

**Date**: 760809

ABSTRACT 948


**Author**: US-Energy Research and Development Administration.


**Keywords**: Food Processing; Conservation; Wastes; Dairy; Agriculture; Refrigeration.

**Notes**: Filed.

**Date**: 760504

ABSTRACT 949

**Title**: Application of Wind Power to Refrigerate Apple Storages.

**Author**: Vaughan D M, Mosier L L, O'Brien V F.


**Keywords**: Food Processing; Wind; Apples; Storage.

**Notes**: Filed. A wind-powered cold storage facility, which includes a 10-kilowatt wind generator mounted on a 90-ft tower; a D.E. vapor compression refrigeration system; a 1000 bushel apple storage building; an ice/tank thermal storage unit; and an electrical (battery bank) energy storage is described.

**Date**: 781216
ABSTRACT 950

• TITLE: THE ENERGY SCENARIO OF VEGETABLE PROCESSING.
• AUTHOR: VERGARA V, RAD MA, JORDAN W K
• SOURCE: ASAE PAPER 77-626, 1977, 26 PP.
• KEYWORDS: FOOD PROCESSING, NEW YORK, ENERGY CONSUMPTION, MODELS.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 951

• TITLE: PRELIMINARY SOLAR DRYING STUDIES OF SOME FLORIDA FRUITS AND VEGETABLES.
• AUTHOR: WAGNER C J, BRYAN W L, BERRY R E
• SOURCE: US CITRUS AND SUBTROPICAL PRODUCTS LAB, PO BOX 1909, WINTER HAVEN, FL 33880, 1977, 4 PP.
• KEYWORDS: FOOD PROCESSING, SOLAR DRYING, FRUITS AND VEGETABLES, FLORIDA.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 952

• TITLE: FUEL VALUE OF GRAPE AND APPLE PROCESSING WASTES.
• AUTHOR: WALTER R H, SHEAHAN R H
• KEYWORDS: FOOD PROCESSING, WASTES, ALTERNATIVES.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 953

• TITLE: PNEUMATIC CONVEYING OF HIGH-MOISTURE FOODS.
• AUTHOR: WANG C T, SINGH R P, STEFFE J F.
• SOURCE: ASAE PAPER 77-608, JUNE 1977, 12 PP.
• KEYWORDS: FOOD PROCESSING, WASTES, WATER USE.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 954

• TITLE: ENERGY REQUIREMENTS FOR PROCESSING POULTRY.
• AUTHOR: WHITEHEAD W K, SHUPE W L, RUSSELL R B
• SOURCE: ASAE PAPER 78-1039, 1978, 18 PP.
• KEYWORDS: FOOD PROCESSING, POULTRY, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 780000

ABSTRACT 955

• TITLE: ENERGY USED FOR FOOD PROCESSING IN WASHINGTON.
• AUTHOR: WHITTLESEY N T, PFIEFFER G
• SOURCE: CIRCULAR 575, RESEARCH CENTER, COLLEGE OF AGR, WASHINGTON STATE UNIV, PULLMAN, AUG 1974, 22 PP.
• KEYWORDS: FOOD PROCESSING, AGRICULTURE.
• NOTES: FILED.
• DATE: 740000

ABSTRACT 956

• TITLE: ENERGY UTILIZATION IN MEAT PROCESSING PLANTS.
• AUTHOR: WILSON P W, KNOFF F C, OKOS M R
• KEYWORDS: FOOD PROCESSING, MEAT, ENERGY ACCOUNTING.
• NOTES: FILED.
• DATE: 780000

ABSTRACT 957

• TITLE: BULLETIN ON THE UTILIZATION OF ENERGY BY FIVE PROCESSES IN AN INTEGRATED PORK PLANT WAS EVALUATED. ENERGY FLOWS THROUGH UNIT OPERATIONS OF EACH PROCESS HAVE BEEN MEASURED USING FLOW RATES AND TEMPERATURE MONITORING DEVICES INSTALLED IN THE PLANT.
• DATE: 781216
ABSTRACT 957

TITLE: THOUGHTS ON THE ENERGY SITUATION IN A SUGAR FACTORY WITH PARTICULAR REFERENCE TO THE CONDITIONS AT OCHSENFURT.

AUTHOR: WITTE V G.


KEYWORDS: FOOD PROCESSING, BEET SUGAR, HEAT, ACCOUNTING, CONSERVATION, GERMANY.

NOTES: FILED. ANALYSIS OF HEAT USAGE IN BEET SUGAR PRODUCTION, WITH SUGGESTED ENERGY SAVINGS. POTENTIAL SAVINGS OF 25 PERCENT ACHIEVABLE WITH PROCESS CHANGES. IN GERMAN WITH A BRIEF ENGLISH SUMMARY.

DATE: 740000

ABSTRACT 959

TITLE: CONDENSATION OF DRYING VAPOURS WITH HEAT UTILIZATION IN PROCESS TECHNOLOGY.

AUTHOR: WUNSCH V H.

SOURCE: ZUCKER 29(12)/673-676 1976.

KEYWORDS: FOOD PROCESSING, BEET SUGAR, CONSERVATION, HEAT, DEHYDRATION, GERMANY.

NOTES: FILED. A METHOD OF RECOVERING ENERGY OTHERWISE DISCHARGED WITH DRYING VAPOURS IS DESCRIBED. RAW THIN-JUICE IS HEATED BEFORE EVAPORATION WITH A COMPRESSED SECOND VAPOR COMPONENT. IN GERMAN WITH A BRIEF ENGLISH SUMMARY.

DATE: 760000

GENERAL 960 -- 1155

ABSTRACT 960

TITLE: ENERGY - USE CONSERVATION AND SUPPLY.

AUTHOR: ABEELSON P H.

SOURCE: AMER ASSOC FOR THE ADVANCEMENT OF SCI. WASHINGTON D C 1974, 154 PP.

KEYWORDS: GENERAL, CONSERVATION, INDUSTRY, AGRICULTURE, PETROLEUM, COAL, COAL GAZIFICATION, NUCLEAR, ELECTRICAL, GEOTHERMAL, SOLAR, WIND, ALCOHOL, STORAGE, HYDROGEN.

NOTES: FILED.

DATE: 740000

ABSTRACT 961

TITLE: INCREASING WORLD ENERGY SUPPLIES.

AUTHOR: ABEELSON P H.


KEYWORDS: GENERAL, ENERGY SOURCES, WORLD WIDE.

NOTES: FILED.

DATE: 731214

ABSTRACT 962

TITLE: NO TIME TO CONFUSE.

AUTHOR: ADELMAN M A, ET AL.

SOURCE: THE INSTIT FOR CONTEMPORARY STUDIES 260 CALIFORNIA STREET, SUITE 811, SAN FRANCISCO, CALIFORNIA 1975, 156 PP.

KEYWORDS: GENERAL, POLICY, HISTORICAL, ECONOMICS, ENVIRONMENT.

NOTES: FILED.

DATE: 750000
ABSTRACT 972

**Title**: The Coming Glut of Energy

**Author**: Anon.


**Keywords**: General, Conservation, Supply, Demand, Economics.

**Notes**: Filed.

**Date**: 740105

ABSTRACT 973

**Title**: Energy for Americas Third Century

**Author**: Anon.

**Source**: Mosaic, 5(2)/1-36, Spring 1974.

**Keywords**: General, Historical, Solar, Wind, Organic, Geothermal, Coal.

**Notes**: NAS.

**Date**: 740800

ABSTRACT 974

**Title**: Development Digest

**Author**: Anon.

**Source**: Development Digest, 10(3)/3-50, July 1972.

**Keywords**: General, Historical, Geothermal, Solar, Energy Sources, Nuclear, Developing Countries, Journal.

**Notes**: Issue contains several articles on energy.

**Date**: 720700

ABSTRACT 975

**Title**: Undercurrents

**Author**: Anon.

**Source**: Undercurrents Ltd, 275 Finchley Rd, London NW3.

**Keywords**: General, Journal.

**Notes**: Filed.

**Date**: 730100

ABSTRACT 976

**Title**: Appropriate Technology

**Author**: Anon.

**Source**: Intermediate Technology Pub Ltd, 9 King St, WC2E 8HN, England.

**Keywords**: General, Journal.

**Notes**: A quarterly journal.

**Date**: 

ABSTRACT 977

**Title**: Energy

**Author**: Anon.

**Source**: Science, 184(4134)/222-402, 19 April 1974.

**Keywords**: General, Social Implications, Conservation, Policy, Economics, Petroleum, Fossil Fuels, Geothermal, Solar, Electrical.

**Notes**: Filed.

**Date**: 740419

ABSTRACT 978

**Title**: Energy Research

**Author**: Anon.


**Keywords**: General, Netherlands, Waste, Meat, Energy Sources, Solar, Electrical, Hydrogen, Coal, Nuclear.

**Notes**: Filed.

**Date**: 741200

ABSTRACT 979

**Title**: Patterns of Energy Consumption in the United States

**Author**: Anon.


**Keywords**: General, Supply, Demand, Energy Consumption, USA, Transportation, Industry.

**Notes**: Filed.

**Date**: 720100

ABSTRACT 980

**Title**: UN Conference on New Sources of Energy

**Author**: Anon.


**Keywords**: General, Energy Sources.

**Notes**: 

**Date**: 610800
ABSTRACT 981

TITLE: PROCEEDINGS OF THE NINTH WORLD ENERGY CONFERENCE.
AUTHOR: ANON.
SOURCE: PROCEEDINGS OF THE NINTH WORLD ENERGY CONF. 9 VOLUMES, DETROIT,
KEYWORDS: GENERAL, WORLD WIDE.
NOTES: FILED.
DATE: 740923.

ABSTRACT 982

TITLE: ENERGY AND POWER.
AUTHOR: ANON.
SOURCE: REPRINT OF ARTICLES FROM SCIENTIFIC AMERICANS SEPTEMBER 1971 ISSUE, SAN
KEYWORDS: GENERAL, AGRICULTURE, INDUSTRY, ECONOMICS.
NOTES: FILED.
DATE: 710100.

ABSTRACT 983

AUTHOR: ANON.
SOURCE: US NATIONAL COMMITTEE OF THE WORLD ENERGY CONF. 345 E 47TH ST, NEW
YORK, 1974, 400 PP.
KEYWORDS: GENERAL.
NOTES: FILED.
DATE: 740922.

ABSTRACT 984

TITLE: PROCEEDINGS 9TH WORLD ENERGY CONFERENCE.
AUTHOR: ANON.
SOURCE: CONF HELD SEPT 23-27, 1974, DETROIT, REPRINTS AVAILABLE IN 6 VOLS, US
NATIONAL COMMITTEE OF THE WORLD ENERGY CONF, C/O EJCo, 345 E 47TH ST, NEW
YORK.
KEYWORDS: GENERAL.
NOTES: FILED.
DATE: 740922.

ABSTRACT 985

TITLE: ENERGY TODAY.
AUTHOR: ANON.
SOURCE: ENERGY TODAY, 111/1-1-47, 29 OCT 1976, NORTHWEST COLLEGE AND
UNIV ASSOCIATION FOR SCIENCE, 100 SPROUT RD, RICHLAND, WASHINGTON.
KEYWORDS: GENERAL, ENERGY SOURCES, ELECTRICAL, FOSSIL FUELS, SOLAR, NUCLEAR.
NOTES: FILED.
DATE: 761029.

ABSTRACT 986

TITLE: ENERGY.
AUTHOR: ANON.
SOURCE: REPRINTS OF THE CHRISTIAN SCIENCE MONITOR, PO BOX 927, BACK BAY
STATION, BOSTON, MA 02117, 1976, 14 PP.
KEYWORDS: GENERAL, SOLAR, NUCLEAR, CONSERVATION, INDUSTRY, HOME.
NOTES: FILED.
DATE: 760700.

ABSTRACT 987

TITLE: SCIENCE - AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
AUTHOR: ANON.
SOURCE: SCIENCE, 199(4291),PP 583-710, 10 FEB 1978.
KEYWORDS: GENERAL, SOLAR, ORGANIC, BIOMASS, INTERNATIONAL.
NOTES: FILED.
DATE: 780214.

ABSTRACT 988

TITLE: ARIZONA ENERGY - A FRAMEWORK FOR DECISION.
AUTHOR: ARIZONA ACADEMY.
SOURCE: ARIZONA ACADEMY, PO BOX 1429, PHOENIX, AZ, 11-14 APRIL 1976, 161 PP.
KEYWORDS: GENERAL, ARIZONA.
NOTES: FILED.
DATE: 760411.
ABSTRACT 989

**TITLE**: SATELLITE SOLAR-POWER STATIONS.
**AUTHOR**: ARONSON R B.
**SOURCE**: MACHINE DESIGN, 27 NOV 1975, PP 18-23.
**KEYWORDS**: GENERAL, SOLAR.
**NOTES**: FILED.
**DATE**: 751127

ABSTRACT 990

**TITLE**: ENERGY OPTIONS TO THE YEAR 2000.
**AUTHOR**: BALZHISER R E.
**SOURCE**: REPRINT 263, CHEM ENGR, 3 JAN 1977, PP 72-90.
**KEYWORDS**: GENERAL, NUCLEAR, SOLAR, COAL.
**NOTES**: FILED.
**DATE**: 770103

ABSTRACT 991

**TITLE**: THE ENERGY CRISIS AND THE FUTURE.
**AUTHOR**: BARNEA J.
**SOURCE**: 75/FR21, UN INST FOR TRAINING AND RESEARCH, 801 UN PLAZA, NEW YORK, NY, 1975, 117PP.
**KEYWORDS**: GENERAL, ECONOMICS, POLICY, ALTERNATIVES, DEVELOPMENT, INTERNATIONAL, PETROLEUM.
**NOTES**: FILED.
**DATE**: 750000

ABSTRACT 992

**TITLE**: THE FORGOTTEN FUNDAMENTALS OF THE ENERGY CRISIS.
**AUTHOR**: BARTLETT A A.
**SOURCE**: AMER J OF PHYSICS, 46(9)/876-888, SEPT 1978.
**KEYWORDS**: GENERAL, SUPPLY DEMAND.
**NOTES**: FILED.
**DATE**: 780900

ABSTRACT 993

**TITLE**: PROCESS INNOVATION AND CHANGES IN INDUSTRIAL ENERGY USE.
**AUTHOR**: BERG C A.
**SOURCE**: SCIENCE, 199(4329)/608-614, 10 FEB 1978.
**KEYWORDS**: GENERAL, INDUSTRY, FOSSIL FUELS.
**NOTES**: FILED.
**DATE**: 780210

ABSTRACT 994

**TITLE**: ENERGY RESEARCH - A HARSH CRITIQUE SAYS FEDERAL EFFORT MAY BACKFIRE.
**AUTHOR**: BOFFEY P M.
**SOURCE**: SCIENCE, 190/553-557, 7 NOV 1975.
**KEYWORDS**: GENERAL, CONSERVATION, TECHNOLOGY ASSESSMENT.
**NOTES**: FILED.
**DATE**: 751107

ABSTRACT 995

**TITLE**: THE WORLD FOOD COUNCIL AND ITS EFFECT UPON AMERICAN AGRICULTURE.
**AUTHOR**: BUTZ E L.
**SOURCE**: US KEYNOTE SPEECH PRESENTED AT FARM ELECTRIFICATION COUNCIL FOOD AND ENERGY INTERDEPENDENCE SYMPOSIUM, WASHINGTON D C, 20 AUG 1975, 11 PP.
**KEYWORDS**: GENERAL, USA, AGRICULTURE.
**NOTES**: FILED.
**DATE**: 750820

ABSTRACT 996

**TITLE**: ENERGY AND THE EARTH MACHINE.
**AUTHOR**: CARR D E.
**SOURCE**: NEW YORK/W NORTON AND CO INC, 1976, 264 PP.
**KEYWORDS**: GENERAL, NUCLEAR, WIND, SOLAR, FOOD ENERGY, TRANSPORTATION.
**NOTES**: FILED.
**DATE**: 760850
ABSTRACT 1005

*TITLE*Remarks for Energy Resource Development, FEA.*
*AUTHOR*Craven D. B.*
*KEYWORDS*General.
*NOTES*Filed.
*DATE*750820

ABSTRACT 1006

*TITLE*ENERGY.*
*AUTHOR*Crawley G. M.*
*KEYWORDS*General, Nuclear, Conservation, Heat, Fossil Fuels, Transportation, Storage, Economics, Policy.
*NOTES*Filed.
*DATE*750303

ABSTRACT 1007

*TITLE*All About Energy.*
*AUTHOR*Dalton R.*
*KEYWORDS*General, Elementary School, Solar, Electrical, Geothermal, Petroleum.
*NOTES*Filed.
*DATE*740300

ABSTRACT 1008

*TITLE*Energy in the World Economy.*
*AUTHOR*Darstädter J., Teitelbaum P. D., Polach J. G.*
*KEYWORDS*General.
*NOTES*Filed.
*DATE*710300

ABSTRACT 1009

*TITLE*The New Energy Sources.*
*AUTHOR*Davis W. M., Golam S.*
*KEYWORDS*General, Energy Sources, Nuclear, Solar, Photovoltaic, Wind, Geothermal.
*NOTES*Nas.
*DATE*741115

ABSTRACT 1010

*TITLE*Complexes in Michigan.*
*AUTHOR*Detroit Edison Co.*
*KEYWORDS*General, Michigan, Coal.
*NOTES*Filed.
*DATE*760217

ABSTRACT 1011

*AUTHOR*OJX S. M.*
*KEYWORDS*General, Economics, Policy.
*NOTES*Filed. An overall view of energy is discussed on political economic is an approach to energy policy and future energy supply data.
*DATE*770300
ABSTRACT 1012
TITLE: INDIANA'S VIEWS ON THE ENERGY CRISIS.
AUTHOR: DOERING O C.
SOURCE: CES PAPER & AGR ECON DEPT, PURDUE UNIV, WEST LAFAYETTE, IN
47907, SEPT 1974, 8 PP.
KEYWORDS: GENERAL, INDIANA.
NOTES: FILED.
DATE: 740900

ABSTRACT 1013
TITLE: ENERGY -- A CRISIS -- A DILEMMA -- OR JUST ANOTHER PROBLEM.
AUTHOR: DOOLITTLE J S.
SOURCE: CHAMPAIGN IL/MATRIX PUBL, INC, 1977, 313 PP.
KEYWORDS: GENERAL, ENERGY SOURCES, FOSSIL FUELS, SOLAR, WIND,
ALTERNATIVES, CONSERVATION.
NOTES: FILED.
DATE: 770000

ABSTRACT 1014
TITLE: THE EFFICIENT USE OF ENERGY.
AUTHOR: DRYDEN J G.
SOURCE: IPC SCI AND TECH PRESS LTD, IPC HOUSE, 32 HIGH ST, GUILDFORD,
SURREY, ENGLAND GU1 5EU, 1975, 601 PP.
KEYWORDS: GENERAL, ECONOMICS, HEAT, ENVIRONMENT, ELECTRICAL, NUCLEAR.
NOTES: FILED.
DATE: 750000

ABSTRACT 1015
TITLE: UNITED STATES ENERGY THROUGH THE YEAR 2000 (REVISED).
AUTHOR: DUPREE W S & CONSENTINO J W.
65 PP.
KEYWORDS: GENERAL, ELECTRICAL, TRANSPORTATION, COAL.
NOTES: FILED.
DATE: 751200

ABSTRACT 1016
TITLE: ENERGY TECHNOLOGY.
AUTHOR: EATON W W.
SOURCE: OFFICE OF PUBLIC AFFAIRS, ERDA, WASHINGTON D C, 1975, 66 PP.
KEYWORDS: GENERAL, ENERGY SOURCES, CONVERSION, STORAGE, TRANSMISSION.
NOTES: FILED.
DATE: 750000

ABSTRACT 1017
TITLE: OUR ENERGY PROBLEMS AND SOLUTIONS.
SOURCE: ENERGY CONSERVATION RESEARCH, 9 BIRCH RD, MALVERN, PA 19355,
1977, 45 PP.
KEYWORDS: GENERAL, CONSERVATION.
NOTES: FILED.
DATE: 770000

ABSTRACT 1018
TITLE: A SUMMARY OF ACCIDENTS RELATED TO NON-NUCLEAR ENERGY.
AUTHOR: US ENVIRONMENTAL PROTECTION AGENCY.
SOURCE: EPA-600/9-77-012, US EPA OFFICE OF RESEARCH AND DEV INFO SERVICE,
SPRINGFIELD, VA 22161, MAY 1977, 11 PP.
KEYWORDS: GENERAL, SAFETY.
NOTES: FILED. PURPOSE OF THE REPORT IS TO ASSIST IN THE FORMULATION OF
ENERGY POLICY. ACCIDENT REPORTS ARE GIVEN FOR COAL, CRUDE OIL,
nATURAL GAS, LNG, ELECTRIC POWER, DEVELOPING ENERGY SYSTEMS, AND
ADVERSE NATURAL INCIDENTS.
DATE: 770500
ABSTRACT 1019

-TITLE- PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ENERGY USE MANAGEMENT - VOLUME I.
-AUTHOR- FAZZOLARE R. A. & SMITH C. B. ED.
-SOURCE- ELMSFORD, NY 10528/PERGAMON PRESS INC. 24-28 OCT 1977. 1006 PP.
-KEYWORDS- GENERAL, ENERGY ACCOUNTING, AGRICULTURE, ECONOMICS, SOCIAL IMPLICATIONS, INTERNATIONAL, ALTERNATIVES, DEVELOPMENT, TRANSPORTATION, ENVIRONMENT, POLICY, CONSERVATION, LAND USE, ANIMAL PRODUCTION, SUPPLY DEMAND, SOLAR, DESIGN, STORAGE, INDUSTRY, MODELS, FOOD PROCESSING, MEAT, MATERIALS, BUILDINGS, APPLIANCES, AUTOMOBILE.
-NOTES- FILED. OVER 300 PAPERS ARE COLLECTED AND LISTED UNDER 12 MAJOR HEADINGS. THESE PAPERS ARE CONTAINED IN VOLUMES I, II, III, IV.
-DATE- 771024

ABSTRACT 1020

-TITLE- PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ENERGY USE MANAGEMENT - VOLUME II.
-AUTHOR- FAZZOLARE R. A. & SMITH C. B. ED.
-SOURCE- ELMSFORD, NY 10528/PERGAMON PRESS INC. 24-28 OCT 1977. 735 PP.
-KEYWORDS- GENERAL, ENERGY ACCOUNTING, AGRICULTURE, ECONOMICS, POLICY, TRANSPORTATION, ENVIRONMENT, CONSERVATION, SOCIAL IMPLICATIONS, INTERNATIONAL, ALTERNATIVES, DEVELOPMENT, ANIMAL PRODUCTION, SOLAR, SUPPLY DEMAND, LAND USE, DESIGN, STORAGE, INDUSTRY, MODELS, MEAT, FOOD PROCESSING, MATERIALS, BUILDINGS, APPLIANCES, AUTOMOBILE.
-NOTES- FILED.
-DATE- 771024

ABSTRACT 1021

-TITLE- ENERGY FROM THE SEA - WAVES, TIDES, AND CURRENTS.
-AUTHOR- FISHER A.
-SOURCE- POPULAR SCI. MAY 1975. PP 69-73; 129.
-KEYWORDS- GENERAL, SEAT M THERMAL, SOLAR.
-NOTES- FILED.
-DATE- 750500

ABSTRACT 1022

-TITLE- ENERGY FROM THE SEA - PART II - TAPPING THE RESERVOIR OF SOLAR HEAT.
-AUTHOR- FISHER A.
-NOTES- FILED.
-KEYWORDS- GENERAL, SEAT M THERMAL, SOLAR.
-DATE- 750600

ABSTRACT 1023

-TITLE- THE ENERGY PINCH - WHERE DO WE GO FROM HERE.
-AUTHOR- FISHER A.
-KEYWORDS- GENERAL, ENERGY SOURCES, HISTORICAL.
-NOTES- FILED.
-DATE- 740300

ABSTRACT 1024

-TITLE- ENERGY CRISIS IN PERSPECTIVE.
-AUTHOR- FISHER J. C.
-SOURCE- NEW YORK/WILEY AND SONS. 1974. 196 PP.
-KEYWORDS- GENERAL, HISTORICAL, ENERGY SOURCES, ENERGY CONSUMPTION, ECONOMICS, SOCIAL IMPLICATIONS, POLICY, ELECTRICAL, EFFICIENCY.
-NOTES- FILED.
-DATE- 740500

ABSTRACT 1025

-TITLE- THE ENERGY QUESTION.
-AUTHOR- FOLEY G. & MASSIN C.
-SOURCE- NEW YORK/PENGUIN BOOK. 1976. 343 PP.
-KEYWORDS- GENERAL, ENERGY SOURCES, CONVERSION.
-NOTES- FILED.
-DATE- 760000

ABSTRACT 1026

-TITLE- A TIME TO CHOOSE.
-AUTHOR- FRECHET S. D. ET AL.
-SOURCE- CAMBRIDGE, MA/BALLINGER PUBL CO. 1974. 511 PP.
-KEYWORDS- GENERAL, POLICY, HISTORICAL, ECONOMICS, ENVIRONMENT.
-NOTES- FILED. FINAL REPORT BY THE ENERGY POLICY PROJECT OF THE FORD FOUNDATION.
-DATE- 740000
ABSTRACT 1027

**TITLE**: EXPLORING ENERGY CHOICES
**AUTHOR**: FREEMAN D. ET AL.
**SOURCE**: PRELIMINARY REPORT OF THE FORD FOUNDATIONS ENERGY POLICY PROJECT; 1974; 81 PP.
**KEYWORDS**: GENERAL: WORLD WIDE: ENERGY CONSUMPTION: RESOURCES.
**NOTES**: FILED.
**DATE**: 7/4/0000

ABSTRACT 1028

**TITLE**: A NATIONAL PLAN FOR ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION
**AUTHOR**: FRIS M.
**SOURCE**: STOCK NO 060-000-0067-1: ERDA 77-14 ENERGY RESEARCH AND DEV ADMINISTRATION: US GOVT PRINTING OFFICE: WASHINGTON DC 20402: 1977: 45PP.
**KEYWORDS**: GENERAL: TECHNOLOGY ASSESSMENT: CONSERVATION.
**NOTES**: FILED. A PLAN IS PRESENTED TO REDUCE US DEPENDENCE ON FOREIGN OIL IMMEDIATELY, TO KEEP US IMPORTS LOW AFTER THAT AND TO EVENTUALLY HAVE INEXHAUSTIBLE SOURCES OF ENERGY.
**DATE**: 7/7/0623

ABSTRACT 1029

**TITLE**: THE FLOW OF ENERGY IN THE BIOSPHERE
**AUTHOR**: GATES D. H.
**KEYWORDS**: GENERAL: PHOTOSYNTHESIS: SOLAR: ENERGY FLOW.
**NOTES**: FILED.
**DATE**: 7/10/000

ABSTRACT 1030

**TITLE**: ENERGY IN PERSPECTIVE
**AUTHOR**: GAUCHER L. P.
**SOURCE**: CHEM TECH: MARCH 1971: PP 153-158.
**KEYWORDS**: GENERAL: ENERGY SOURCES.
**NOTES**: FILED.
**DATE**: 7/10/000

ABSTRACT 1031

**TITLE**: NEW DIRECTIONS IN ENERGY
**AUTHOR**: GENERAL ELECTRIC CO
**SOURCE**: MANAGER: ADVANCED ENERGY PROGRAMS MARKETING: SPACE DIV. GENERAL ELECTRIC CO: PO BOX 13651: PHILADELPHIA, PA: UNDATED.
**KEYWORDS**: GENERAL: SOLAR: CONVERSION: STORAGE: WIND.
**NOTES**: FILED.
**DATE**: 7/10/000

ABSTRACT 1032

**TITLE**: UNDERSTANDING THE NATIONAL ENERGY DILEMMA
**AUTHOR**: GEORGETOWN UNIVERSITY
**KEYWORDS**: GENERAL: ENERGY FLOW: SUPPLY DEMAND: USA.
**NOTES**: FILED.
**DATE**: 7/3/0000

ABSTRACT 1033

**TITLE**: US ENERGY DEMAND - SOME LOW ENERGY FUTURES
**AUTHOR**: GIBBONS J. ET AL.
**KEYWORDS**: GENERAL: USA: SUPPLY DEMAND: CONSERVATION.
**NOTES**: FILED. THIS ARTICLE PRESENTS SEVERAL PLAUSIBLE ENERGY DEMAND SCENARIOS FOR THE UNITED STATES THROUGH THE YEAR 2010. EACH ONE DERIVED FROM ANALYTIC EFFORTS CONDUCTED BY THE DEMAND AND CONSERVATION PANEL OF THE NATIONAL RESEARCH COUNCILS COMMITTEE ON NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS.
**DATE**: 7/7/0414
ABSTRACT 1042
*TITLE: RAYS OF HOPE – THE TRANSITION TO A POST-PELROLEUM WORLD.
*AUTHOR: HAYES D.
*SOURCE: NEW YORK: NY/VA NORTON AND CO, INC. 1977; 240 PP.
*KEYWORDS: GENERAL, FOSSIL FUELS, NUCLEAR, SOLAR, WIND
*TRANSPORTATION, AGRICULTURE.
*NOTES: FILED.
*DATE: 770000

ABSTRACT 1043
*TITLE: BUILDING RURAL MICHIGAN.
*AUTHOR: HECK G.
*KEYWORDS: GENERAL, AGRICULTURE, MICHIGAN, ECONOMICS, POLICY.
*NOTES: FILED.
*DATE: 740100

ABSTRACT 1044
*TITLE: INDIA – THE ENERGY SECTOR.
*AUTHOR: HENDERSON P D.
*SOURCE: WORLD BANK, WASHINGTON D C, 1975; 185 PP.
*KEYWORDS: GENERAL, INDIA, ENERGY SOURCES, ENERGY CONSUMPTION, SUPPLY DEMAND, ORGANIC.
*NOTES: FILED.
*DATE: 750000

ABSTRACT 1045
*TITLE: PLUG TECHNOLOGY INTO THE ENERGY SHORTAGE.
*AUTHOR: HENRY J P.
*KEYWORDS: GENERAL, COAL, PETROLEUM, FOSSIL FUELS.
*NOTES: FILED.
*DATE: 730000

ABSTRACT 1046
*TITLE: INFORMATION ON INTERNATIONAL R AND D ACTIVITIES IN THE FIELD OF ENERGY.
*AUTHOR: HERSHEY O F.
*SOURCE: SMITHSONIAN SCI INFO EXCHANGE, 1730 M ST N W, WASHINGTON D C, MAY 1976; 365 PP.
*KEYWORDS: GENERAL, INTERNATIONAL.
*NOTES: AID. COMPiled UNDER NSF GRANT AER-74-2076.
*DATE: 760500

ABSTRACT 1047
*TITLE: ENERGY TECHNOLOGY III-COMMERICALIZATION.
*AUTHOR: MILL R F, ED.
*KEYWORDS: GENERAL, POLICY, TECHNOLOGY ASSESSMENT.
*NOTES: FILED.
*DATE: 760500

ABSTRACT 1048
*TITLE: ENERGY.
*AUTHOR: HOLGREN J P, HERRERA P.
*SOURCE: SAN FRANCISCO/SIERRA CLUB, JAN 1973; 252 PP.
*KEYWORDS: GENERAL, ENERGY SOURCES, ENERGY CONSUMPTION.
*NOTES: FILED.
*DATE: 730100

ABSTRACT 1049
*TITLE: ANNUAL REVIEW OF ENERGY – VOLUME 1.
*AUTHOR: HOLLANDER J M, SIMMONS M K.
*SOURCE: ANNUAL REVIEWS INC, 1359 EL CAMINO WAY, PALO ALTO, CALIF. 1976; 793 PP.
*KEYWORDS: GENERAL, SUPPLY DEMAND, ECONOMICS, CONSERVATION, ENVIRONMENT, POLICY, INTERNATIONAL.
*NOTES: FILED.
*DATE: 760000
ABSTRACT 1050

*TITLE: ANNUAL REVIEW OF ENERGY - VOL 3.
*AUTHOR: HOLLANDER J M. ED.
*SOURCE: 4139 EL CAMINO WAY. PALO ALTO CA 94306/ANNUAL REVIEWS INC.
*KEYWORDS: GENERAL. SOLAR. WIND. NUCLEAR. ENVIRONMENT. INDUSTRY.
*SOCIAL IMPLICATIONS.
*NOTES: FILED. THE OBJECTIVE OF THIS BOOK IS TO PROVIDE REVIEWS OF ACTIVITIES AND LITERATURE RELEVANT TO TOPICS IN ENERGY. THE TOPICS COVERED ARE: ENERGY END USE AND CONSERVATION. ENERGY RESOURCES AND TECHNOLOGIES. RISKS AND IMPACTS OF ENERGY PRODUCTION AND USE. ENERGY ECONOMICS AND ECONOMETRICS. ENERGY POLICY. SOCIOPOLITICAL ASPECTS OF ENERGY. AND INTERNATIONAL AND REGIONAL ENERGY TOPICS.
*DATE: 780000

ABSTRACT 1051

*TITLE: NEW ENERGY TECHNOLOGY - SOME FACTS AND ASSESSMENTS.
*AUTHOR: HOTTEL H C, HOWARD J B.
*SOURCE: CAMBRIDGE, MASS/THE MIT PRESS 1971. 364 PP.
*KEYWORDS: GENERAL. FOSSIL FUELS. CONVERSION. NUCLEAR.
*NOTES: FILED.
*DATE: 74000C

ABSTRACT 1052

*TITLE: TOWARD A GLOBAL APPROACH TO THE ENERGY PROBLEM.
*AUTHOR: HUE J W.
*KEYWORDS: GENERAL. INTERNATIONAL.
*NOTES: FILED.
*DATE: 760300

ABSTRACT 1053

*TITLE: THE ENERGY RESOURCES OF THE EARTH.
*AUTHOR: HUBBERT M K.
*KEYWORDS: GENERAL. SOLAR. ENERGY FLOW. COAL. ENERGY SOURCES. PETROLEUM.
*NOTES: FILED.
*DATE: 710900

ABSTRACT 1054

*TITLE: EXTENSION ENERGY PROGRAMS.
*AUTHOR: HYATT G.
*SOURCE: ECP ENERGY TASK FORCE. 28 SEPT 1977. 21 PP.
*KEYWORDS: GENERAL. CONSERVATION. AWARENESS.
*NOTES: FILED.
*DATE: 770928

ABSTRACT 1055

*TITLE: A PERSPECTIVE ON THE NATIONS ENERGY SUPPLY PROBLEMS.
*AUTHOR: IKARD F H.
*SOURCE: PRESENTED AT 65TH ANNUAL MEETING. NATIONAL GOVERNORS CONF. LAKE TANGE. NEVADA. 5 JUNE 1973. 12 PP.
*KEYWORDS: GENERAL. SUPPLY DEMAND. PETROLEUM. ELECTRICAL.
*NOTES: FILED.
*DATE: 730605

ABSTRACT 1056

*TITLE: RISK WITH ENERGY FROM CONVENTIONAL AND NONCONVENTIONAL SOURCES.
*AUTHOR: INHABER H.
*KEYWORDS: GENERAL.
*NOTES: FILED.
*DATE: 790223
ABSTRACT 1057

**TITLE**: ENERACTICS - A BOOK OF ENERGY THINGS TO DO.
**AUTHOR**: JANETI J. ED.
**SOURCE**: ENTROPY SCI AND MATH TEACHING CENTER, MICH STATE UNIV,
EAST LANSING 48824, JAN 1977*90 PP.
**KEYWORDS**: GENERAL, INSULATION, ENERGY BUDGET, APPLIANCES, FERTILIZER,
SOLAR, WIND.
**NOTES**: FILED.
**DATE**: 770100

ABSTRACT 1058

**TITLE**: THE ENERGY SITUATION.
**AUTHOR**: JOHNSON S. ED.
**SOURCE**: NINTH DISTRICT QUARTERLY 3(4)/1-16, 3RD QUARTER 1976, RESEARCH
DEPT, FEDERAL RESERVE BANK, MINNEAPOLIS, MINNESOTA 55402.
**KEYWORDS**: GENERAL, PETROLEUM, NATURAL GAS, ECONOMICS, ELECTRICAL,
CONSERVATION, POLICY.
**NOTES**: FILED.
**DATE**: 760000

ABSTRACT 1059

**TITLE**: THE NEXT 200 YEARS.
**AUTHOR**: KAHN H., BROWN L., MARTEL L.
**SOURCE**: NEW YORK/WILLIAM MORROW AND CO, 1976, 241 PP.
**KEYWORDS**: GENERAL, ENERGY SOURCES, FOOD ENERGY.
**NOTES**: FILED.
**DATE**: 760900

ABSTRACT 1060

**TITLE**: POTENTIAL ENERGY--AN ANALYSIS OF WORLD ENERGY TECHNOLOGY.
**AUTHOR**: KENWARD H.
**SOURCE**: CAMBRIDGE, MA/CAMBRIDGE UNIV PRESS, 1976, 221PP.
**KEYWORDS**: GENERAL, ALTERNATIVES, ENERGY SOURCES.
**NOTES**: FILED. THE PROBLEM OF THE ENERGY CRISIS IN THE UNITED STATES,
TRADITIONAL AND FUTURE ENERGY SOURCES ARE DEALT WITH.
**DATE**: 760000

ABSTRACT 1061

**TITLE**: WORLD RESOURCES AND THE WORLD MIDDLE CLASS.
**AUTHOR**: KEYFITZ M.
**KEYWORDS**: GENERAL, ECONOMICS, ENERGY SOURCES.
**NOTES**: FILED.
**DATE**: 760700

ABSTRACT 1062

**TITLE**: ENERGY, ECOLOGY, AND ECONOMICS - ELEMENTS OF A THERMODYNAMICALLY BASED ECONOMY.
**AUTHOR**: KOENIG H. E., EDENS T. C.
**SOURCE**: DESIGN AND MANAGEMENT OF RURAL ECOSYSTEMS, MICH STATE UNIV,
EAST LANSING, MI 48824, DEC 1975, 56 PP.
**KEYWORDS**: GENERAL, ECONOMICS, ENVIRONMENT, ENERGY SOURCES,
EFFICIENCY, LAND USE.
**NOTES**: FILED.
**DATE**: 751200

ABSTRACT 1063

**TITLE**: THE HARMONIOUSLY CONFUSED WORLD.
**AUTHOR**: KOENIG H. E., COOPER W. E. ET AL.
**SOURCE**: CENTER FOR ENVIR QUALITY, MICH STATE UNIV,
EAST LANSING, MI 48824, 1977, 36 PP.
**KEYWORDS**: GENERAL, ENVIRONMENT, CONSERVATION.
**NOTES**: FILED.
**DATE**: 770000
ABSTRACT 1071

TITLE: SOFT ENERGY PATHS--TOWARD A DURABLE PEACE.
AUTHOR: LOVINS A B.
KEYWORDS: GENERAL: ENERGY SOURCES; ECONOMICS.
NOTES, FILED: THE USE OF SOFT ENERGY (SOLAR, WIND, BIOMASS CONVERSION) IN
PLACE OF CURRENT ENERGY SOURCES. POLITICS OF, FUTURE OF, AND
COMPARATIVE COSTS OF ENERGY SOURCES.
DATE: 770000

ABSTRACT 1072

TITLE: THE ECONOMIC GEOGRAPHY OF ENERGY.
AUTHOR: LUTEN O B.
SOURCE: SCIENTIFIC AMER, 225(3)/165-175, SEPT 1971.
KEYWORDS: GENERAL: ENERGY FLOW; HISTORICAL; WORLD WIDE; PETROLEUM; STORAGE;
NATURAL GAS.
NOTES, FILED.
DATE: 710900

ABSTRACT 1073

TITLE: ENERGY DEMAND, CONSERVATION, AND INSTITUTIONAL PROBLEMS.
AUTHOR: MACRAKIS H S.
SOURCE: NSF-RA-N-74-034, NATIONAL SCI FOUNDATION, WASHINGTON D C, 12-14 FEB
1973, 556 PP.
KEYWORDS: GENERAL; ECONOMICS, SUPPLY DEMAND, TRANSPORTATION, CONSERVATION.
NOTES, FILED.
DATE: 730212

ABSTRACT 1074

TITLE: PROVIDING FOR ENERGY.
AUTHOR: MANCHE R B.
SOURCE: NEW YORK, NY/MCGRAW-HILL BOOK CO, 1977, 134 PP.
KEYWORDS: GENERAL: POLICY, PETROLEUM, COAL, NATURAL GAS.
NOTES, FILED.
DATE: 770000

ABSTRACT 1075

TITLE: REPORT TO GOVERNOR WILLIAM G MILLIKEN.
AUTHOR: MCCracken P W.
SOURCE: REPORT OF THE SPECIAL COMMISSION ON ENERGY, OFFICE OF THE GOVERNOR,
LANSING, MICH, FEB 1974, 66 PP.
KEYWORDS: GENERAL: ENERGY CONSUMPTION, MICHIGAN, POLICY.
NOTES, FILED.
DATE: 740200

ABSTRACT 1076

TITLE: THE ENERGY CRISIS LINGERS ON AND ON.
AUTHOR: MCCONNELL J J.
KEYWORDS: GENERAL: ENVIRONMENT, FOSSIL FUELS, ENERGY CONSUMPTION.
NOTES, FILED.
DATE: 740900

ABSTRACT 1077

TITLE: ENERGY RESOURCES AND SUPPLY.
AUTHOR: MCWALLACE J T, MORGAN R, MURRAY R B.
SOURCE: NEW YORK/JOHN WILEY AND SONS, 1976, 508 PP.
KEYWORDS: GENERAL: SOLAR, PHOTOSYNTHESIS, FOSSIL FUELS, COAL, PETROLEUM;
NUCLEAR, STORAGE, WASTES, ECONOMICS, SOCIAL IMPLICATIONS.
NOTES, FILED.
DATE: 760900
ABSTRACT 1078

*TITLE* THE LIMITS TO GROWTH.
*AUTHORS* MEADOWS D H, MEADOWS D L, RANDERS J, BEHRENS W W.
*SOURCE* NEW YORK/UNIVERSE BOOKS, 1972, 205 PP.
*KEYWORDS* GENERAL, FERTILIZER, POPULATION, LAND USE, ECONOMICS, ENVIRONMENT.
*NOTES* FILED.
*DATE* 720800

ABSTRACT 1279

*TITLE* ENGINEERING RESEARCH FOR DECENTRALIZED POWER - A PLAN FOR ACTION.
*AUTHOR* MERRIAM M F.
*SOURCE* WORKING PAPER SERIES NO 19, TECH AND DEV INST, EAST-WEST CENTER, SEPT 1974.
*KEYWORDS* GENERAL, ENERGY SOURCES, ENVIRONMENT, SOCIAL IMPLICATIONS.
*NOTES* FILED.
*DATE* 740904

ABSTRACT 1080

*TITLE* DEVELOPING WESTERN ENERGY RESOURCES.
*AUTHOR* MEYER R.
*SOURCE* EXXON CO, PUBLIC AFFAIRS DEPT, PO BOX 2180, HOUSTON, TEXAS, 4 SEPT 1974, 9 PP.
*KEYWORDS* GENERAL, ENERGY SOURCES, ENVIRONMENT, SOCIAL IMPLICATIONS.
*NOTES* FILED.
*DATE* 740904

ABSTRACT 1081

*TITLE* ENERGY.
*AUTHOR* MICHIGAN UNITED CONSERVATION CLUBS.
*SOURCE* MICH UNITED CONSERVATION CLUBS, PO BOX 30235, LANSING, MI 48909.
*KEYWORDS* GENERAL, CONSERVATION, ENERGY SOURCES.
*NOTES* FILED.
*DATE* 771103

ABSTRACT 1082

*TITLE* TOWARD A UNIFIED MICHIGAN ENERGY POLICY.
*AUTHORS* MICHIGAN ENERGY AND RESOURCE RESEARCH ASSOCIATION.
*SOURCE* MICH ENERGY AND RESOURCE RESEARCH ASSOC, 328 EXECUTIVE PLAZA, 1200 SIXTH ST, DETROIT, MI 48226, NOV 1977, 153 PP.
*KEYWORDS* GENERAL, MICHIGAN, POLICY, FOSSIL FUELS, SUPPLY DEMAND, NUCLEAR, SOLAR.
*NOTES* FILED.
*DATE* 771103

ABSTRACT 1083

*TITLE* ENERGY CRISIS - WAYS OUT.
*AUTHOR* MILLER P E.
*SOURCE* MINN SCI, 32/6-11, WINTER 1976-77.
*KEYWORDS* GENERAL, MINNESOTA, ENERGY CONSUMPTION, ENERGY SOURCES.
*NOTES* FILED.
*DATE* 760300

ABSTRACT 1084

*AUTHOR* MILLIKEN W G.
*SOURCE* OFFICE OF GOVERNOR, STATE OF MICH, LANSING, APRIL 1975, 56 PP.
*KEYWORDS* GENERAL, PETROLEUM, NATURAL GAS, COAL, ELECTRICAL, MICHIGAN, CONSERVATION.
*NOTES* FILED.
*DATE* 750404

ABSTRACT 1085

*TITLE* CONTINUING ENERGY CRISIS IN AMERICA.
*AUTHORS* MOORE J M, ED.
*SOURCE* CONGRESSIONAL QUARTERLY, 1414 22ND STREET NW, WASHINGTON, D C 20037, 1975, 124 PP.
*KEYWORDS* GENERAL, FOSSIL FUELS, NUCLEAR, POLICY, ECONOMICS, BIBLIOGRAPHY.
*NOTES* FILED.
*DATE* 750304
ABSTRACT 1086

TITLE: ENERGY AND PUBLIC POLICY - 1972
AUTHOR: MURPHY J J
SOURCE: NEW YORK/THE CONFERENCE BOARD, 1972, 318 PP.
KEYWORDS: GENERAL, PETROLEUM, NUCLEAR, ENERGY SOURCES, ENVIRONMENT
NOTES: FILED
DATE: 720000

ABSTRACT 1087

TITLE: ENERGY - A NATIONAL ISSUE
AUTHOR: MURRAY F K
SOURCE: THE CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES,
GEORGETOWN UNIV, 1800 K STREET NW, WASHINGTON, D C 20006,
1976, 49 PP.
KEYWORDS: GENERAL, ENERGY FLOW, SUPPLY DEMAND
NOTES: FILED
DATE: 760000

ABSTRACT 1088

TITLE: ENERGY CONSUMPTION IN MANUFACTURING
AUTHOR: MYERS J G, GILB B K, MAKAMURA L, PRESTON N, RABITSCH E K
SOURCE: CAMBRIDGE, MASS/BALLINGER PUB CO, 1974, 410 PP.
KEYWORDS: GENERAL, ENERGY CONSUMPTION, INDUSTRY
NOTES: FILED
DATE: 740000

ABSTRACT 1089

TITLE: US ENERGY PROSPECTS - AN ENGINEERING VIEWPOINT
AUTHOR: NATIONAL ACADEMY OF SCIENCE
SOURCE: NAS, 2101 CONSTITUTION AVE, WASHINGTON D C, 1974
KEYWORDS: GENERAL, HISTORICAL, CONSERVATION, COAL, ELECTRICAL, PETROLEUM, SUPPLY DEMAND
NOTES: FILED
DATE: 740000

ABSTRACT 1090

TITLE: ENERGY MODELLING
AUTHOR: NATIONAL SCIENCE FOUNDATION
SOURCE: SPECIAL PUBL-ENERGY POLICY, 32 HIGH ST, GUILDFORD,
SURREY, ENGLAND, GUI, 1973, 170 PP.
KEYWORDS: GENERAL, MODELS, ECONOMICS, POLICY, SUPPLY DEMAND
DATE: 731015

ABSTRACT 1091

TITLE: SPACE COLONIES AND ENERGY SUPPLY TO THE EARTH
AUTHOR: O NEILL & K
SOURCE: SCIENCE, 190(4218)/943-947, 5 DEC 1975
KEYWORDS: GENERAL, SOLAR
NOTES: FILED
DATE: 751205

ABSTRACT 1092

TITLE: ENVIRONMENT, POWER, AND SOCIETY
AUTHOR: ODUM H T
SOURCE: WILEY-INTERSCIENCE, 1971
KEYWORDS: GENERAL, ENVIRONMENT
NOTES: FILED
DATE: 710000
ABSTRACT 1093

•TITLE: THE ENERGY CYCLE OF THE EARTH.
•AUTHOR: GORT A H.
•KEYWORDS: GENERAL, SOLAR, ENERGY FLOW.
•NOTES: FILED.
•DATE: 760900

ABSTRACT 1094

•TITLE: SOMETHING NEW - 1977 WEATHERIZATION INCENTIVES FOR OREGON HOMEOWNERS.
•AUTHOR: OREGON DEPARTMENT OF ENERGY.
•SOURCE: OREGON DEPT OF ENERGY, 528 COTTAGE ST NE, SALEM, OR 97310, AUG 1977, 30 PP.
•KEYWORDS: GENERAL, OREGON, HOME, LEGISLATION, POLICY.
•NOTES: FILED.
•DATE: 770800

ABSTRACT 1095

•TITLE: ENERGY - PROSPECTS FOR THE REST OF THE CENTURY.
•AUTHOR: OTHER O F.
•KEYWORDS: GENERAL, ENERGY SOURCES.
•NOTES: FILED.
•DATE: 740600

ABSTRACT 1096

•TITLE: THE ENERGY MANAGERS HANDBOOK.
•AUTHOR: PAYNE G A.
•SOURCE: IPC SCI AND TECH PRESS LTD, IPC HOUSE, 32 HIGH ST, GUILDFORD, SURREY, ENGLAND GUI 3EW, 1977, 147PP.
•KEYWORDS: GENERAL, CONSERVATION, FOSSIL FUELS, HEAT, ELECTRICAL, INDUSTRY.
•NOTES: FILED.
•DATE: 770800

ABSTRACT 1097

•TITLE: ENERGY BUDGETS AND THE TRADE-OFFS--THE NEED AND TECHNIQUES.
•AUTHOR: PEYTON T L.
•SOURCE: FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, 21 AUG 1975, WASHINGTON D C, 7 PP.
•KEYWORDS: GENERAL, ENERGY BUDGET.
•NOTES: FILED.
•DATE: 750821

ABSTRACT 1098

•TITLE: THE FUEL CONSUMPTION OF AUTOMOBILES.
•AUTHOR: PIerce J R.
•SOURCE: SCIENTIFIC AMER., JAN 1975, PP 34-44.
•KEYWORDS: GENERAL, CONSERVATION, ENERGY CONSUMPTION.
•NOTES: FILED.
•DATE: 750100

ABSTRACT 1099

•TITLE: NEW WAYS WITH FUELS.
•AUTHOR: PIPER A.
•KEYWORDS: GENERAL.
•NOTES: FILED.
•DATE: 740719
ABSTRACT 1100

**TITLE**: ENERGY PRIMER.
**AUTHOR**: PORTOLA INSTITUTE.
**SOURCE**: PORTOLA INST, 558 SANTA CRUZ AVE, MENLO PARK, CA.
**KEYWORDS**: GENERAL, RENEWABLE ENERGY, ENERGY SOURCES, SOLAR, WIND, BIOMASS, AGRICULTURE, METHANE, ALCOHOL.
**NOTES**: FILED.
**DATE**.

ABSTRACT 1101

**TITLE**: THE ENERGY DILEMMA - AN ANALYSIS OF THE CURRENT SITUATION.
**AUTHOR**: PRICE O R.
**SOURCE**: NEW YORK STATE COLLEGE OF AGR AND LIFE SCI, CORNELL UNIV, ITHACA, N Y.
**AUG 1973** 11 PP.
**KEYWORDS**: GENERAL, SUPPLY DEMAND, SOCIAL IMPLICATIONS, ECONOMICS.
**NOTES**: FILED.
**DATE**: 730800

ABSTRACT 1102

**TITLE**: ENERGY FOR A TECHNOLOGICAL SOCIETY.
**AUTHOR**: PRIEST J.
**SOURCE**: READING, MASS/ADDISON-WESLEY PUB CO, 1975, 358 PP.
**KEYWORDS**: GENERAL, FOSSIL FUELS, NUCLEAR, ELECTRICAL, CONSERVATION.
**NOTES**, FILED.
**DATE**: 750300

ABSTRACT 1103

**TITLE**: A CATALOGUE.
**AUTHOR**: PURDUE UNIVERSITY.
**SOURCE**: NATIONAL ENERGY DATA WORKSHOP, PURDUE UNIV, WEST LAFAYETTE, IN 47907; 30-31 OCT 1974.
**KEYWORDS**: GENERAL, BIBLIOGRAPHY, CATALOG.
**NOTES**: FILED. LISTS CONTACTS AND ACTIVITIES IN EACH STATE.
**DATE**: 741030

ABSTRACT 1104

**TITLE**: ALTERNATIVES IN ENERGY DEVELOPMENT.
**AUTHOR**: RANGARAO B V.
**SOURCE**: ECONOMIC AND POLITICAL WEEKLY, 9(27)/1063-1069, 6 JULY 1974.
**KEYWORDS**: GENERAL, WIND, FOSSIL FUELS, NUCLEAR, SOLAR.
**NOTES**: FILED.
**DATE**: 740706

ABSTRACT 1105

**TITLE**: PIGS FOR ANCESTORS.
**AUTHOR**: RAPPAPORT R.
**SOURCE**: YALE UNIV PRESS, 1967.
**KEYWORDS**: GENERAL.
**NOTES**.
**DATE**: 670000

ABSTRACT 1106

**TITLE**: THE NATIONS ENERGY FUTURE.
**AUTHOR**: RAY D L.
**SOURCE**: REPORT BY US ATOMIC ENERGY COMMISSION TO RICHARD M NIXON, PRESIDENT OF THE UNITED STATES, 1 DEC 1973; 171 PP.
**KEYWORDS**: GENERAL, HISTORICAL, SUPPLY DEMAND, CONSERVATION.
**NOTES**: FILED.
**DATE**: 731201

ABSTRACT 1107

**TITLE**: FOOD AND POPULATION.
**AUTHOR**: REVELLE R.
**KEYWORDS**: GENERAL.
**NOTES**: A10.
**DATE**: 740900
ABSTRACT 1108

**TITLE:** ENERGY SOURCES AND CONVERSION TECHNIQUES.

**AUTHOR:** ROBERTS R.


**KEYWORDS:** GENERAL, HISTORICAL, CONVERSION.

**NOTES:** NAS.

**DATE:** 730100

ABSTRACT 1109

**TITLE:** THE ENERGY CRISIS.

**AUTHOR:** ROCKS L. RUNYON R P.

**SOURCE:** NEW YORK/CROWN PUB, 1972, 189 PP.

**KEYWORDS:** GENERAL, HISTORICAL, PETROLEUM, COAL, NATURAL GAS, SOLAR, GEOTHERMAL, NUCLEAR, ENVIRONMENT.

**NOTES:** FILED.

**DATE:** 720000

ABSTRACT 1110

**TITLE:** ENERGY.

**AUTHOR:** SCHURR S H.

**SOURCE:** SCIENTIFIC AMER, SEPT 1963, PP 111-126.

**KEYWORDS:** GENERAL, ENERGY SOURCES.

**NOTES:** FILED.

**DATE:** 630900

ABSTRACT 1111

**TITLE:** ENERGY, ECONOMIC GROWTH AND THE ENVIRONMENT.

**AUTHOR:** SCHURR S H. ET AL.

**SOURCE:** BALTIMORE/JOHN HOPKINS UNIV PRESS, 1972, 232 PP.

**KEYWORDS:** GENERAL, ECONOMICS, ENVIRONMENT, POLICY, ENERGY CONSUMPTION.

**NOTES:** FILED, A COMPILATION OF PAPERS PRESENTED AT A FORUM CONDUCTED BY RESOURCES FOR THE FUTURE, 20-21 APRIL 1971.

**DATE:** 720300

ABSTRACT 1112

**TITLE:** ENERGY PERSPECTIVES - INTERNATIONAL AND NATIONAL.

**AUTHOR:** SEAMANS R C.

**SOURCE:** WORLD RESOURCES/THE FORENSIC QUARTERLY 49/337-344, AUG 1975.

**KEYWORDS:** GENERAL, INTERNATIONAL.

**NOTES:** FILED.

**DATE:** 750800

ABSTRACT 1113

**TITLE:** A NATIONAL PLAN FOR ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION - CREATING ENERGY CHOICES FOR THE FUTURE.

**AUTHOR:** SEAMANS R C.

**SOURCE:** ERDA 76-1, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1976, 122 PP.

**KEYWORDS:** GENERAL, POLICY, DEVELOPMENT, WORLD WIDE, NUCLEAR.

**NOTES:** FILED.

**DATE:** 760300

ABSTRACT 1114

**TITLE:** THE UNITED STATES AND WORLD DEVELOPMENT - AGENDA 1977.

**AUTHOR:** SEWELL J. W. ET AL.

**SOURCE:** NEW YORK, NY/PRAEGER PUB, 1977, 248 PP.

**KEYWORDS:** GENERAL, WORLD WIDE, POLICY, USA.

**NOTES:** FILED.

**DATE:** 770000

ABSTRACT 1115

**TITLE:** THE NATIONAL ENERGY OUTLOOK.

**AUTHOR:** SHELL OIL CO.

**SOURCE:** SHELL OIL CO, JAN 1974, 39 PP.

**KEYWORDS:** GENERAL, ENERGY SOURCES, USA, SUPPLY DEMAND, PETROLEUM, FOSSIL FUELS, INTERNATIONAL, CONSERVATION.

**NOTES:** FILED.

**DATE:** 740100
ABSTRACT 1116

•TITLE: INTRODUCTION TO ENERGY TECHNOLOGY.
•AUTHOR: SHEPARD M L, CHADDOCK J B, COCKS F M, HARMAN C M.
•SOURCE: ANN ARBOR, MICH/ANN ARBOR SCI PUB. 1976. 300 PP.
•KEYWORDS: GENERAL, ELECTRICAL, NUCLEAR, STORAGE, TRANSPORTATION, SOLAR, WIND.
•NOTES: FILED.
•DATE: 760000

ABSTRACT 1117

•TITLE: ENERGY ANALYSIS IN POLICY MAKING.
•AUTHOR: SLESSER M.
•SOURCE: NEW SCIENTIST. 1 NOV 1975. PP 328-333.
•KEYWORDS: GENERAL, ENERGY SUBSIDY, AGRICULTURE.
•NOTES: FILED.
•DATE: 751101

ABSTRACT 1118

•TITLE: STRIKING A BALANCE.
•AUTHOR: SPILMAUS A.
•SOURCE: AGR ENGR. 39(1)/14-17. SEPT 1975.
•KEYWORDS: GENERAL, POPULATION, ECONOMICS, ENVIRONMENT.
•NOTES: FILED.
•DATE: 750900

ABSTRACT 1119

•TITLE: ENERGY REQUIREMENTS AND THE ROLE OF ENERGY IN OUR EXPANDING ECONOMY.
•AUTHOR: SPORN P.
•KEYWORDS: GENERAL, REQUIREMENTS.
•NOTES: FILED.
•DATE: 570000

ABSTRACT 1120

•TITLE: THE ENERGY EQUATIONS, NATURAL POWER FOR THE THIRD WORLD.
•AUTHOR: SPURGEON D.
•KEYWORDS: GENERAL, GEOTHERMAL, SOLAR, WIND, DEVELOPING COUNTRIES.
•NOTES: FILED.
•DATE: 731206

ABSTRACT 1121

•TITLE: ENERGY - SOURCES, USE AND ROLE IN HUMAN AFFAIRS.
•AUTHOR: STEINHART C E, STEINHART J S.
•SOURCE: NORTH SCITUATE, MASS/DURBURY PRESS. 1974. 362 PP.
•KEYWORDS: GENERAL, HISTORICAL, ENERGY BUDGET, FOOD ENERGY, ENERGY SOURCES, FOSSIL FUELS, NUCLEAR, ELECTRICAL, POLICY, ENERGY ACCOUNTING.
•NOTES: FILED.
•DATE: 740000

ABSTRACT 1122

•TITLE: PRODUCING YOUR OWN POWER.
•AUTHOR: STONER C H, ET AL.
•SOURCE: NEW YORK/VINTAGE BOOKS. 1975. 322 PP.
•KEYWORDS: GENERAL, WIND, WATER POWER, WOOD, METHANE, SOLAR, CONSERVATION.
•NOTES: FILED.
•DATE: 750000
ABSTRACT 1124

*TITLE: THE CONVERSION OF ENERGY.
*AUTHOR: SUMMERS C M.
*SOURCE: NEW YORK/MONTHLY REVIEW PRESS 1974, 171 PP.
*KEYWORDS: GENERAL; INTERNATIONAL; ENERGY SOURCES, PETROLEUM.
*NOTES: FILED.
*DATE: 710900

ABSTRACT 1125

*TITLE: THE ENERGY CRISIS: WORLD STRUGGLE FOR POWER AND WEALTH.
*AUTHOR: TANZER J.
*KEYWORDS: GENERAL; CONVERSION, EFFICIENCY.
*NOTES: FILED.
*DATE: 710900

ABSTRACT 1126

*TITLE: AN ANALYSIS OF THE ERDA PLAN AND PROGRAM.
*AUTHOR: TEAGUE O E, ET AL.
*SOURCE: SP TR 57-3, US GOVT PRINTING OFFICE.
*KEYWORDS: GENERAL, FOSSIL FUELS, NUCLEAR, SOLAR, GEOTHERMAL, CONSERVATION, ENVIRONMENT.
*NOTES: FILED.
*DATE: 751000

ABSTRACT 1127

*TITLE: ENERGY FACTS II.
*AUTHOR: TEAGUE O E, ET AL.
*KEYWORDS: GENERAL, SUPPLY, DEMAND, COAL, NUCLEAR, PETROLEUM, USA.
*NOTES: FILED.
*DATE: 751000

ABSTRACT 1128

*TITLE: ENERGY--THERE CAN BE ENOUGH.
*AUTHOR: TESSIERI J E.
*KEYWORDS: GENERAL, ALTERNATIVES, POLICY, USA.
*NOTES: FILED.
*DATE: 770900

ABSTRACT 1129

*TITLE: STRETCHING SCARCE SUPPLIES AND FINDING FUTURE FUELS.
*AUTHOR: TESSEYRI J E.
*SOURCE: TEXAS ENERGY AND MINERAL RESOURCES, 21/1-3, TEXAS A AND M UNIVERSITY COLLEGE STATION, TX, NOV 1975.
*KEYWORDS: GENERAL, ALTERNATIVES, METHANOL.
*NOTES: FILED.
*DATE: 751100
ABSTRACT 1130
• TITLE: ENERGY FOR MAN FROM WINDMILLS TO NUCLEAR POWER.
  • AUTHOR: THIRRING H.
  • SOURCE: NEW YORK/HARPER AND ROW PUB, 1976, 459 PP.
  • KEYWORDS: GENERAL, ENERGY SOURCES, COAL, PETROLEUM, FOSSIL FUELS, SOLAR, NUCLEAR.
  • NOTES: FILED.
  • DATE: 760000

ABSTRACT 1131
• TITLE: A SYSTEMATIC EVALUATION OF ENERGY CRISIS IMPACTS ON BUSINESS.
  • AUTHOR: TINKLEMAII M.
  • SOURCE: PRESENTED AT A JOINT NATIONAL MEETING OF THE INST OF MANAGEMENT SERVICES, OPERATIONS RESEARCH SOCIETY OF AMERICA, SAN JUAN, PUERTO RICO, 16-18 OCT 1974, 13 PP.
  • KEYWORDS: GENERAL, SUPPLY DEMAND.
  • NOTES: FILED.
  • DATE: 741016

ABSTRACT 1132
• TITLE: ENERGY NEEDS AND ANALYSIS WITH SPECIAL REFERENCE TO FOOD AND AGRICULTURE
  • AUTHOR: UNION CARBIDE AND NATIONAL ENERGY PROGRAMS.
  • SOURCE: UNION CARBIDE CORP, MARCH 1975, 21 PP.
  • KEYWORDS: GENERAL, INDUSTRY, LEGISLATION, CHEMICALS.
  • NOTES: FILED.
  • DATE: 750300

ABSTRACT 1133
• TITLE: CHECKING YOUR ENERGY I.Q.
  • AUTHOR: UNIVERSITY OF FLORIDA.
  • SOURCE: FLORIDA COOPERATIVE EXTENSION SERVICE, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL.
  • KEYWORDS: GENERAL, AWARENESS.
  • NOTES: FILED.
  • DATE: 750500

ABSTRACT 1134
• TITLE: ENERGY ALTERNATIVES - A COMPARATIVE ANALYSIS.
  • AUTHOR: UNIVERSITY OF OKLAHOMA.
  • SOURCE: SCI AND PUBLIC POLICY PROGRAM, UNIV OF OKLAHOMA, NORMAN, OK, MAY 1975.
  • KEYWORDS: GENERAL, COAL, PETROLEUM, FOSSIL FUELS, ALTERNATIVES, NUCLEAR, SOLAR, GEOTHERMAL, ORGANIC, WASTES, ELECTRICAL, ENERGY CONSUMPTION, ECONOMICS.
  • NOTES: FILED.
  • DATE: 750300

ABSTRACT 1135
• TITLE: ENERGY PERSPECTIVES.
  • AUTHOR: US-DEPARTMENT OF INTERIOR.
  • SOURCE: US DEPT OF INTERIOR, FEB 1975, 287 PP.
  • KEYWORDS: GENERAL, WORLD WIDE STATISTICS, USA, ENERGY SOURCES.
  • NOTES: FILED.
  • DATE: 750200

ABSTRACT 1136
• TITLE: ENERGY MANAGEMENT - ECONOMIC SENSE FOR RETAILERS.
  • AUTHOR: US-DEPARTMENT OF COMMERCE.
  • SOURCE: OFFICE OF ENERGY PROGRAMS, US DEPT OF COMMERCE, WASHINGTON D C, FEB 1974, 6 PP.
  • KEYWORDS: GENERAL, AWARENESS, CONSERVATION.
  • NOTES: FILED.
  • DATE: 740200
ABSTRACT 1146

*TITLE* THE OIL CRISIS.
*AUTHOR* VENON R.
*SOURCE* NEW YORK/W W NORTON AND CO INC, 1976, 301 PP.
*KEYWORDS* GENERAL, PETROLEUM, INTERNATIONAL.
*NOTES* FILED.
*DATE* 760300

ABSTRACT 1147

*TITLE* DEAR ENERGY.
*AUTHOR* VERWAY D I.
*KEYWORDS* GENERAL, NATURAL GAS, FOSSIL FUELS.
*NOTES* FILED.
*DATE* 731000

ABSTRACT 1148

*TITLE* ENERGY AS A MAJOR FACTOR IN MAN'S DEVELOPMENT.
*AUTHOR* WARD G T.
*SOURCE* ASAE PAPER 70-112, 22 PP.
*KEYWORDS* GENERAL, ENERGY SOURCES, DEVELOPING COUNTRIES, WORLD WIDE.
*NOTES* FILED.
*DATE* 700300

ABSTRACT 1149

*TITLE* CLEAN FUELS FROM BIOMASS, SEWAGE, URBAN REFUSE, AGRICULTURAL WASTES.
*AUTHOR* WHITE J W, MCGREW W.
*SOURCE* INST OF GAS TECH, 3424 S STATE ST, CHICAGO, IL, MARCH 1976, 459 PP.
*KEYWORDS* GENERAL, BIOMASS, AGRICULTURE, WASTES, MUNICIPAL WASTE.
*NOTES* FILED.
*DATE* 760300

ABSTRACT 1150

*TITLE* ENERGY.
*AUTHOR* WILSON M.
*SOURCE* NEW YORK/TIME-LIFE BOOKS, 1973, 200 PP.
*KEYWORDS* GENERAL, HISTORICAL, ELECTRICAL, HEAT.
*NOTES* FILED.
*DATE* 730900

ABSTRACT 1151

*AUTHOR* WILSON C L, ED.
*SOURCE* NEW YORK, NY/MCGRAW-HILL BOOK CO, 1977, 291PP.
*KEYWORDS* GENERAL, POLICY, RESOURCES, PETROLEUM, NATURAL GAS, COAL, NUCLEAR, SUPPLY DEMAND.
*NOTES* FILED, REPORT OF THE WORKSHOP ON ALTERNATIVE ENERGY STRATEGIES, A PROJECT SPONSORED BY THE MASS INST OF TECH.
*DATE* 770600

ABSTRACT 1152

*TITLE* OUTLOOK FOR ENERGY IN THE UNITED STATES TO 1985.
*AUTHOR* JENGER J G, BUMING G D, EMERSON J D, SPARLING R G, ZRALY A J.
*SOURCE* ENERGY ECON DIV, THE CHASE MANHATTAN BANK, NEW YORK, MAY 1973, 55 PP.
*KEYWORDS* GENERAL, ENERGY SOURCES, SUPPLY DEMAND, PETROLEUM, NATURAL GAS, COAL, NUCLEAR, WATER POWER.
*NOTES* FILED.
*DATE* 730500

ABSTRACT 1153

*TITLE* THE ENERGY CYCLE OF THE BIOSPHERE.
*AUTHOR* WOODWELL G H.
*SOURCE* SCIENTIFIC AMER, SEPT 1970, PP 64-74.
*KEYWORDS* GENERAL, ENERGY FLOW, PHOTOSYNTHESIS.
*NOTES* FILED.
*DATE* 700900
ABSTRACT 1154

*TITLE* ENERGY CRISIS - DANGER AND OPPORTUNITY

*AUTHOR* YANNAcone V J. ET AL.

*SOURCE* ST PAUL, MINN./WEST PUB CO 1974. 432 PP.

*KEYWORDS* GENERAL, ENERGY SOURCES, ECONOMICS, SOCIAL IMPLICATIONS.

*NOTES* FILED.

*DATE* 740000

ABSTRACT 1155

*TITLE* REMARKS PREPARED FOR DELIVERY BY FRANK G ZABE ADMINISTRATOR FEA.


*AUTHOR* ZABE F G.

*SOURCE* FEDERAL ENERGY NEWS. FEDERAL ENERGY ADMINISTRATION, WASHINGTON D C.

FEB 1976, 7 PP.

*KEYWORDS* GENERAL, AUTOMOBILE, INDUSTRY, ENERGY SOURCES.

*NOTES* FILED.

*DATE* 760200

GEOTHERMAL 1156 -- 1175

ABSTRACT 1156

*TITLE* GEOTHERMAL ENERGY - A REVIEW OF RESEARCH AND DEVELOPMENT.

*AUTHOR* ARMSTEAD T.


*KEYWORDS* GEOTHERMAL.

*NOTES* FILED.

*DATE* 730000

ABSTRACT 1157

*TITLE* GEOTHERMAL POWER.

*AUTHOR* BARNEA J.

*SOURCE* SCIENTIFIC AMER, JAN 1972. PP 70-77.

*KEYWORDS* GEOTHERMAL.

*NOTES* NAS.

*DATE* 720100

ABSTRACT 1158

*TITLE* HEAT FROM THE EARTH.

*AUTHOR* BATTELLE MEMORIAL INSTITUTE.

*SOURCE* ENERGY PERSPECTIVES 3, BATTELLE MEMORIAL INST, 505 KING AVE.

COLUMBUS, OH, OCT 1973, 5 PP.

*KEYWORDS* GEOTHERMAL, USA, ITALY.

*NOTES* FILED.

*DATE* 731000

ABSTRACT 1159

*TITLE* GEOTHERMAL - EARTHS PRIMORDIAL ENERGY.

*AUTHOR* BOWEN R G. GROH E A.


*KEYWORDS* GEOTHERMAL.

*NOTES* NAS.

*DATE* 711030

ABSTRACT 1160

*TITLE* GEOTHERMAL ENERGY.

*AUTHOR* EATON W W.

*SOURCE* USERDA, TECH INFO CENTER, PO BOX 62, OAK RIDGE, TENN 1975, 42 PP.

*KEYWORDS* GEOTHERMAL, GENERAL.

*NOTES* FILED.

*DATE* 750000
ABSTRACT 1169

• TITLE: MERCURY EMISSIONS FROM GEOTHERMAL POWER PLANTS.
• AUTHOR: ROBERTSON D E, CRECELIUS E A, FRUCHTER J S, LUDWICK J D.
• KEYWORDS: GEOTHERMAL, USA.
• NOTES: FILED. GEOTHERMAL STEAM USED FOR POWER PRODUCTION CONTAINS SIGNIFICANT QUANTITIES OF MERCURY, MUCH OF WHICH ESCAPES TO THE ATMOSPHERE AS ELEMENTAL MERCURY VAPOR IN COOLING TOWER EXHAUSTS.
• DATE: 770603

ABSTRACT 1170

• TITLE: GEOTHERMAL ENERGY.
• AUTHOR: SMITH M C.
• KEYWORDS: GEOTHERMAL.
• NOTES: NAS.
• DATE: 730500

ABSTRACT 1171

• TITLE: GEOTHERMAL RESOURCES POTENTIAL IN AFRICA AND RECOMMENDATIONS FOR DEVELOPMENT.
• AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL.
• SOURCE: UN ECON AND SOCIAL COUNCIL, ECON COMMISSION FOR AFRICA, SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976, 9 PP.
• KEYWORDS: GEOTHERMAL, AFRICA.
• NOTES: FILED.
• DATE: 760501

ABSTRACT 1172

• TITLE: EXPLORATION AND EXPLOITATION OF GEOTHERMAL RESOURCES IN ARID AND SEMIARID LANDS.
• AUTHOR: UNIVERSITY OF ARIZONA.
• SOURCE: INFO PAPER 2, OFFICE OF ARID LAND STUDIES, UNIV OF ARIZONA, TUSCON, AZ 85721, 1973, 119 PP.
• KEYWORDS: GEOTHERMAL.
• NOTES: NAS.
• DATE: 750500

ABSTRACT 1173

• TITLE: SECOND SYMPOSIUM ON THE DEVELOPMENT AND USE OF GEOTHERMAL RESOURCES.
• AUTHOR: UNIVERSITY OF CALIFORNIA.
• SOURCE: LAWRENCE BERKELEY LAB, UNIV OF CALIF, MAY 1975.
• KEYWORDS: GEOTHERMAL.
• NOTES: NAS.
• DATE: 750500

ABSTRACT 1174

• TITLE: GEOTHERMAL ENERGY.
• AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
• SOURCE: ERDA, TECH INFO CENTER, PO BOX 62, OKR RIDGE, TN, AUG 1975, 11 PP.
• KEYWORDS: GEOTHERMAL.
• NOTES: FILED.
• DATE: 750800

ABSTRACT 1175

• AUTHOR: US-HOUSE.
• SOURCE: HEARINGS BEFORE THE SUBCOMMITTEE ON ENERGY OF THE COMMITTEE ON SCI AND ASTRONAUTICS, US HOUSE OF REP, FEB-MAY 1974, 544 PP.
• KEYWORDS: GEOTHERMAL, ENERGY SOURCES.
• NOTES: FILED.
• DATE: 740200
ABSTRACT 1176
*TITLE: SOLAR GREENHOUSE DESIGN FEATURES.
*AUTHOR: ANON.
*SOURCEx SOLAR SUSTENANCE TEAM, ROUTE 1, BOX 107A, SANTA FE, NM 87501.
*DATE: 780000
*KEYWORDS: GREENHOUSE, INSOLATION.
*NOTES: FILEd.

ABSTRACT 1177
*TITLE: BUILDING MOBITY GREENHOUSES.
*AUTHOR: BAILEY W & LIU R C, KLUETER H M.
*SOURCEx AGR INFO BULLETIN 357, USDA, MARCH 1973, 19 PP.
*NOTES: FILEd.
*DATE: 750300

ABSTRACT 1178
*TITLE: GREENHOUSE SOLAR HEATING SYSTEM UTILIZING UNDERBENCH ROCK STORAGE.
*AUTHOR: BAIRD C D, WATERS W E, MEARS O R.
*SOURCEx ASAE PAPER 77-4012, 1977, 18 PP.
*NOTES: FILEd.

ABSTRACT 1179
*TITLE: CONSERVING HEAT IN GLASS GREENHOUSES WITH SURFACE-MOUNTED AIR-INFLATED PLASTIC.
*AUTHOR: BAUERLE W L, SHORT T H.
*SOURCEx CIRCULAR 101, OHIO AGR RESEARCH AND DEV CENTER, WOOSTER.
*DATE: JAN 1977, 7PP.

ABSTRACT 1180
*TITLE: SOLAR ENERGY UTILIZATION IN A BULK CURING/GREENHOUSE SYSTEM.
*AUTHors: BOWERS C G, HUANG B K, ABRAMS C F.
*SOURCEx ASAE PAPER 75-3554, 21 PP.

ABSTRACT 1181
*TITLE: ENERGY FROM GREENHOUSES AND AIR SOLAR COLLECTOR TO HEAT GREENHOUSES.
*AUTHOR: CARNEGIE E J, APATO T.
*SOURCEx ASAE PAPER 78-4516, DEC 1978, 7 PP.

ABSTRACT 1182
*TITLE: PLANT PRODUCTIVITY - NEW APPROACHES TO EFFICIENT LIGHT SOURCES AND ENVIRONMENTAL CONTROL.
*AUTHOR: CATHEY M F, CAMPBELL L E.
*SOURCEx ASAE PAPER 75-7501, 21 PP.

ABSTRACT 1183
*TITLE: ENERGY FROM GREENHOUSES AND AIR SOLAR COLLECTOR TO HEAT GREENHOUSES.
*AUTHOR: CARNEGIE E J, APATO T.
*SOURCEx ASAE PAPER 78-4516, DEC 1978, 7 PP.

ABSTRACT 1184
*TITLE: PLANT PRODUCTIVITY - NEW APPROACHES TO EFFICIENT LIGHT SOURCES AND ENVIRONMENTAL CONTROL.
*AUTHOR: CATHEY M F, CAMPBELL L E.
*SOURCEx ASAE PAPER 75-7501, 21 PP.

ABSTRACT 1185
*TITLE: ENERGY FROM GREENHOUSES AND AIR SOLAR COLLECTOR TO HEAT GREENHOUSES.
*AUTHOR: CARNEGIE E J, APATO T.
*SOURCEx ASAE PAPER 78-4516, DEC 1978, 7 PP.

ABSTRACT 1186
*TITLE: PLANT PRODUCTIVITY - NEW APPROACHES TO EFFICIENT LIGHT SOURCES AND ENVIRONMENTAL CONTROL.
*AUTHOR: CATHEY M F, CAMPBELL L E.
*SOURCEx ASAE PAPER 75-7501, 21 PP.
ABSTRACT 1183

*TITLE*: PREDICTING THE EFFECTS OF ORIENTATION AND INSULATION ON GREENHOUSE ENVIRONMENT.

*AUTHOR*: CHANDRA P., BRITTON M. G.

*SOURCE*: ASAE PAPER 76-4002, 27-30 JUNE 1976, 24 PP.

*KEYWORDS*: GREENHOUSE, CONSERVATION.

*NOTES*: FILED. A THEORETICAL ANALYSIS WAS UNDERTAKEN TO EVALUATE THE EFFECT OF GREENHOUSE ORIENTATION AND INSULATING THE NORTH FACING SURFACE OF DOUBLE LAYER PLASTIC GREENHOUSES ON THEIR HEAT LOSS CHARACTERISTICS.

*DATE*: 760627

ABSTRACT 1184

*TITLE*: DYNAMIC THERMAL ANALYSIS OF A SOLAR RESIDENCE--GREENHOUSE DESIGN.

*AUTHOR*: CRANE A. B., ZORNIG H. F., GODSEY L. C.

*SOURCE*: ASAE PAPER 77-4019, 1977, 15PP.

*KEYWORDS*: GREENHOUSE, SOLAR DESIGN.


*DATE*: 770000

ABSTRACT 1185

*TITLE*: SIMULATION OF SOLAR ENERGY AVAILABILITY, UTILIZATION, AND STORAGE IN GREENHOUSES.

*AUTHOR*: DUNCAN G. A., LOEWER O. J., COLLIVER D. G.

*SOURCE*: ASAE PAPER 76-4619, 43 PP.

*KEYWORDS*: GREENHOUSE, SOLAR, MODELS, CONSERVATION, STORAGE.

*NOTES*: FILED.

*DATE*: 760000

ABSTRACT 1186

*TITLE*: GROWING ROOMS.

*AUTHOR*: ELECTRICITY COUNCIL.

*SOURCE*: GROW ELECTRIC HANDBOOK 1, OCT 1975, 78 PP. THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV6 2LS.

*KEYWORDS*: GREENHOUSE, AGRICULTURE, ELECTRICAL.

*NOTES*: FILED.

*DATE*: 751000

ABSTRACT 1187

*TITLE*: LIGHTING IN GREENHOUSES.

*AUTHOR*: ELECTRICITY COUNCIL.

*SOURCE*: GROW ELECTRIC HANDBOOK 2, SEPT 1973, 98 PP. THE ELECTRICITY COUNCIL, 30 MILLBANK, LONDON SW1P 4RD.

*KEYWORDS*: GREENHOUSE, AGRICULTURE.

*NOTES*: FILED.

*DATE*: 730900

ABSTRACT 1188

*TITLE*: VENTILATION FOR GREENHOUSES.

*AUTHOR*: ELECTRICITY COUNCIL.

*SOURCE*: GROW ELECTRIC HANDBOOK 3, MARCH 1975, 82 PP. THE ELECTRICITY COUNCIL, FARM-ELECTRIC CENTRE, NATIONAL AGR CENTRE, KENILWORTH, WARWICKSHIRE CV6 2LS.

*KEYWORDS*: GREENHOUSE, AGRICULTURE.

*NOTES*: FILED.

*DATE*: 750300

ABSTRACT 1189

*TITLE*: THE FOOD AND HEAT PRODUCING SOLAR GREENHOUSE-- DESIGN, CONSTRUCTION, OPERATION.

*AUTHOR*: FISHER R., YANDA B.

*SOURCE*: PO BOX 613, SANTA FE, NM 87501/JOHN MUIR PUBLICATIONS, AUG 1977, 161 PP.

*KEYWORDS*: GREENHOUSE, SOLAR, DESIGN.

*NOTES*: FILED.

*DATE*: 770800
ABSTRACT 1190

•TITLE: DEVELOPMENT OF GREENHOUSE BULK DRYING SYSTEMS FOR SOLAR ENERGY UTILIZATION AND PLANTBED MECHANIZATION.
•AUTHOR: HUANG B K, ET AL.
•SOURCE: ASAE PAPER 75-1018, 22 JUNE 1975, 19 PP.
•KEYWORDS: GREENHOUSE, DRYING, SOLAR, MECHANIZATION.
•NOTES: FILED.
•DATE: 750622.

ABSTRACT 1191

•TITLE: THE EFFECT OF SOLAR RADIATION ON THE ENERGY BALANCE OF A CONTROLLED-ENVIRONMENT GREENHOUSE.
•AUTHOR: KUDRET S MO
•SOURCE: "THE AMER SOC OF MECHANICAL ENGINEERS, UNITED ENGR CENTER, NEW YORK.
•KEYWORDS: GREENHOUSE, SOLAR.
•NOTES: FILED.
•DATE: 730100.

ABSTRACT 1192

•TITLE: THE ROLE OF SOLAR ENERGY IN HEATING GREENHOUSES IN QUEBEC.
•AUTHOR: LAWAND T A, ALWARD R, MAGHSOOD J, MALIK M A S
•KEYWORDS: GREENHOUSE, SOLAR.
•NOTES: NAS.
•DATE: 730100.

ABSTRACT 1193

•TITLE: SAVING ENERGY (AND DOLLARS) IN GREENHOUSE HEATING.
•AUTHOR: LOGEE T, STOUT B A
•SOURCE: AEIS 356, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, SEPT 1976, 4 PP.
•KEYWORDS: GREENHOUSE, CONSERVATION.
•NOTES: FILED.
•DATE: 760900.

ABSTRACT 1194

•TITLE: A LARGE SCALE NORTHERN CLIMATE SOLAR-GARDEN.
•AUTHOR: MAES R E
•SOURCE: ENVIR RESEARCH INST OF MICH, BOX 8618, ANN ARBOR, MI 48107, JUNE 1978, 6 PP.
•KEYWORDS: GREENHOUSE, SOLAR.
•NOTES: FILED.
•DATE: 780600.

ABSTRACT 1195

•TITLE: DEVELOPMENT OF A GREENHOUSE SOLAR HEATING DEMONSTRATION.
•AUTHOR: MEARS R D, ROBERTS W J, KENDALL P W
•SOURCE: ASAE PAPER 78-4512, 1978, 9 PP.
•KEYWORDS: GREENHOUSE, SOLAR, HEAT ACCOUNTING.
•NOTES: FILED. IN A 0.54 HECTARE GREENHOUSE, HEATED BY SOLAR ENERGY, THE FLOOR SERVES AS THE PRIMARY HEAT EXCHANGE SURFACE AND PROVIDES THERMAL STORAGE. MOVABLE PLASTIC CURTAINS PROVIDE INSULATION AT NIGHT. WATER IS HEATED BY 1,000 SQ M OF AIR-INFLATED PLASTIC FILM SOLAR COLLECTORS.
•DATE: 780300.

ABSTRACT 1196

•TITLE: INTERNAL-EXTERNAL SOLAR COLLECTORS FOR GREENHOUSE HEATING.
•AUTHOR: MILBURN W F, ALDRICH R A, WHITE J W
•SOURCE: ASAE PAPER 77-4008, 1977, 10PP.
•KEYWORDS: GREENHOUSE, SOLAR, HEAT DESIGN.
•NOTES: FILED. AN AIR HEATING SOLAR COLLECTING SYSTEM WAS ASSEMBLED WITH FEATURES OF LOW INITIAL COST, SIMPLICITY OF INSTALLATION AND OPERATION AND HIGH UTILIZATION.
•DATE: 770030.
ABSTRACT 1197

• TITLE: SIMULATION OF BURIED WARM WATER PIPES BENEATH A GREENHOUSE.
• AUTHOR: PARKER J J, HENDRY R T, CURRY R B, ROLLER W L.
• SOURCE: OHIO AGR RESEARCH AND DEVELOPMENT CENTER, WOOSTER, 1976, 12 PP.
• KEYWORDS: GREENHOUSE, AGRICULTURE, MODELS.
• NOTES: FILED.
• DATE: 760600

ABSTRACT 1198

• TITLE: REDUCING NIGHT HEAT LOSSES AND DAYTIME SOLAR EXTREMES IN GREENHOUSES.
• AUTHOR: PERRY R L.
• SOURCE: ASAE PAPER 75-4021, 22 JUNE 1975, 25 PP.
• KEYWORDS: GREENHOUSE, SOLAR, HEAT, CONSERVATION.
• NOTES: FILED.
• DATE: 750622

ABSTRACT 1199

• TITLE: AN OPERATIONAL GREENHOUSE UTILIZING REJECT HEAT FOR ENVIRONMENTAL CONTROL.
• AUTHOR: BURNS E R, MADEWELL E.
• SOURCE: ASAE PAPER 75-4009, 12 PP.
• KEYWORDS: GREENHOUSE, HEAT.
• NOTES: FILED.
• DATE: 750600

ABSTRACT 1200

• TITLE: GREENHOUSE ENERGY DEMAND AND POTENTIAL FOR CONSERVATION.
• AUTHOR: PRICE D R, GORTZIG C F, GOOD D L.
• SOURCE: 33RD ANNUAL PROGRESS REPORT TO THE NEW YORK FARM ELECTRIFICATION COUNCIL, MAY 1976, PP 72-95.
• KEYWORDS: GREENHOUSE, AGRICULTURE, CONSERVATION, ECONOMICS.
• NOTES: FILED.
• DATE: 760500

ABSTRACT 1201

• TITLE: SOLAR HEATING OF GREENHOUSES IN THE NORTHEAST.
• AUTHOR: PRICE D R, WILSON E E, FROCILICH D P, CRUMP A W.
• KEYWORDS: GREENHOUSE, SOLAR, HEAT, STORAGE.
• NOTES: FILED.
• DATE: 760500

ABSTRACT 1202

• TITLE: INTERNAL CURTAINS FOR ENERGY CONSERVATION IN GREENHOUSES.
• AUTHOR: REBUCK S R, ALDRICH R A, WHITE J W.
• SOURCE: ASAE PAPER 76-4009, 12 PP.
• KEYWORDS: GREENHOUSE, CONSERVATION.
• NOTES: FILED.
• DATE: 760600

ABSTRACT 1203

• TITLE: CONTROL SYSTEM FOR A SOLAR HEATED GREENHOUSE.
• AUTHOR: ROBERTS W J, HEARS D R.
• SOURCE: ASAE PAPER 76-5015, 1976, 11 PP.
• KEYWORDS: GREENHOUSE, SOLAR.
• NOTES: FILED. CONTROL SYSTEMS FOR TWO RESEARCH PROTOTYPE AND ONE COMMERCIAL DEMONSTRATION GREENHOUSE ARE PRESENTED. CONTROLS FOR VENTILATION, MOVABLE INSULATION, SOLAR COLLECTION, HEAT EXCHANGE AND BACKUP HEATING SYSTEMS ARE COVERED FOR EACH OF THE THREE CASES. SEPARATE CONTROL OF FLOOR HEATING AND AIR HEATING SYSTEMS IS PROVIDED.
• DATE: 760500

ABSTRACT 1204

• TITLE: AN ENERGY SAVING NATURALLY VENTILATED PLASTIC GREENHOUSE.
• AUTHOR: ROBERTS W J.
• SOURCE: ASAE PAPER 76-4013, 27-30 JUNE 1976, 10 PP.
• KEYWORDS: GREENHOUSE.
• NOTES: FILED.
• DATE: 760637
ABSTRACT 1205

- TITLE: USING SOLAR ENERGY TO HEAT POLYETHYLENE FILM GREENHOUSES.
- AUTHOR: ROBERTS W J, SIMPKINS J C, KENDALL P W.
- SOURCE: ASAE PAPER 76-4011; 27-30 JUNE 1976; 21 PP.
- KEYWORDS: GREENHOUSE, SOLAR.
- NOTES: FILED. POLYETHYLENE GREENHOUSES HAVE BECOME MORE POPULAR AND FUNCTIONAL SINCE THE DEV OF THE DOUBLE COVERING SYSTEM USING LOW PRESSURE AIR TO SEPARATE TWO FILM LAYERS. LOW COST COLLECTORS, STORAGE, AND HEAT EXCHANGERS ARE DISCUSSED.
- DATE: 760627

ABSTRACT 1206

- TITLE: ENERGY REQUIREMENTS FOR GLASSHOUSE HEATING IN BRITAIN.
- AUTHOR: SHEARD G F.
- KEYWORDS: GREENHOUSE, UNITED KINGDOM, HEAT REQUIREMENTS.
- NOTES: FILED.
- DATE: 750000

ABSTRACT 1207

- TITLE: COMPUTER SIMULATION OF WARM FLOOR GREENHOUSE HEATING.
- AUTHOR: SHEN H, MEARS D R.
- SOURCE: ASAE PAPER 77-4532; 1977; 9 PP.
- KEYWORDS: GREENHOUSE, HEAT MODELS.
- NOTES: FILED.
- DATE: 770000

ABSTRACT 1208

- TITLE: A DOUBLE-PLASTIC HEAT CONSERVATION SYSTEM FOR GLASS GREENHOUSES.
- AUTHOR: SHORT T H, BAUERLE W L.
- SOURCE: ASAE PAPER 77-4528; 1977; 10 PP.
- KEYWORDS: GREENHOUSE, HEAT, CONSERVATION.
- NOTES: FILED.
- DATE: 770000

ABSTRACT 1209

- TITLE: A SOLAR POND FOR HEATING GREENHOUSES AND RURAL RESIDENCES.
- AUTHOR: SHORT T H, BADGER P C, ROLLER W L.
- SOURCE: J SERIES 84-77; OHIO AGR RESEARCH AND DEV CENTER, WOOSTER, OH, 14 PP.
- KEYWORDS: GREENHOUSE, SOLAR, HOME.
- NOTES: FILED.
- DATE: 770000

ABSTRACT 1210

- TITLE: THE GREENHOUSE AS A SOLAR COLLECTOR.
- AUTHOR: SMITH J, ALDRICH R A, WHITE J W, DUDA J L.
- SOURCE: ASAE PAPER 76-4022; 24 PP.
- KEYWORDS: GREENHOUSE, SOLAR.
- NOTES: FILED.
- DATE: 760000

ABSTRACT 1211

- TITLE: SOLAR HEATING OF A GREENHOUSE--RESIDENCE COMBINATION.
- AUTHOR: SMITH C C.
- SOURCE: ASAE PAPER 77-4007; 1977; 6PP.
- KEYWORDS: GREENHOUSE, SOLAR, HEAT DESIGN, EFFICIENCY.
- NOTES: FILED. SOLAR HEATING OF A GREENHOUSE/RESIDENCE COMBINATION CAN BE MORE EFFECTIVE THAN SOLAR HEATING OF EITHER INDEPENDENTLY.
- DATE: 770000

ABSTRACT 1212

- TITLE: SOLAR ENERGY FOR HEATING GREENHOUSES AND GREENHOUSE-RESIDENCE COMBINATIONS.
- AUTHOR: SMITH C C, ED
- KEYWORDS: GREENHOUSE, SOLAR, HOME.
- NOTES: FILED.
- DATE: 780402
ABSTRACT 1213
*TITLE*: COLLECTION OF EXCESS SOLAR HEAT WITHIN A FIBERGLASS GREENHOUSE.
*AUTHORS*: TECZA J, ALDRICH R A, WHITE J W.
*SOURCE*: ASAE PAPER 77-3547, 1977, 10 PP.
*KEYWORDS*: GREENHOUSE, SOLAR.
*NOTES*: FILED.
*DATE*: 770000.

ABSTRACT 1214
*TITLE*: CONTINUOUS-TYPE HEAT STORAGE BIN FOR DIRECT-HEAT SOIL PASTEURIZATION.
*AUTHOR*: DUGGAN S A, SHAW L N.
*SOURCE*: ASAE PAPER 75-1019, 22 JUNE 1975, 10 PP.
*KEYWORDS*: GREENHOUSE, HEAT STORAGE.
*NOTES*: FILED.
*DATE*: 750622.

ABSTRACT 1215
*TITLE*: HEAT LOSS FROM HEATED GREENHOUSE SOIL BEDS.
*AUTHOR*: WELLS L G, WARD A D, WALKER J N, BURTON J W.
*SOURCE*: ASAE PAPER 77-4529, 1977, 13 PP.
*KEYWORDS*: GREENHOUSE, MODELS.
*NOTES*: FILED.
*DATE*: 770000.

ABSTRACT 1216
*TITLE*: THERMAL BLANKETS FOR CONSERVATION IN GREENHOUSES.
*AUTHOR*: WHITE J W.
*SOURCE*: SOLAB AGE, 5(3)/31-33 MARCH 1978.
*KEYWORDS*: GREENHOUSE.
*NOTES*: FILED.
*DATE*: 780300.

ABSTRACT 1217
*TITLE*: A SOLAR ENERGY STORAGE SYSTEM FOR GREENHOUSES.
*AUTHOR*: WILLITS D H, BOWERS C G, NELSON P W, KUANG B K.
*SOURCE*: ASAE PAPER 76-3507, 1976, 13 PP.
*KEYWORDS*: GREENHOUSE, DESIGN.
*NOTES*: FILED.
*DATE*: 760000.

ABSTRACT 1218
*TITLE*: INCREASING THE EFFECTIVENESS OF THE GREENHOUSE AS A SOLAR COLLECTOR.
*AUTHOR*: WILSON G C, PRICE D R, LANGHANS R W.
*SOURCE*: ASAE PAPER 77-4527, 1977, 15 PP.
*KEYWORDS*: GREENHOUSE, SOLAR, EFFICIENCY.
*NOTES*: FILED.
*DATE*: 770000.

ABSTRACT 1219
*TITLE*: REDUCING FUEL COSTS WITH SOLAR ENERGY.
*AUTHOR*: WOODS C.
*SOURCE*: SUNSHINE STATE AGR RESEARCH REPORT FOR FALL, 1975, PP 3-5.
*KEYWORDS*: GREENHOUSE, SOLAR.
*NOTES*: FILED.
*DATE*: 750000.

ABSTRACT 1220
*TITLE*: ANALYTICAL DETERMINATION OF THE EFFECTS OF USING NIGHT CURTAINS IN GREENHOUSES.
*AUTHOR*: CHANDRA P, ALBRIGHT L D.
*SOURCE*: ASAE PAPER 78-4514, 1978, 26 PP.
*KEYWORDS*: GREENHOUSES, HEAT, CONSERVATION, MODELS.
*NOTES*: FILED.
*A THEORETICAL PROCEDURE USING ENERGY BALANCE PRINCIPLES HAS BEEN DEVELOPED FOR ESTIMATING THE EFFECT ON THE HEAT REQUIREMENT OF USING A NIGHT CURTAIN IN A GREENHOUSE. THE PROCEDURE HAS BEEN FOUND TO ESTIMATE THE EFFECTIVENESS OF A CURTAIN ADEQUATELY BY COMPARING THE RESULTS OF THE ANALYSIS WITH PUBLISHED EXPERIMENTAL DATA.
*DATE*: 780000.
ABSTRACT 1221

*TITLE* COMPARING HEAT LOSS FROM GREENHOUSE GLAZING MATERIALS.

*AUTHOR* HELLICKSON M L.

*SOURCE* ASAE PAPER 78-4513, 1978; 9 PP.

*KEYWORDS* GREENHOUSES, CONSERVATION.

*NOTES* FILED. COMPARISON OF OVERALL HEAT TRANSFER COEFFICIENTS FOR CORRUGATED AND FLAT FIBERGLASS CUBIC CORRAGATIONS. DIFFERENCES IN OVERALL HEAT TRANSMISSION WERE PROPORTIONAL TO INCREASED SURFACE AREA OVER PROJECTED AREA.

*DATE* 780000

HEAT PUMPS 1222 -- 1229

ABSTRACT 1222

*TITLE* SOLAR-ASSISTED HEAT PUMP FOR RESIDENTIAL HOUSING.

*AUTHOR* CHRISTIANSON L L, SHANKLIN K D.

*SOURCE* ASAE PAPER 78-4533, 1978; 17 PP.

*KEYWORDS* HEAT PUMPS, SOLAR, HOME.

*NOTES* FILED. A LOW-COST SOLAR SYSTEM WAS DESIGNED TO AUGMENT HEAT PUMP EFFICIENCY FOR A HOME NEAR COLUMBIA, MISSOURI.

*DATE* 780000

ABSTRACT 1223

*TITLE* EXPERIENCES WITH A SOLAR ASSISTED HEAT PUMP FOR LIVESTOCK HOUSING.

*AUTHOR* HOLMES B J, VAUGHAN D M, BELL E S.

*SOURCE* ELECTRIC FARM POWER 73, FALL 1977; 4 PP.

*KEYWORDS* HEAT PUMPS.

*NOTES* FILED.

*DATE* 770000

ABSTRACT 1224

*TITLE* ECONOMIC EVALUATION OF HEAT PUMPS.

*AUTHOR* KERNAN R, BRADY J.


*KEYWORDS* HEAT PUMPS, ECONOMICS, EFFICIENCY.

*NOTES* FILED. AN ECONOMIC EVALUATION OF HEAT PUMPS IS PRESENTED WHICH COMPARES THE RUNNING COSTS AND DISCOUNTED CAPITAL COSTS OF CENTRAL-HEATING SYSTEMS BASED ON OIL-FIRED BOILERS AND HEAT PUMPS.

*DATE* 770400

ABSTRACT 1225

*TITLE* PEANUT DRYING WITH HEAT PUMP SYSTEMS.

*AUTHOR* PERSON N K, JASKA E M, NEWMAN J S.

*SOURCE* ASAE PAPER 77-2536, 1977; 33 PP.

*KEYWORDS* HEAT PUMPS, DRYING.

*NOTES* FILED.

*DATE* 770000
ABSTRACT 1227

TITLE: A SOLAR ASSISTED HEAT PUMP SYSTEM.
AUTHOR: SMITH M. HOLL R C.
SOURCE: ASAE PAPER 76-4018; 8 PP.
KEYWORDS: HEAT PUMPS, SOLAR.
NOTES: FILED.
DATE: 760000

ABSTRACT 1228

TITLE: THE HEAT THAT COMES IN FROM THE COLD.
AUTHOR: STELLON P.
KEYWORDS: HEAT PUMPS, OPERATING PROCEDURE.
NOTES: FILED.
DATE: 740303

ABSTRACT 1229

TITLE: SOLAR ENERGY COLLECTION WITH LAGOON STORAGE FOR HEAT PUMPS.
AUTHOR: VAUGHAN D M, BELL E & HUGHES M A.
SOURCE: ASAE PAPER 76-4053; 17 PP.
KEYWORDS: HEAT PUMPS, SOLAR, STORAGE, ENVIRONMENT.
NOTES: FILED.
DATE: 760000

HOME 1230 -- 1334

ABSTRACT 1230

TITLE: MODEL CODE FOR ENERGY CONSERVATION IN NEW BUILDING CONSTRUCTION.
AUTHOR: ANON.
SOURCE: CONTRACT C(44-3) 1230, ERDA, JAN 1977, 47 PP.
KEYWORDS: HOME, DESIGN, CONSERVATION, BUILDINGS.
NOTES: FILED.
DATE: 770106

ABSTRACT 1231

TITLE: SAFETY IMPLICATIONS OF AUTOMATIC VENT DAMPERS.
AUTHOR: ANON.
KEYWORDS: HOME, SAFETY.
NOTES: FILED. THE FUNCTION OF AN AUTOMATIC VENT DAMPER IN PREVENTING HAZARDOUS SITUATIONS IS DISCUSSED.
DATE: 770700

ABSTRACT 1232

TITLE: TIPS FOR ENERGY SAVERS.
AUTHOR: ANON.
SOURCE: TIPS FOR ENERGY SAVERS, ENERGY CONSERVATION NOW, PUEBLO, CO 81009, 1977, 63PP.
KEYWORDS: HOME, CONSERVATION.
NOTES: FILED. ENERGY SAVING TIPS FOR IN AND AROUND THE HOME, ON THE ROAD AND IN THE MARKETPLACE.
DATE: 770800

ABSTRACT 1233

TITLE: HOME HEATING IN AN EMERGENCY.
AUTHOR: BARKER F V, BILMAN F & NICKERSON D A.
SOURCE: COOPERATIVE EXTENSION SERVICE, UNIV OF NEW HAMPSHIRE, DURHAM, 15 PP.
UNDATED.
KEYWORDS: HOME, HEAT.
NOTES: FILED.
DATE:
ABSTRACT 1234

*TITLE* HOME HEATING MAJOR TARGET IN BATTLE TO SAVE ENERGY.
*AUTHOR* BICKERT W & BAKKER-ARKE F W.
*SOURCE* MICHIGAN FARMER, 2 MARCH 1974, PP 53-54.
*KEYWORDS* HOME, ECONOMICS, CONSERVATION.
*NOTES* FILED.
*DATE* 740302

ABSTRACT 1235

*TITLE* WHY NOT JUST BUILD THE HOUSE RIGHT IN THE FIRST PLACE?
*AUTHOR* BLISS R W.
*SOURCE* BULLETIN OF THE ATOMIC SCIENTIST, 32(3)/32-40, MARCH 1976.
*KEYWORDS* HOME, SOLAR, CONSERVATION.
*NOTES* FILED.
*DATE* 760300

ABSTRACT 1236

*TITLE* EFFICIENT, ECONOMICAL, AND AFFORDABLE.
*AUTHOR* BOURDETTE V R.
*KEYWORDS* HOME, EFFICIENCY, ECONOMICS.
*NOTES* FILED.
*DATE* 770400

ABSTRACT 1237

*TITLE* ARE YOU CONSERVING ENERGY.
*AUTHOR* BOYD J S.
*SOURCE* AEIS 294, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, MAY 1974, 5 PP.
*KEYWORDS* HOME, CONSERVATION.
*NOTES* FILED.
*DATE* 740500

ABSTRACT 1238

*TITLE* HOW TO CONSERVE ENERGY IN THE HOME.
*AUTHOR* BOYD J S.
*SOURCE* AEIS 295, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, MAY 1974, 5 PP.
*KEYWORDS* HOME, CONSERVATION, INSULATION, APPLIANCES.
*NOTES* FILED.
*DATE* 740500

ABSTRACT 1239

*TITLE* WEATHERPROOFING MICHIGAN HOUSES.
*AUTHOR* BOYD J S.
*SOURCE* AEIS NO 304, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, AUG. 1974, 8 PP.
*KEYWORDS* HOME, INSULATION, HEAT, RVALUE.
*NOTES* FILED.
*DATE* 740800

ABSTRACT 1240

*TITLE* KEEPING COOL.
*AUTHOR* BOYD J S.
*SOURCE* AEIS NO 360, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, SEPT 1974, 3 PP.
*KEYWORDS* HOME, REFRIGERATION.
*NOTES* FILED.
*DATE* 740900

ABSTRACT 1241

*TITLE* INSULATE YOUR UNFINISHED ATTIC.
*AUTHOR* BOYD J S.
*SOURCE* BULLETIN 1103, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI, 1977, 4 PP.
*KEYWORDS* HOME, INSULATION.
*NOTES* FILED. DO IT YOURSELF INSTRUCTIONS ON ATTIC INSULATION.
*DATE* 770300
ABSTRACT 1242

*TITLE, WEATHERSTRIP YOUR DOORS AND WINDOWS.*
*AUTHOR, BOYD J. S.*
*SOURCE, BULLETIN 110+, AGR ENGR DEPT, HUMAN ENVIR AND DESIGN, MICH STATE UNIV, EAST LANSING, MI, 1977, 6PP.*
*KEYWORDS, HOME, INSULATION.*
*NOTES, FILED. DO IT YOURSELF INSTRUCTIONS ON WEATHERSTRIPPING, Installation of Storm Windows and Doors.*
*DATE, 770000*

ABSTRACT 1243

*TITLE, INSULATE YOUR BASEMENT WALLS.*
*AUTHOR, BOYD J. S.*
*SOURCE, BULLETIN 110+, AGR ENGR DEPT, HUMAN ENVIR AND DESIGN, MICH STATE UNIV, EAST LANSING, MI, 1977, 6PP.*
*KEYWORDS, HOME, INSULATION.*
*NOTES, FILED. DO IT YOURSELF INSTRUCTIONS ON FLOOR, CRAWLSPACE, AND BASEMENT WALL INSULATION, ALSO VENTILATION OF CRAWL SPACE.*
*DATE, 770000*

ABSTRACT 1244

*TITLE, CONDENSATION CONTROL FOR ALASKAN HOMES.*
*AUTHOR, BRANTON C. R., FANNESTOCK C R., EATON E M.*
*SOURCE, PUB NO 52, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, JUNE 1972, 19 PP.*
*KEYWORDS, HOME, ALASKA.*
*NOTES, FILED.*
*DATE, 720060*

ABSTRACT 1245

*TITLE, SIMULATION MODELS OF TRANSIENT ENERGY REQUIREMENTS FOR HEATING AND COOLING BUILDINGS.*
*AUTHOR, BUFFINGTON D E.*
*SOURCE, ASAE PAPER 75-4522, 10 PP.*
*KEYWORDS, HOME, MODELS, BUILDINGS, HEAT, COOLING.*
*NOTES, FILED.*
*DATE, 750000*

ABSTRACT 1246

*TITLE, HOW MUCH INSULATION - A STUDY OF COST EFFECTIVENESS.*
*AUTHOR, BURGNER M L, GOODWIN S E.*
*SOURCE, ASAE PAPER 78-4594, 1978, 14 PP.*
*KEYWORDS, HOME, INSULATION, ECONOMICS.*
*NOTES, FILED. AN ANALYSIS OF THE ECONOMICS OF WALL INSULATION MUST CONSIDER THE DYNAMICS OF HEAT FLOW AND THE MASS OF THE WALL.*
*DATE, 780000*

ABSTRACT 1247

*TITLE, COMPARATIVE INSULATION VALUES AND WEIGHTS OF TYPICAL WALL SECTIONS.*
*AUTHOR, CARLSON A R.*
*SOURCE, BUILDING IN ALASKA PUB NO 17, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, FEB 1972, 1 PP.*
*KEYWORDS, HOME, INSULATION.*
*NOTES, FILED.*
*DATE, 720200*

ABSTRACT 1248

*TITLE, EFFECT OF WALL FRAMING ON HEAT LOSS.*
*AUTHOR, CARLSON A R.*
*SOURCE, BUILDING IN ALASKA PUB NO 16, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, FEB 1972, 1 PP.*
*KEYWORDS, HOME, INSULATION.*
*NOTES, FILED.*
*DATE, 720200*

ABSTRACT 1249

*TITLE, HEAT LOSS AND CONDENSATION IN NORTHERN RESIDENTIAL CONSTRUCTION.*
*AUTHOR, CARLSON A R.*
*SOURCE, BUILDING IN ALASKA PUB NO P-558, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, NOV 1972, 4 PP.*
*KEYWORDS, HOME, HEAT, WOOD, ALASKA.*
*NOTES, FILED.*
*DATE, 721100*
ABSTRACT 1250
*TITLE: HEAT LOSS COEFFICIENTS OF BUILDING MATERIAL.
*AUTHOR: CARLSON A R.
*SOURCE: BUILDING IN ALASKA PUB NO P-258, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, NOV 1972, 2 PP.
*KEYWORDS: HOME, HEAT, RVALUE.
*NOTES: FILED.
*DATE: 721100

ABSTRACT 1251
*TITLE: SPECIAL CONSIDERATIONS FOR BUILDING IN ALASKA.
*AUTHOR: CARLSON A R.
*SOURCE: BUILDING IN ALASKA PUB NO P-952, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, AUG 1972, 5 PP.
*KEYWORDS: HOME, ALASKA.
*NOTES: FILED.
*DATE: 720800

ABSTRACT 1252
*TITLE: WARM FLOORS ARE ESSENTIAL FOR COMFORT.
*AUTHOR: CARLSON A R.
*SOURCE: BUILDING IN ALASKA PUB NO P-456, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, NOV 1972, 7 PP.
*KEYWORDS: HOME, ALASKA, HEAT.
*NOTES: FILED.
*DATE: 721100

ABSTRACT 1253
*TITLE: WINDOWS REGULATE RELATIVE HUMIDITY.
*AUTHOR: CARLSON A R.
*SOURCE: BUILDING IN ALASKA PUB NO P-457, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, MAY 1971, 3 PP.
*KEYWORDS: HOME, ALASKA.
*NOTES: FILED.
*DATE: 710500

ABSTRACT 1254
*TITLE: USING THE PROPER AMOUNT OF INSULATION IN MISSOURI HOMES.
*AUTHOR: CHRISTIANSON L L.
*SOURCE: SCI AND TECH GUIDE, 1722, UNIV OF MISSOURI-COLUMBIA EXTENSION DIV, 8 DEC 1976, 4 PP.
*KEYWORDS: HOME, INSULATION, MISSOURI.
*NOTES: FILED.
*DATE: 761200

ABSTRACT 1255
*TITLE: THERMAL RESISTANCE MEASUREMENT OF WALLS USING A LOW-COST DIGITAL ELECTRONIC DEVICE.
*AUTHOR: CHRISTIANSON L L; GEORGE R M.
*SOURCE: ASAE PAPER 78-4536, 1976, 17 PP.
*KEYWORDS: HOME, DESIGN, TECHNOLOGY ASSESSMENT.
*NOTES: FILED. USING THE INSTRUMENT DESCRIBED IN THIS PAPER YOU CAN MEASURE THE WALL THERMAL RESISTIVITY WITHOUT DISTURBING THE WALL SURFACES.
*DATE: 780000

ABSTRACT 1256
*TITLE: ENERGY CONSERVATION IN THE HOME.
*AUTHOR: CLINARD L.
*KEYWORDS: HOME, CONSERVATION, ENERGY FLOW.
*NOTES: FILED. DESIGNED AS A GUIDE FOR HOME ECON TEACHERS, THE BOOK IS A COMBINATION OF A COMPREHENSIVE OVERVIEW OF THE ENERGY SITUATION AND IMPORTANT BACKGROUND MATERIAL ON ENERGY CONCEPTS AND TERMINOLOGY, AND A COMPLETE GUIDE TO THE ENERGY USES AND PRACTICES IN THE HOME, WITH EMPHASIS ON MEASURES WHICH COULD BE TAKEN TO CONSERVE ENERGY.
*DATE: 771000

ABSTRACT 1257
*TITLE: A SIMULATION MODEL FOR DETERMINING THE ENERGY BUDGET OF A USER DEFINED HUMAN DWELLING.
*AUTHOR: COLLIVER D G; LOEVER O J; DUNCAN G A.
*SOURCE: ASAE PAPER 76-4533, 1976, 33 PP.
*KEYWORDS: HOME, ENERGY CONSUMPTION.
*NOTES: FILED.
*DATE: 760000
ABSTRACT 1258

• TITLE: ENERGY-SAVING TIPS FOR HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS.
• AUTHOR: CONSUMERS POWER CO.
• SOURCE: CONSUMERS POWER CO., ENERGY CONSULTING SERVICES DEPT., 26 FEB 1974, 6 PP.
• KEYWORDS: HOME, HEAT, COOLING, CONSERVATION.
• NOTES: FILED.
• DATE: 740226

ABSTRACT 1259

• TITLE: A NATION OF ENERGY EFFICIENT BUILDINGS BY 1990.
• AUTHOR: DALY L A., ET AL.
• SOURCE: AMER INST OF ARCHITECTS, 1735 NEW YORK AVE N W, WASHINGTON D C, 1972,
20 PP.
• KEYWORDS: HOME, EFFICIENCY, ECONOMIES.
• NOTES: FILED.
• DATE: 720000

ABSTRACT 1260

• TITLE: HOW TO INSULATE YOUR HOME FOR WISE AND EFFICIENT USE OF ENERGY.
• AUTHOR: DETROIT EDISON CO.
• SOURCE: DETROIT EDISON, 2000 SECOND AVE, DETROIT, MI, APRIL 1974, 25 PP.
• KEYWORDS: HOME, INSULATION.
• NOTES: FILED.
• DATE: 740400

ABSTRACT 1261

• TITLE: HOMEOWNERS ACCEPTANCE OF A COMPUTERIZED HOME INSULATION EVALUATION.
• AUTHOR: FEHR R L., TURNER G M., DUNCAN G A.
• SOURCE: ASAE PAPER 77-5005, 1977, 17 PP.
• KEYWORDS: HOME, INSULATION.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 1262

• TITLE: STATEWIDE PROGRAM INVOLVING A COMPUTERIZED ANALYSIS OF HOME INSULATION.
• AUTHOR: GILMAN F E.
• SOURCE: NRAES FS-3, RILEY-ROBB HALL, CORNELL UNIV, ITHACA, NY 14853, NOV 1976, 4 PP.
• KEYWORDS: HOME, INSULATION.
• NOTES: FILED.
• DATE: 761100
ABSTRACT 1265

•TITLE: HOME INSULATION AND VAPOR BARRIERS - THEIR SELECTION AND INSTALLATION.
•AUTHOR: GILMAN F E.
•SOURCE: ENERGY-SAVING SERIES 1* UNIV OF NEW HAMPSHIRE, DURHAM, NH, 6PP.
•KEYWORDS: HOME, INSULATION.
•NOTES: FILED.
•DATE: 750500

ABSTRACT 1266

•TITLE: HOW SOLAR HEAT CAN COOL YOUR HOME - THE ABSORPTION CYCLE, THE RANKINE CYCLE.
•AUTHOR: GILMORE C P; LINDSLEY E F.
•KEYWORDS: HOME, SOLAR, HEAT, COOLING.
•NOTES: FILED.
•DATE: 750500

ABSTRACT 1267

•TITLE: IMPACTS OF RISING PRICES UPON RESIDENTIAL ENERGY CONSUMPTION, ATTITUDES, AND CONSERVATION POLICY ACCEPTANCE.
•AUTHOR: GILBERT P M; ZAICHELIS J J; MERRISON B R.
•SOURCE: IN THE BOOK ENERGY IN AMERICA - SOCIAL AND BEHAVIORAL DIMENSIONS, SEYMOUR WARKOM, ED, PRAEGER, IN PRESS.
•KEYWORDS: HOME, MICHIGAN, ENERGY CONSUMPTION, CONSERVATION, SOCIAL IMPLICATIONS.
•NOTES: FILED.
•DATE:

ABSTRACT 1268

•TITLE: HOME ENERGY HOW-TO.
•AUTHOR: HARR A J.
•SOURCE: NEW YORK, NY/HARPER AND ROW, 1977, 258 PP.
•KEYWORDS: HOME, ENERGY CONSUMPTION, CONSERVATION, ALTERNATIVES, COOLING, INSULATION, SOLAR, WATER POWER, WIND, WOOD, DESIGN, METHANE, METHANOL.
•NOTES: FILED. A COMPLETE GUIDE TO SAVING AND PRODUCING HOME ENERGY.
•DATE: 770000

ABSTRACT 1269

•TITLE: DESIGNING A TRUSS-FRAME HOUSE FOR ENERGY EFFICIENCY.
•AUTHOR: HANSEN R.
•SOURCE: ASAE PAPER 77-4548, 1977, 15 PP.
•KEYWORDS: HOME, BUILDINGS, DESIGN, CONSERVATION.
•NOTES: FILED.
•DATE: 770000

ABSTRACT 1270

•TITLE: ENERGY CONSERVATION - WISE USE OF APPLIANCES.
•AUTHOR: HANSEN R.
•KEYWORDS: HOME, CONSERVATION, APPLIANCES.
•NOTES: FILED.
•DATE: 770000

ABSTRACT 1271

•TITLE: HOME HEATING ENERGY AND DOLLAR CONSERVATION.
•AUTHOR: HINKELE C N; PARSONS S D.
•SOURCE: ASAE PAPER 76-4455, 1978, 9 PP.
•KEYWORDS: HOME, HEAT, CONSERVATION, MODELS.
•NOTES: FILED. THIS IS A FACTS PROGRAM DESIGNED TO SHOW INDIANA RESIDENTS HOW THEY CAN SAVE BOTH ENERGY AND DOLLARS ON THEIR HOME HEATING BILLS. TOTAL HEAT LOSS AND FUEL COST PER BUILDING COMPONENT ARE COMPUTED.
•DATE: 780000
ABSTRACT 1272

**TITLE**: A METHODOLOGY FOR PRESENTING DOLLAR SAVINGS BY INSULATION.

**AUTHOR**: HINKLE C M.

**SOURCE**: ASAE PAPER 78-4557; 1978; 8 PP.

**KEYWORDS**: HOME; BUILDINGS; R VALUE; INSULATION.

**NOTES**: FILED. A SIMPLE PROBLEM IS USED TO SHOW THE TOTAL HEAT LOSS AND ITS COST FOR THE SEVERAL COMPONENTS OF A BUILDING. A METHOD IS DESCRIBED THAT CAN THEN BE USED TO SHOW LOGICAL MODIFICATIONS IN COMPONENT R-VALUES AND AN ESTIMATE OF THE TOTAL ENERGY COST SAVED TO PAY FOR THE CHANGE IN INSULATION LEVEL.

**DATE**: 780000

ABSTRACT 1273

**TITLE**: ENERGY BALANCE.

**AUTHOR**: HIRNING W J; WOELL P.

**SOURCE**: PUBLICATION JD; ELECTRIC FARM COUNCIL; WINTER 1976; 4 PP.

**KEYWORDS**: HOME; ENERGY FLOW.

**NOTES**: FILED.

**DATE**: 760000

ABSTRACT 1274

**TITLE**: HOME INSULATION.

**AUTHOR**: HIRNING W J; WOELL R.

**SOURCE**: PUBLICATION 72; ELECTRIC FARM POWER; SUMMER 1977; 4 PP.

**KEYWORDS**: HOME; INSULATION.

**NOTES**: FILED.

**DATE**: 770000

ABSTRACT 1275

**TITLE**: HOME WINTERIZATION.

**AUTHOR**: HIRNING W J; WOELL R.

**SOURCE**: PUBLICATION 74; ELECTRIC FARM POWER; WINTER 1977; 4 PP.

**KEYWORDS**: HOME; CONSERVATION.

**NOTES**: FILED.

**DATE**: 770000

ABSTRACT 1276

**TITLE**: RESIDENTIAL ENERGY USE ALTERNATIVES--1976 TO 2000

**AUTHOR**: HIRST E.


**KEYWORDS**: HOME; EFFICIENCY; APPLIANCES.

**NOTES**: FILED. A VIGOROUS CONSERVATION PROGRAM COULD REDUCE ENERGY USE GROWTH TO ALMOST ZERO THROUGH THE YEAR 2000.

**DATE**: 761217

ABSTRACT 1272

**TITLE**: A METHODOLOGY FOR PRESENTING DOLLAR SAVINGS BY INSULATION.

**AUTHOR**: HINKLE C M.

**SOURCE**: ASAE PAPER 78-4557; 1978; 8 PP.

**KEYWORDS**: HOME; BUILDINGS; R VALUE; INSULATION.

**NOTES**: FILED. A SIMPLE PROBLEM IS USED TO SHOW THE TOTAL HEAT LOSS AND ITS COST FOR THE SEVERAL COMPONENTS OF A BUILDING. A METHOD IS DESCRIBED THAT CAN THEN BE USED TO SHOW LOGICAL MODIFICATIONS IN COMPONENT R-VALUES AND AN ESTIMATE OF THE TOTAL ENERGY COST SAVED TO PAY FOR THE CHANGE IN INSULATION LEVEL.

**DATE**: 780000

ABSTRACT 1273

**TITLE**: ENERGY BALANCE.

**AUTHOR**: HIRNING W J; WOELL P.

**SOURCE**: PUBLICATION JD; ELECTRIC FARM COUNCIL; WINTER 1976; 4 PP.

**KEYWORDS**: HOME; ENERGY FLOW.

**NOTES**: FILED.

**DATE**: 760000

ABSTRACT 1274

**TITLE**: HOME INSULATION.

**AUTHOR**: HIRNING W J; WOELL R.

**SOURCE**: PUBLICATION 72; ELECTRIC FARM POWER; SUMMER 1977; 4 PP.

**KEYWORDS**: HOME; INSULATION.

**NOTES**: FILED.

**DATE**: 770000
ABSTRACT 1275

+TITLE• HOME WINTERIZATION.
+AUTHOR• MURNING H J & WOELL R.
+SOURCE• PUB&ICATION 74• ELECTRIC FARM POWER• WINTER 1977, 4 PP.
+KEYWORDS• HOME• CONSERVATION.
+DATE• 770000

ABSTRACT 1276

+TITLE• RESIDENTIAL ENERGY USE ALTERNATIVES--1976 TO 2000
+AUTHOR• HIRST E.
+SOURCE• SCIENCE• 194(271)/1247-1252, 17 DEC 1976.
+KEYWORDS• HOME• EFFICIENCY• APPLIANCES.
+DATE• 761217

ABSTRACT 1277

+TITLE• TEMPERATURES AND ENERGY USE IN A HOUSE WITH UNDERFLOOR PLENUM HEATING SYSTEM.
+AUTHOR• HUFF E R.
+SOURCE• ASAE PAPER 76-4036, 23 PP.
+KEYWORDS• HOME• HEAT.
+NOTES• FILED.
+DATE• 760000

ABSTRACT 1278

+TITLE• ENGINEERED HOUSING REDUCES INITIAL COST/Accomodates SOLAR HEATING.
+AUTHOR• HURST M T & ZETTERSTEN S J.
+SOURCE• ASAE PAPER 76-4087, 9 PP.
+KEYWORDS• HOME• SOLAR.
+NOTES• FILED.
+DATE• 760000

ABSTRACT 1279

+TITLE• MAKING THE MOST OF YOUR ENERGY DOLLARS IN HOME HEATING AND COOLING.
+AUTHOR• JACOBS W & PETERSEN S R.
+SOURCE• NBS CONSUMER INFO SERIES 5, JUNE 1975, 16 PP.
+KEYWORDS• HOME• INSULATION.
+NOTES• FILED.
+DATE• 750620

ABSTRACT 1280

+TITLE• RECYCLING ENERGY BY BUILDING HEAT EXCHANGE SYSTEMS.
+AUTHOR• JOHNSON C A.
+SOURCE• ASAE PAPER 76-4035, 24 PP.
+KEYWORDS• HOME• ECONOMICS• SOLAR• WIND.
+NOTES• FILED.
+DATE• 760000

ABSTRACT 1281

+TITLE• HOW TO REDUCE YOUR HOME ENERGY USE.
+AUTHOR• JONES K & M.HARP S.
+SOURCE• PUBLICATION 2, ENERGY MANAGEMENT LEAFLET, OKLAHOMA STATE UNIV.
+KEYWORDS• HOME• CONSERVATION.
+NOTES• FILED.
+DATE•

ABSTRACT 1282

+TITLE• PROSPECTS FOR DISTRICT HEATING IN THE UNITED STATES.
+AUTHOR• KARKHECK J, POWELL J & BEARDSWORTH E.
+SOURCE• SCIENCE, 195(4287)/948-955, 11 MARCH 1977.
+KEYWORDS• HOME• HEAT• USA• CONSERVATION.
+NOTES• FILED. DISTRICT HEATING CAN EFFECT A SIGNIFICANT REDUCTION IN Fossil FUEL CONSUMPTION.
+DATE• 770311
ABSTRACT 1284

*TITLE: YEAR ROUND ENERGY CONSERVATION IN A TYPICAL TWO-STORY RESIDENCE.
*AUTHOR: LONG C H, LUONI J.
*SOURCE: ASAE PAPER 77-4545; 1977, 15 PP.
*KEYWORDS: HOME, CONSERVATION.
*NOTES: FILED.
*DATE: 770000

ABSTRACT 1285

*TITLE: INSULATION.
*AUTHOR: MADDEX R L, HALL F W.
*SOURCE: AGR ENGR FACTS NO 24; MICH STATE UNIV, EAST LANSING, JULY 1974, 2 PP.
*KEYWORDS: HOME, INSULATION.
*NOTES: FILED.
*DATE: 740700

ABSTRACT 1286

*TITLE: INSULATION PAYS.
*AUTHOR: MAHONEY G W A, HARP S.
*SOURCE: OSU EXTENSION FACTS 1664; OKLAHOMA STATE UNIV, STILLWATER, OK, 3 PP.
*KEYWORDS: HOME, INSULATION.
*NOTES: FILED.
*DATE:

ABSTRACT 1287

*TITLE: MOISTURE PROBLEMS IN THE HOME.
*AUTHOR: MAHONEY G W A, HARP S.
*SOURCE: OSU EXTENSION FACTS 1666; OKLAHOMA STATE UNIV, STILLWATER, OK, 4 PP.
*KEYWORDS: HOME, VENTILATION.
*NOTES: FILED.
*DATE:

ABSTRACT 1288

*TITLE: SELECTING CAULKING COMPOUNDS FOR HOME AND FARM.
*AUTHOR: MAHONEY G W A, HARP S.
*SOURCE: OSU EXTENSION FACTS 1662; OKLAHOMA STATE UNIV, STILLWATER, OK, 4 PP.
*KEYWORDS: HOME.
*NOTES: FILED.
*DATE:

ABSTRACT 1289

*TITLE: WEATHERPROOFING THE HOME.
*AUTHOR: MAHONEY G W A, HARP S.
*SOURCE: OSU EXTENSION FACTS 1660; OKLAHOMA STATE UNIV, STILLWATER, OK, 4 PP.
*KEYWORDS: HOME, CONSERVATION.
*NOTES: FILED.
*DATE:

ABSTRACT 1290

*TITLE: HOME COOLING COSTS FOR OKLAHOMA.
*AUTHOR: MAHONEY G W A, GARTON J E, HARP S.
*SOURCE: OSU EXTENSION FACTS 1662; OKLAHOMA STATE UNIV, STILLWATER, OK, 4 PP.
*KEYWORDS: HOME, COOLING, OKLAHOMA, ECONOMICS.
*NOTES: FILED.
*DATE:
ABSTRACT 1291

**TITLE:** HOME HEATING COSTS IN OKLAHOMA.
**AUTHOR:** RAMONEY G W & GARTON J E & MARM S.
**SOURCE:** OSU EXTENSION FACTS 1663; OKLAHOMA STATE UNIV.
STILLWATER, OK, 4 PP.
**KEYWORDS:** HOME, HEAT, OKLAHOMA, ECONOMICS.
**NOTES:** FILED.
**DATE:**

ABSTRACT 1292

**TITLE:** ELECTRICITY FOR CONDITIONING RURAL RESIDENCES - FACT OR FICTION.
**AUTHOR:** MCBERRY J A.
**SOURCE:** FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, WASHINGTON DC.
20 AUG 1975, 3 PP.
**KEYWORDS:** HOME, ELECTRICAL.
**NOTES:** FILED.
**DATE:** 750820

ABSTRACT 1293

**TITLE:** HEATING, VENTILATION, AIR CONDITIONING AND LIGHTING - ENERGY MANAGEMENT HANDBOOK FOR SMALL AND MEDIUM SIZED BUSINESS.
**AUTHOR:** MICHIGAN DEPARTMENT OF COMMERCE.
**SOURCE:** MICH DEPT OF COMMERCE, OFFICE OF ECON EXPANSION, 4TH FLOOR LAW BLDG, LANSING, MI APRIL 1975, 14 PP.
**KEYWORDS:** HOME, CONSERVATION, BUILDINGS.
**NOTES:** FILED.
**DATE:** 750400

ABSTRACT 1294

**TITLE:** SOLAR AND THE FARMERS HOME.
**AUTHOR:** MORGAN E.
**SOURCE:** SOLAR AGE, 3(3/34-37, MARCH 1978.
**KEYWORDS:** HOME, SOLAR.
**NOTES:** FILED.
**DATE:** 780300

ABSTRACT 1295

**TITLE:** RESIDENTIAL ENERGY CONSUMPTION - SOCIO-PHYSICAL DETERMINANTS OF ENERGY USE IN SINGLE FAMILY DWELLINGS.
**AUTHOR:** MORRISON B M.
**SOURCE:** PAPER PREPARED FOR THE ENVIRONMENTAL DESIGN RESEARCH ASSOC, 7TH ANNUAL MEETING, VANCOUVER, BRITISH COLUMBIA, 25-28 MAY 1976, 7 PP.
**KEYWORDS:** HOME, ENERGY CONSUMPTION, SOCIAL IMPLICATIONS.
**NOTES:** FILED.
**DATE:** 760500

ABSTRACT 1296

**TITLE:** ENERGY AND FAMILIES - THE CRISIS AND THE RESPONSE.
**AUTHOR:** MORRISON B M & GLADHART P M.
**SOURCE:** J OF HOME ECONOMICS, JAN 1976, PP 15-18.
**KEYWORDS:** HOME, ENERGY CONSUMPTION, SOCIAL IMPLICATIONS, CONSERVATION, POLICY.
**NOTES:** FILED.
**DATE:** 760100

ABSTRACT 1297

**TITLE:** IMPACTS ON HOUSEHOLD ENERGY CONSUMPTION - AN EMPIRICAL STUDY OF MICHIGAN FAMILIES.
**AUTHOR:** MORRISON B M & KEITH J & ZUICHE S J.
**SOURCE:** IN THE BOOK SOCIOPOLITICAL IMPACTS OF ENERGY USE AND POLICY CONTENTS, THE NAT ACADEMY OF SCI, IN PRESS.
**KEYWORDS:** HOME, MICHIGAN, ENERGY CONSUMPTION, CONSERVATION, SOCIAL IMPLICATIONS.
**NOTES:** FILED.
**DATE:**

ABSTRACT 1298

**TITLE:** THE MIT REPORT, CONSUMER APPLIANCES - THE REAL COST.
**AUTHOR:** NATIONAL SCIENCE FOUNDATION.
**SOURCE:** NSF-RA-4-74-013; RANN DOCUMENT CENTER, NSF.
WASHINGTON D C, 32 PP.
**KEYWORDS:** HOME, APPLIANCES, ECONOMICS.
**NOTES:** FILED.
**DATE:**
ABSTRACT 1299

*TITLE* HEATING AND AIR CONDITIONING STUDY OF A WOOD-FRAME AND A MASONRY STRUCTURE.
*AUTHOR* NATIONAL FOREST PRODUCTS ASSOCIATION.
*SOURCE* TECH REPORT 2, NATIONAL FOREST ASSOC. WASHINGTON DC, 1961, 19 PP.
*KEYWORDS* HOME, ENERGY CONSUMPTION, HEAT, COOLING.
*NOTES* FILED.
*DATE* 610000

ABSTRACT 1300

*TITLE* INSULATION OF WOOD-FRAME STRUCTURES.
*AUTHOR* NATIONAL FOREST PRODUCTS ASSOCIATION.
*SOURCE* WOOD CONSTRUCTION DATA 7, NATIONAL FOREST PRODUCTS ASSOC., WASHINGTON DC, 1964, 20 PP.
*KEYWORDS* HOME, INSULATION.
*NOTES* FILED.
*DATE* 640000

ABSTRACT 1301

*TITLE* PASSIVE DESIGN IDEAS FOR THE ENERGY CONSCIOUS ARCHITECT.
*AUTHOR* NATIONAL SOLAR HEATING AND COOLING INFORMATION CENTER.
*SOURCE* NATIONAL SOLAR HEATING AND COOLING INFO CENTER, PO BOX 1607, ROCKVILLE, MD 20850, 71 PP.
*KEYWORDS* HOME, BUILDINGS, CONSERVATION, DESIGN.
*NOTES* FILED.
*DATE* 800000

ABSTRACT 1302

*TITLE* EFFECT OF WINDOW AREAS ON ENERGY USE.
*AUTHOR* NEUGAUER L W.
*SOURCE* ASES PAPER 77-4546, 1977, 12 PP.
*KEYWORDS* HOME, BUILDINGS.
*NOTES* FILED.
*DATE* 770000

ABSTRACT 1303

*TITLE* DESIGN CONSIDERATIONS FOR BELOW-GRADE-LEVEL HOUSES.
*AUTHOR* NEUMAN J., GODBEY L C, DAVIS M A.
*SOURCE* ASES PAPER 78-4551, 1978, 16 PP.
*KEYWORDS* HOME, REQUIREMENTS, TECHNOLOGY ASSESSMENT.
*NOTES* FILED. POTENTIAL DESIGN CONSIDERATIONS ARE IDENTIFIED AND THE MERIT OF SEVERAL CHOICES ARE DISCUSSED.
*DATE* 780000

ABSTRACT 1304

*TITLE* HOW MANY KILOWATT HOURS ARE YOU USING.
*AUTHOR* NICKERSON D A.
*SOURCE* UNIV OF NEW HAMPSHIRE, DURHAM, NH, 3 PP, UNDATED.
*KEYWORDS* HOME, ENERGY CONSUMPTION.
*NOTES* FILED.
*DATE* 800000

ABSTRACT 1305

*TITLE* OPTIMUM INSULATION THICKNESS IN WOOD-FRAME HOMES.
*AUTHOR* OVIATT A E.
*SOURCE* USDA FOREST SERVICE GENERAL TECH REPORT PNW-32, 1975, 37 PP.
*KEYWORDS* HOME, INSULATION, CONSERVATION, ECONOMICS.
*NOTES* FILED.
*DATE* 750000

ABSTRACT 1306

*TITLE* PORTABLE GENERATORS FOR THE HOME.
*AUTHOR* PALMER E L.
*SOURCE* CRM-12, COOPERATIVE EXTENSION SERVICE, UNIV OF CONNECTICUT, STORRS, MARCH 1974, 10 PP.
*KEYWORDS* HOME, ELECTRICAL.
*NOTES* FILED.
*DATE* 740000
ABSTRACT 1307

•TITLE• CONTINUOUS RIDGE-AND-SOFFIT ATTIC VENTILATION.
•AUTHOR• PERRINE L G.
•SOURCE• TEXAS ENERGY AND MINERAL RESOURCES, 3(2), TEXAS A AND M UNIV,
•DATE• DEC 1976.
•KEYWORDS• HOME, CONSERVATION, AIR CONDITIONING.
•NOTES• FILED.
•DATE• 761200

ABSTRACT 1308

•TITLE• CONSERVING ENERGY IN YOUR MOBILE HOME.
•AUTHOR• PLOWMAN F T.
•SOURCE• ENERGY CONSERVATION FACT SHEET EC-11, INST OF FOOD AND AGR SCI, UNIV
OF FLORIDA, GAINESVILLE, 1976, 2 PP.
•KEYWORDS• HOME, CONSERVATION, INSULATION, AWARENESS.
•NOTES• FILED.
•DATE• 760800

ABSTRACT 1309

•TITLE• AIR CONDITIONING WITH LESS ENERGY.
•AUTHOR• PLOWMAN F T.
•SOURCE• FACT SHEET EC-7, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA,
GAINESVILLE, FL 32611, 1976, 2 PP.
•KEYWORDS• HOME, CONSERVATION, COOLING.
•NOTES• FILED.
•DATE• 760900

ABSTRACT 1310

•TITLE• PERFORMANCE OF RESIDENTIAL FIREPLACES.
•AUTHOR• POCNOP L O, BORRELLI J, McNAMAA M A.
•SOURCE• ASAE PAPER 78-4548, 1978, 14 PP.
•KEYWORDS• HOME, HEAT, EFFICIENCY.
•NOTES• FILED. OVERALL EFFICIENCIES AND OTHER FACTORS AFFECTING THE
PERFORMANCE OF SEVERAL FIREPLACES, DETERMINED BY CONDUCTING IN-HOME
TESTS, ARE DISCUSSED.
•DATE• 780600

ABSTRACT 1311

•TITLE• HOW TO KEEP YOUR APPLIANCES ON AN ENERGY BUDGET.
•AUTHOR• POEILL E.
•KEYWORDS• HOME, APPLIANCES.
•NOTES• FILED.
•DATE• 751100

ABSTRACT 1312

•TITLE• YOU CAN INCREASE FIREPLACE EFFICIENCY.
•AUTHOR• POEILL E.
•SOURCE• POPULAR SCIENCE, NOV 1975, PP 110-111, 138.
•KEYWORDS• HOME, HEAT.
•NOTES• FILED.
•DATE• 751100

ABSTRACT 1313

•TITLE• SAVE ENERGY—SAVE DOLLARS.
•AUTHOR• PRICE O R, ET AL.
•SOURCE• BULLETIN 125, NY STATE COLLEGE OF HUMAN ECOLOGY AND THE NY STATE
COLLEGE OF AGR AND LIFE SCI, CORNELL UNIV,ITHACA, NY, 1977, 95PP.
•KEYWORDS• HOME, HEAT, COOLING, INSULATION, VENTILATION, APPLIANCES,
CONSERVATION, EFFICIENCY.
•NOTES• FILED. EFFICIENT ENERGY MANAGEMENT FOR CONSUMERS FROM COOPERATIVE
EXTENSION NEW YORK STATE.
•DATE• 770800

ABSTRACT 1314

•TITLE• CUTTING HOME ELECTRIC BILLS.
•AUTHOR• SHACKELFORD P S.
•SOURCE• FACT SHEET EC-33, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA,
GAINESVILLE 32611, 1976, 4 PP.
•KEYWORDS• HOME, ELECTRICAL, AWARENESS.
•NOTES• FILED.
•DATE• 760600
ABSTRACT 1315

**TITLE** PROJECT RETROTECH - ENERGY CONSERVATION FOR EXISTING RESIDENCES.

**AUTHOR** SMITH N., KITTREDGE C. W., MILL R. C.

**SOURCE** ASAE PAPER 78-4001, 1978, 20 PP.

**KEYWORDS** HOME, CONSERVATION.

**NOTES** FILED. A METHOD FOR ENERGY AUDIT OF EXISTING BUILDINGS USED IN PROJECT RETROTECH IS PRESENTED WITH AN ACCOMPANYING METHOD OF EVALUATING THE RELATIVE BENEFITS OF PROPOSED ENERGY CONSERVATION MEASURES.

**DATE** 780000

ABSTRACT 1316

**TITLE** ENERGY CONSERVATION IN NEW HOUSING DESIGN.

**AUTHOR** SHELL J. E., ACHENBACH P. R., PETERSEN S. R.


**KEYWORDS** HOME, CONSERVATION, DESIGN, FUEL CONSUMPTION.

**NOTES** FILED.

**DATE** 760600

ABSTRACT 1317

**TITLE** ANNUAL TEMPERATURE CONTROL BY PASSIVE SOLAR DESIGN.

**AUTHOR** STARR G., NEUBAUER L., HELZER B.

**SOURCE** ASAE PAPER 78-4003, 1978, 22 PP.

**KEYWORDS** HOME, SOLAR, EFFICIENCY.

**NOTES** FILED. THE GOAL OF THIS PROJECT WAS TO MINIMIZE RESOURCE CONSUMPTION, TEST AN ECONOMICAL AND EFFICIENT PASSIVE DIRECT SOLAR HOUSE WITH CONCRETE FLOOR AND SPECIAL WINDOW SHADES AND REDUCE HEATING AND COOLING COSTS, IN A COMFORTABLE HOME ACTUALLY OCCUPIED BY FOUR PERSONS, USING NATURAL CONDITIONS AND PRACTICES ACCEPTABLE TO THE GENERAL PUBLIC.

**DATE** 780000

ABSTRACT 1318

**TITLE** HOW TO FIGURE HEAT LOSSES AND FUEL COST.

**AUTHOR** STITH J. D., BREVICK T. J., BROOKS L. A.

**SOURCE** ASAE PAPER 78-4536, 1978, 15 PP.

**KEYWORDS** HOME, HEAT, INSULATION.

**NOTES** FILED.

**DATE** 780000

ABSTRACT 1319

**TITLE** CHECKLIST FOR ENERGY CONSERVATION IN THE HOME.

**AUTHOR** TENNESSEE ENERGY OFFICE.

**SOURCE** TENN ENERGY OFFICE, 250 CAPITAL HILL BLDG, NASHVILLE, TN, 7 PP.

**KEYWORDS** HOME, CONSERVATION.

**NOTES** FILED.

**DATE**

ABSTRACT 1320

**TITLE** LOCATION OF WINDBREAKS TO CONSERVE ENERGY ON FARMSTEADS - A MODEL ANALYSIS.

**AUTHOR** THEAKSTON F. M.

**SOURCE** ASAE PAPER 78-4536, 1978, 15 PP.

**KEYWORDS** HOME, WIND, MODELS.

**NOTES** FILED.

**DATE** 780000

ABSTRACT 1321

**TITLE** SOLVING THE ENERGY PROBLEM, A FAMILY AFFAIR.

**AUTHOR** UNIVERSITY OF FLORIDA.

**SOURCE** INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, FL, UNDATED, 19 PP.

**KEYWORDS** HOME, AWARENESS.

**NOTES** FILED. NARRATIVE OF A SLIDE SET.

**DATE**

ABSTRACT 1322

**TITLE** DRESSING CHILDREN FOR COLD WEATHER.

**AUTHOR** UNIVERSITY OF ALASKA.

**SOURCE** PUBL 83, COOPERATIVE EXTENSION SERVICE, UNIV OF ALASKA, SEPT 1973, 11 PP.

**KEYWORDS** HOME, HEAT, HUMAN ENERGY.

**NOTES** FILED.

**DATE** 730900
ABSTRACT 1331

• TITLE: THE TRUTH ABOUT HEAT LOSSES.
• AUTHOR: WATKINS A M.
• KEYWORDS: HOME, HEAT.
• NOTES: FILED.
• DATE: 760100

ABSTRACT 1332

• TITLE: HOUSEHOLD ENERGY CONSUMPTION SURVEY.
• AUTHOR: WEEKS S A.
• KEYWORDS: HOME, ENERGY CONSUMPTION.
• NOTES: FILED.
• DATE: 760600

ABSTRACT 1333

• TITLE: THE WHY, WHAT AND HOW OF HOME INSULATION.
• AUTHOR: WEARY C D & TRICE R H.
• SOURCE: VIRGINIA FARM AND HOME ELECTRIFICATION COUNCIL, BLACKSBURG, VA, APRIL 1975, 13 PP.
• KEYWORDS: HOME, INSULATION, EFFICIENCY.
• NOTES: FILED.
• DATE: 760400

ABSTRACT 1334

• TITLE: ENERGY AND THE FAMILY.
• AUTHOR: ZIJCHES J J.
• SOURCE: MICHIGAN FARM ECON NO 390, DEPT OF AGR ECON, MICH STATE UNIV, EAST LANSING, JULY 1975, 4 PP.
• KEYWORDS: HOME, MODELS.
• NOTES: FILED.
• DATE: 750700

ABSTRACT 1335

• TITLE: ECONOMIC ASPECTS OF TRADITIONAL AND MODERN CULTIVATION TASKS IN UGANDA.
• AUTHOR: ROSHOFF U H.
• KEYWORDS: HUMAN ENERGY, UGANDA, LABOR, AGRICULTURE.
• NOTES: FILED.
• DATE: 760300

ABSTRACT 1336

• TITLE: TO EVALUATE LABOR ENERGY IN FOOD PRODUCTION.
• AUTHOR: FLUCK R C.
• KEYWORDS: HUMAN ENERGY, PRODUCTION, LABOR, AGRICULTURE.
• NOTES: FILED.
• DATE: 760100

ABSTRACT 1337

• TITLE: A BICYCLE OPERATED PTO UNIT FOR SMALL FARMS.
• AUTHOR: GHOSH B N.
• SOURCE: ASAE PAPER 76-1011, 4 PP.
• KEYWORDS: HUMAN ENERGY.
• NOTES: FILED.
• DATE: 760800

HUMAN ENERGY 1335 -- 1343

ABSTRACT 1335

• TITLE: ECONOMIC ASPECTS OF TRADITIONAL AND MODERN CULTIVATION TASKS IN UGANDA.
• AUTHOR: ROSHOFF U H.
• KEYWORDS: HUMAN ENERGY, UGANDA, LABOR, AGRICULTURE.
• NOTES: FILED.
• DATE: 760300

ABSTRACT 1336

• TITLE: TO EVALUATE LABOR ENERGY IN FOOD PRODUCTION.
• AUTHOR: FLUCK R C.
• KEYWORDS: HUMAN ENERGY, PRODUCTION, LABOR, AGRICULTURE.
• NOTES: FILED.
• DATE: 760100

ABSTRACT 1337

• TITLE: A BICYCLE OPERATED PTO UNIT FOR SMALL FARMS.
• AUTHOR: GHOSH B N.
• SOURCE: ASAE PAPER 76-1011, 4 PP.
• KEYWORDS: HUMAN ENERGY.
• NOTES: FILED.
• DATE: 760800
ABSTRACT 1339

*TITLE* HUMAN ENERGY EXPENDITURE.
*AUTHOR* PASSMORE R. & DURKIN J. V. G. A.
*SOURCE* PHYSIOLOGICAL REVIEWS; 35/801-840*; OCT 1955.
*KEYWORDS* HUMAN ENERGY, ENERGETICS.
*NOTES* FILED.
*DATE* 551000

ABSTRACT 1340

*TITLE* SOME PHYSIOLOGICAL RESPONSES OF MAN TO WORKLOAD AND ENVIRONMENT.
*AUTHOR* SUGGS C W. & SPLINTER W. E.
*SOURCE* J OF APPLIED PHYSIOLOGY; 16/(3)/413-420*; 1961.
*KEYWORDS* HUMAN ENERGY, LABOR, ENVIRONMENT.
*NOTES* FILED.
*DATE* 610000

ABSTRACT 1341

*TITLE* EFFECT OF ENVIRONMENT ON THE ALLOWABLE WORK LOAD OF MAN.
*AUTHOR* SUGGS C W. & SPLINTER W. E.
*SOURCE* TRANSACTIONS OF THE ASAE; 1961; PP 48-51.
*KEYWORDS* HUMAN ENERGY, ENVIRONMENT, LABOR.
*NOTES* FILED.
*DATE* 610000

ABSTRACT 1342

*TITLE* TIME AND ENERGY ANALYSIS OF AGRICULTURAL TASKS.
*AUTHOR* SUGGS C W. & SPLINTER W. E.
*SOURCE* TRANSACTIONS OF THE ASAE; 111/50-52*; 1958.
*KEYWORDS* HUMAN ENERGY, AGRICULTURE.
*NOTES* FILED.
*DATE* 580000

ABSTRACT 1343

*TITLE* THE ENERGETIC COST OF MOVING ABOUT.
*AUTHOR* TUCKER V. A.
*SOURCE* AMER SCIENTIST; 63/438-447*; JULY-AUG 1975.
*KEYWORDS* HUMAN ENERGY, LABOR, ENERGETICS.
*NOTES* FILED.
*DATE* 750700

HYDROGEN 1344 -- 1358

ABSTRACT 1344

*TITLE* HYDROGEN -- LIKELY FUEL OF THE FUTURE.
*AUTHOR* ANON.
*SOURCE* CHEMICAL AND ENGR NEWS; 26 JUNE 1972; PP 14-17.
*KEYWORDS* HYDROGEN.
*NOTES* FILED.
*DATE* 720626

ABSTRACT 1345

*TITLE* HYDROGEN -- A VERSITILE ELEMENT.
*AUTHOR* BARBERGER C E. & BRAUNSTEIN J.
*SOURCE* AMER SCIENTIST; 63/438-447*; JULY-AUG 1975.
*KEYWORDS* HYDROGEN, PRODUCTION, INDUSTRY, THERMOCHEMICAL, TRANSPORTATION.
*NOTES* FILED.
*DATE* 750703
ABSTRACT 1346

• TITLE: THE WIND OF HYDROGEN AND OF CHANGE BLEW GENTLE, CLEAN AND PERSISTENT AT MIAMI.
• AUTHOR: CAHN R.W.
• KEYWORDS: HYDROGEN.
• NOTES: NAS.
• DATE: 740419

ABSTRACT 1347

• TITLE: HYDROGEN - TOMORROWS FUEL.
• AUTHOR: CHOPEF N.P.
• KEYWORDS: HYDROGEN.
• NOTES: NAS.
• DATE: 721225

ABSTRACT 1348

• TITLE: HYDROGEN AND OXYGEN FROM WATER.
• AUTHOR: FLETCHER J.A., MOEN R.L.
• KEYWORDS: HYDROGEN, SOLAR, THERMOCHEMICAL.
• NOTES: FILED. THE USE OF SOLAR ENERGY IN A ONE STEP EFFUSIONAL PROCESS IS CONSIDERED.
• DATE: 770909

ABSTRACT 1349

• TITLE: THE PRODUCTION OF HYDROGEN FROM NUCLEAR ENERGY.
• AUTHOR: GREGORY D.P.
• SOURCE: INST OF GAS TECH, 3424 S STATE ST, IIT CENTER, CHICAGO, OCT 1975, 17 PP.
• KEYWORDS: HYDROGEN, PRODUCTION, NUCLEAR, THERMOCHEMICAL.
• NOTES: FILED. PRESENTED AT SEVENTH SYNTHETIC PIPELINE GAS SYMPOSIUM, CHICAGO, 27-29 OCT 1975.
• DATE: 751000

ABSTRACT 1350

• TITLE: THE STATUS OF THE HYDROGEN = ENERGY SYSTEM CONCEPT.
• AUTHOR: GREGORY D.P.
• SOURCE: INST OF GAS TECH, 3424 S STATE ST, IIT CENTER, CHICAGO, JUNE 1976.
• PP.
• KEYWORDS: HYDROGEN, GENERAL.
• NOTES: FILED. PAPER PRESENTED AT 13TH WORLD GAS CONF, LONDON, 7-11 JUNE 1976.
• DATE: 760600

ABSTRACT 1351

• TITLE: HYDROGEN - A CARRIER OF ENERGY.
• AUTHOR: GREGORY D.P.
• SOURCE: INST OF GAS TECH, 3424 S STATE ST, IIT CENTER, CHICAGO, FEB 1974( 11 PP.
• KEYWORDS: HYDROGEN, PRODUCTION, TRANSMISSION, STORAGE.
• NOTES: FILED. PRESENTED AT AAAS SAN FRANCISCO MEETING, 24 FEB - 1 MARCH 1974.
• DATE: 740200

ABSTRACT 1352

• TITLE: THE HYDROGEN ECONOMY.
• AUTHOR: GREGORY D.P.
• SOURCE: SCIENTIFIC AMER, 228(1)/13-21, JAN 1973.
• KEYWORDS: HYDROGEN.
• NOTES: NAS.
• DATE: 730100

ABSTRACT 1353

• TITLE: HYDROGEN PRODUCTION BY ELECTROLYSIS - PRESENT AND FUTURE.
• AUTHOR: KONOPKA A.J., GREGORY D.P.
• SOURCE: INST OF GAS TECH, 3424 S STATE ST, IIT CENTER, CHICAGO, AUG 1975, 10 PP.
• KEYWORDS: HYDROGEN, PRODUCTION.
• DATE: 750800
ABSTRACT 1354

*TITLE: STORABLE, RENEWABLE HYDROGEN POWER: KEY TO UNLOCKING ENERGY FROM THE SUN, WIND, TIDES*
*AUTHOR: LINDSLEY E.F.*
*SOURCE: POPULAR SCI, MARCH 1975, PP 88-90, 145*
*KEYWORDS: HYDROGEN, STORAGE*
*NOTES: FILED*
*DATE: 7/83/30*

ABSTRACT 1355

*TITLE: HYDROGEN - SYNTHETIC FUEL OF THE FUTURE*
*AUTHOR: MAUGH T.M.*
*SOURCE: SCIENCE, 178/849-852, 24 NOV 1972*
*KEYWORDS: HYDROGEN*
*NOTES: NAS*
*DATE: 7/21/24*

ABSTRACT 1356

*TITLE: THE HYDROGEN ECONOMY*
*AUTHOR: MCULIFFE C.A.*
*SOURCE: CHEMISTRY AND INDUSTRY, 6 SEPT 1975, PP 725-728*
*KEYWORDS: HYDROGEN, COAL*
*NOTES: FILED*
*DATE: 7/5/66*

ABSTRACT 1357

*TITLE: HYDROGEN AGE ROLLS FORWARD*
*AUTHOR: WALTERS S.*
*SOURCE: MECHANICAL ENGR, MARCH 1974, PP 40-41*
*KEYWORDS: HYDROGEN*
*NOTES: FILED*
*DATE: 7/4/30*

ABSTRACT 1358

*TITLE: THERMOCHEMICAL HYDROGEN GENERATION*
*AUTHOR: WENTORF R.H., HANNEHIN R.E.*
*SOURCE: SCIENCE, 179(4148/311-319, 26 JULY 1972*
*KEYWORDS: HYDROGEN, PRODUCTION, THERMOCHEMICAL, ECONOMICS*
*NOTES: FILED*
*DATE: 7/4/72*

HYDROPOWER 1359 -- 1371

ABSTRACT 1359

*TITLE: HOW TO EFFICIENTLY RUN SMALL POWER STATIONS*
*AUTHOR: ANON.*
*SOURCE: SHANGHAI/SHANGHAI PEOPLES PRESS, 1971*
*KEYWORDS: HYDROPOWER, CHINA*
*NOTES*
*DATE: 7/1/00*

ABSTRACT 1360

*TITLE: SMALL LOW-HEAD HYDROELECTRIC POWER*
*AUTHOR: ANON.*
*SOURCE: PROC OF THE MIDWEST REGIONAL CONF ON SMALL LOW-HEAD HYDROELECTRIC POWER, MICH STATE UNIV, E LANSING, MI 48824, 23-25 MAY 1978, 476 PP*
*KEYWORDS: HYDROPOWER, HISTORICAL POLICY, TECHNOLOGY ASSESSMENT*
*NOTES: FILED*
*DATE: 7/80/523*

ABSTRACT 1361

*TITLE: THE HYDROGEN AGENDA ROLLS FORWARD*
*AUTHOR: WALTERS S.*
*SOURCE: MECHANICAL ENGR, MARCH 1974, PP 40-41*
*KEYWORDS: HYDROGEN*
*NOTES: FILED*
*DATE: 7/4/30*

ABSTRACT 1362

*TITLE: THERMOCHEMICAL HYDROGEN GENERATION*
*AUTHOR: WENTORF R.H., HANNEHIN R.E.*
*SOURCE: SCIENCE, 179(4148/311-319, 26 JULY 1972*
*KEYWORDS: HYDROGEN, PRODUCTION, THERMOCHEMICAL, ECONOMICS*
*NOTES: FILED*
*DATE: 7/4/72*

ABSTRACT 1363

*TITLE: HYDROPOWER 1359 -- 1371*

ABSTRACT 1364

*TITLE: HOW TO EFFICIENTLY RUN SMALL POWER STATIONS*
*AUTHOR: ANON.*
*SOURCE: SHANGHAI/SHANGHAI PEOPLES PRESS, 1971*
*KEYWORDS: HYDROPOWER, CHINA*
*NOTES*
*DATE: 7/1/00*

ABSTRACT 1365

*TITLE: SMALL LOW-HEAD HYDROELECTRIC POWER*
*AUTHOR: ANON.*
*SOURCE: PROC OF THE MIDWEST REGIONAL CONF ON SMALL LOW-HEAD HYDROELECTRIC POWER, MICH STATE UNIV, E LANSING, MI 48824, 23-25 MAY 1978, 476 PP*
*KEYWORDS: HYDROPOWER, HISTORICAL POLICY, TECHNOLOGY ASSESSMENT*
*NOTES: FILED*
*DATE: 7/80/523*
ABSTRACT 1362

*TITLE* ENERGY FROM FALLING WATER.
*AUTHOR* BATTELLE MEMORIAL INSTITUTE.
*SOURCE* ENERGY PERSPECTIVES 14, BATTLELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, SEPT 1974, 6 PP.
*KEYWORDS* HYDROPOWER.
*NOTES* FILED.
*DATE* 740900

ABSTRACT 1363

*TITLE* RURAL HYDROELECTRIC STATIONS.
*AUTHOR* CHINA BUREAU OF WATER CONSERVANCY AND ELECTRIC POWER.
*SOURCE* BUREAU OF WATER CONSERVANCY AND ELECTRIC POWER, HUMAN PEOPLES PRESS, 1974.
*KEYWORDS* HYDROPOWER, CHINA.
*NOTES* IN CHINESE.
*DATE* 740000

ABSTRACT 1364

*TITLE* LOW COST DEVELOPMENT OF SMALL WATER-POWER SITES.
*AUTHOR* HAMM M W.
*SOURCE* VITA.
*KEYWORDS* HYDROPOWER.
*NOTES* FILED.
*DATE* 760000

ABSTRACT 1365

*TITLE* THE CONSTRUCTION OF MILL DAMS.
*AUTHOR* JAMES LAFFEL AND CO.
*SOURCE* SPRINGFIELD, OH/JAMES LAFFEL AND CO, 1874.
*KEYWORDS* HYDROPOWER.
*NOTES* FILED, REPRINTED IN 1970.
*DATE* 700000

ABSTRACT 1366

*TITLE* WATER POWER DEVELOPMENT (VOL 2).
*AUTHOR* MOSONTI E.
*SOURCE* HUNGARIAN ACADEMY OF SCI, BUDAPEST, HUNGARY, 869PP.
*KEYWORDS* HYDROPOWER, HUNGARY.
*NOTES* FILED.
*DATE* 760000
190  

**ABSTRACT 1369**

**TITLE**: WATER POWER  
**AUTHOR**: SALTER S H  
**SOURCE**: NATURE, 249/720-724, 21 JUNE 1974  
**KEYWORDS**: HYDROPOWER  
**NOTES**: NAS  
**DATE**: 740621

**ABSTRACT 1370**

**TITLE**: WATER POWER  
**AUTHOR**: SUREDOCK T C, PPIDLE J E, DORIN W L  
**SOURCE**: AEIS NO 351, AGRI, ENGR DEPT, MICH STATE UNIV, EAST LANSING, MAY 1976  
**KEYWORDS**: HYDROPOWER, WATER POWER  
**NOTES**: Filed  
**DATE**: 760700

**ABSTRACT 1371**

**TITLE**: WATER RUNNING WILD  
**AUTHOR**: WOOLSTON G  
**SOURCE**: UNDERCURRENTS 16, MARCH 1974, PP 31-34  
**KEYWORDS**: HYDROPOWER  
**NOTES**:Filed  
**DATE**: 740300

**INTERNATIONAL 1372 -- 1456**

**ABSTRACT 1372**

**TITLE**: ENERGY ALTERNATIVES FOR BRAZIL  
**AUTHOR**: ABELSON P H  
**SOURCE**: SCIENCE, 184/41211, 8 AUG 1975  
**KEYWORDS**: INTERNATIONAL, BRAZIL, ALTERNATIVES, SOLAR, NUCLEAR, ORGANIC, ALCOHOL  
**NOTES**:Filed  
**DATE**: 750800

**ABSTRACT 1373**

**TITLE**: BANGLADESH ENERGY STUDY  
**AUTHOR**: ANON  
**SOURCE**: META SYSTEMS INC, 18 MOLWORTHY ST, CAMBRIDGE, MASS, APRIL 1976, 79 PP  
**KEYWORDS**: INTERNATIONAL, BANGLADESH  
**NOTES**: AID, REPORT TO ASIAN DEV BANK, PO BOX 789, MANILA, PHILIPPINES, BY MONTREAL ENGINEERING-ÇNAIPROGETTI JOINT VENTURE, PO BOX 777, PLACE BELNAVENTURE, MONTREAL, CANADA  
**DATE**: 760400

**ABSTRACT 1374**

**TITLE**: US SURVEY OF ENERGY R AND D IN JAPAN  
**AUTHOR**: ANON  
**SOURCE**: REPORT OF A TECH DELEGATIONS VISIT TO JAPAN, 3-12 AUG 1974  
**KEYWORDS**: INTERNATIONAL, JAPAN  
**NOTES**: AID, ABOUT 3/4 INCHES THICK  
**DATE**: 740803

**ABSTRACT 1375**

**TITLE**: ENERGY PROBLEMS PECULIAR TO DEVELOPING COUNTRIES  
**AUTHOR**: ANON  
**SOURCE**: PUBLIC UTILITIES REPORT NO DUN 15, IBRD, PRESENTED AT THE 9TH WORLD ENERGY CONF, DETROIT, SEPT 1974, 26 PP  
**KEYWORDS**: INTERNATIONAL  
**NOTES**: AID, INCLUDES STATEMENTS FROM CHINA, MALAYSIA, IRELAND, IRAN, GHANA, NICARAGUA  
**DATE**: 740900
ABSTRACT 1384

*TITLE*: BALANÇO ENERGÉTICO NACIONAL
*AUTHOR*: BRAZIL MINISTERIO DAS MINAS E ENERGIA.
*SOURCE*: MINISTERIO DAS MINAS E ENERGIA, REPÚBLICA FEDERATIVA DO BRASIL 1977 103 PP.
*KEYWORDS*: INTERNATIONAL, BRAZIL, ENERGY CONSUMPTION, COAL, POLICY, NATURAL GAS, PETROLEUM.
*NOTES*: FILED.
*DATE*: 770000

ABSTRACT 1385

*TITLE*: ENERGY FOR RURAL DEVELOPMENT - RENEWABLE RESOURCES AND ALTERNATIVE TECHNOLOGIES FOR DEVELOPING COUNTRIES.
*AUTHOR*: BROWN N. E.
*SOURCE*: NATIONAL ACADEMY OF SCI, WASHINGTON D C 1976 306 PP.
*KEYWORDS*: INTERNATIONAL, ALTERNATIVES, DEVELOPING COUNTRIES.
*NOTES*: FILED.
*DATE*: 760000

ABSTRACT 1386

*TITLE*: SOLAR ENERGY FOR VILLAGE DEVELOPMENT.
*AUTHOR*: BROWN N., MCLE J.
*KEYWORDS*: INTERNATIONAL, SOLAR, DIESEL, TANZANIA, DEVELOPING COUNTRIES.
*NOTES*: FILED, COSTS OF FIVE SOLAR TECHNOLOGIES WERE COMPARED WITH COSTS OF DIESEL-GENERATED ELECTRICITY AND WITH ELECTRICITY FROM THE NATIONAL GRID.
*DATE*: 780210

ABSTRACT 1387

*TITLE*: SOLAR ENERGY FOR VILLAGE DEVELOPMENT.
*AUTHOR*: BROWN N., HUME J. W.
*KEYWORDS*: INTERNATIONAL, SOLAR, ECONOMICS, PHOTOVOLTAIC, HYDROPOWER, WIND, REFRIGERATION, DIESEL, TANZANIA, ORGANIC, METHANE.
*NOTES*: FILED, COSTS OF FIVE SOLAR TECHNOLOGIES WERE COMPARED WITH THE COSTS OF DIESEL-GENERATED ELECTRICITY AND WITH ELECTRICITY FROM THE NATIONAL GRID (TANZANIA).
*DATE*: 780210

ABSTRACT 1388

*TITLE*: HOW INDUSTRIAL SOCIETIES USE ENERGY - A COMPARATIVE ANALYSIS.
*AUTHOR*: DAVIES, D., DUNKERLEY J., ALTENMA J.
*SOURCE*: BALTIMORE, MD/ THE JOHN HOPKINS UNIV PRESS 1977 282 PP.
*KEYWORDS*: INTERNATIONAL, ENERGY CONSUMPTION, TRANSPORTATION, INDUSTRY, HOME.
*NOTES*: FILED.
*DATE*: 770000

ABSTRACT 1389

*TITLE*: ENERGY DEVELOPMENT IN LATIN AMERICA - SCIENTIFIC AND TECHNOLOGICAL ASPECTS.
*AUTHOR*: DEVECCHI B., WILKES J. D.
*SOURCE*: ORGANIZATION OF AMER STATES, INTER AMER COMMITTEE ON SCI AND TECH, WASHINGTON 13 NOV 1973 75 PP.
*KEYWORDS*: INTERNATIONAL, LATIN AMERICA.
*NOTES*: AID.
*DATE*: 731113

ABSTRACT 1390

*TITLE*: AGRICULTURES UNCERTAIN CLAIM ON WORLD ENERGY RESOURCES.
*AUTHOR*: DEVIT C.
*SOURCE*: SPAN. 16/113/2-4, 1975.
*KEYWORDS*: INTERNATIONAL, NETHERLANDS, AUSTRALIA, FOSSIL FUELS.
*NOTES*: FILED.
*DATE*: 750000
ABSTRACT 1392
*TITLE:* ENERGY AND THE DEVELOPING COUNTRIES.
*AUTHOR:* DEUZICH O. E.D.
*SOURCE:* SOCIEDADE BRASILEIRA DE FISICA. BOLETIM ESPECIAL.
*KEYWORDS:* INTERNATIONAL, BRAZIL, NUCLEAR, ELECTRICAL, ALCOHOL, SOLAR, BIOMASS.
*NOTES:* FILED.
*DATE:* 770000

ABSTRACT 1393
*TITLE:* ENERGY REQUIREMENTS AND EFFICIENCY FOR CROP PRODUCTION.
*AUTHOR:* FAIDLEY L. W.
*SOURCE:* FROM THE BOOK ASPECTS OF ENERGY CONVERSION, M. BLAIR, B. D. JONES.
*KEYWORDS:* INTERNATIONAL, AGRICULTURE, ENERGY CONSUMPTION.
*NOTES:* FILED. PAPER SUMMARIZES FORdeveloped and developing regions of the world, the commercial energy input for farm machinery, fertilizers, irrigation and pesticides and suggests methods for more efficient utilization.
*DATE:* 770000

ABSTRACT 1394
*TITLE:* ENERGY USE AND AGRICULTURAL PRODUCTION IN DEVELOPING AREAS.
*AUTHOR:* FREDERICK K. D.
*SOURCE:* CHANGING RESOURCE PROBLEMS OF THE FOURTH WORLD, WASHINGTON D.C., RESOURCES FOR THE FUTURE, PP 90-128.
*KEYWORDS:* INTERNATIONAL, AGRICULTURE.
*NOTES:* FILED.
*DATE:* 760200

ABSTRACT 1395
*TITLE:* FINANCING OF POWER EXPANSION FOR DEVELOPING COUNTRIES.
*AUTHOR:* FRIEDMANN E.
*SOURCE:* INTERNATIONAL ATOMIC ENERGY AGENCY BULLETIN, 17(6)/13-23, DEC 1975.
*KEYWORDS:* INTERNATIONAL, ECONOMICS.
*NOTES:* AID.
*DATE:* 751200

ABSTRACT 1396
*TITLE:* SMALL-SCALE POWER SUPPLIES FOR RURAL COMMUNITIES IN DEVELOPING COUNTRIES.
*AUTHOR:* GENERAL ELECTRIC CO.
*SOURCE:* GENERAL ELECTRIC CO, NEW YORK, NY, MARCH 1963.
*KEYWORDS:* INTERNATIONAL, DEVELOPING COUNTRIES.
*NOTES:* FILED.
*DATE:* 630300

ABSTRACT 1397
*TITLE:* DISCUSSION PAPERS ON THE PROBLEMS OF SCIENCE AND TECHNOLOGY.
*AUTHOR:* GEORGIA INSTITUTE OF TECHNOLOGY.
*SOURCE:* ECON DEV LAB, ENGR EXPT STS, GEORGIA INST OF TECH, DEC 1975, 129 PP.
*KEYWORDS:* INTERNATIONAL, TECHNOLOGY ASSESSMENT, DEVELOPING COUNTRIES.
*NOTES:* FILED.
*DATE:* 751200

ABSTRACT 1398
*TITLE:* ENERGY NO BRASIL.
*AUTHOR:* GOLOEBERG J. E.D.
*SOURCE:* PUBLICACAO ACIESP NO 2, ACADEMIA DE CIENCIAS, ESTADO DE SAO PAULO, SAO PAULO, BRASIL, 1976, 156 PP.
*KEYWORDS:* INTERNATIONAL, BRAZIL, SOLAR, GEOThermal, Tidal, NUCLEAR, ALCOHOL, NATURAL GAS, HYDROPOWER.
*NOTES:* FILED.
*DATE:* 760000
ABSTRACT 1399

•TITLE: BRAZIL - ENERGY OPTIONS AND CURRENT OUTLOOK.
•AUTHOR: GOLDEMBERG J.
•KEYWORDS: INTERNATIONAL; BRAZIL; ENERGY SOURCES.
•NOTES: FILED. BRAZIL'S ENERGY OPTIONS AND CURRENT OUTLOOK ARE EXAMINED AND A SUMMARY OF KNOWN RESERVES OF FOSSIL AND RENEWABLE RESOURCES IS GIVEN. BRAZIL HAS ABUNDANT RENEWABLE ENERGY RESOURCES BUT VERY MODERATE RESERVES OF FOSSIL FUELS. CONSEQUENTLY, THE EMPHASIS IN THE FUTURE WILL HAVE TO BE ON THE UTILIZATION OF SOLAR ENERGY, HYDROELECTRIC POWER, AND BIOMASS IN A PROGRAM DESIGNED TO PRESERVE LOCAL TRADITIONS AND CULTURE.
•DATE: 780414

ABSTRACT 1400

•TITLE: ITEMS FOR INFORMATION - NON-CONVENTIONAL AND NON-POLLUTING SOURCES OF ENERGY.
•AUTHOR: GREY J.
•SOURCE: ADVISORY COMMITTEE ON THE APPLICATION OF SCI AND TECH TO DEV, UNITED NATIONS, GENEVA, 1 NOV 1975.
•KEYWORDS: INTERNATIONAL; FOSSIL FUELS, NUCLEAR; SOLAR, WIND, GEOTHERMAL, CONVERSION, FUEL CELL.
•NOTES: FILED.
•DATE: 751101

ABSTRACT 1401

•TITLE: UNCONVENTIONAL ENERGY SOURCES-BRAZIL LOOKS FOR APPLICATIONS.
•AUTHOR: HAMPSON A L.
•KEYWORDS: INTERNATIONAL; BRAZIL; SOLAR, HYDROGEN.
•NOTES: FILED.
•DATE: 770304
•DATE: 760800

ABSTRACT 1402

•TITLE: ENERGY - A RENEWED CHALLENGE TO ENGINEERS.
•AUTHOR: MANTHORNE W.
•KEYWORDS: INTERNATIONAL; SUPPLY DEMAND, PETROLEUM, NATURAL GAS, CONSERVATION, ECONOMICS.
•NOTES: FILED.
•DATE: 750600

ABSTRACT 1403

•TITLE: THE US AND THE DEVELOPING WORLD - AGENDA FOR ACTION.
•AUTHOR: KNOWLAND W E, TARRANT J J.
•SOURCE: A REPORT TO THE ROCKEFELLER FOUNDATION BY THE OVERSEAS DEVCOUNCIL, WASHINGTON DC, 31 OCT 1977, PRELIMINARY DRAFT, 153 PP.
•KEYWORDS: INTERNATIONAL; DEVELOPING COUNTRIES; FOSSIL FUELS, SOLAR, NUCLEAR, HYDROPOWER.
•NOTES: FILED.
•DATE: 761125

ABSTRACT 1404

•TITLE: ENERGY FOR THE VILLAGES OF AFRICA.
•AUTHOR: KNOWLAND W E, ET AL.
•SOURCE: THE OVERSEAS DEVCOUNCIL, 25 FEB 1977, 163 PP.
•KEYWORDS: INTERNATIONAL; AFRICA; ENERGY SOURCES.
•NOTES: FILED.
•DATE: 791125

ABSTRACT 1405

•TITLE: ENERGY FOR DEVELOPING COUNTRIES.
•AUTHOR: KNOWLAND W E, BEVER J A, TARRANT J J.
•SOURCE: A REPORT TO THE ROCKEFELLER FOUNDATION BY THE OVERSEAS DEVCOUNCIL, WASHINGTON DC, 31 OCT 1977, PRELIMINARY DRAFT, 153 PP.
•KEYWORDS: INTERNATIONAL; DEVELOPING COUNTRIES; FOSSIL FUELS, SOLAR, NUCLEAR, HYDROPOWER.
•NOTES: FILED.
•DATE: 771111
ABSTRACT 1406
•TITLE: ENERGY AND DEVELOPMENT - AN INTERNATIONAL APPROACH.
•AUTHOR: HOWE J W, KNOWLAND W E.
•SOURCE: COMMUNIQUE ON DEV ISSUES 31, OVERSEAS DEV COUNCIL
WASHINGTON DC 20036, DEC 1976, 5 PP.
•KEYWORDS: INTERNATIONAL, POLICY, USA, DEVELOPING COUNTRIES.
•NOTES: FILED.
•DATE: 761200

ABSTRACT 1407
•TITLE: ENERGY FOR RURAL AFRICA - THE POTENTIAL OF SMALL-SCALE
RENEWABLE ENERGY TECHNIQUES.
•AUTHOR: HOWE J W, KNOWLAND W E.
•KEYWORDS: INTERNATIONAL, AFRICA, RENEWABLE ENERGY.
•NOTES: FILED.
•DATE: 770900

ABSTRACT 1408
•TITLE: INVENTORY OF NATURAL RESOURCES.
•AUTHOR: INTERNATIONAL RICE RESEARCH INSTITUTE.
•SOURCE: TECH REPORT VOL IX, AGR ENGR DEPT, THE INTERNATIONAL RICE
RESEARCH INST, PO BOX 933, MANILA, PHILIPPINES, 110 PP.
•KEYWORDS: INTERNATIONAL, ENERGY SOURCES, PHILIPPINES.
•NOTES: FILED.
•DATE: 180000

ABSTRACT 1409
•TITLE: NON-CONVENTIONAL SOURCES OF ENERGY FOR THE DEVELOPING COUNTRIES.
•AUTHOR: JOHNSON A L.
•SOURCE: UN ADVISORY COMMITTEE ON THE APPLICATION OF SCI AND TECH TO DEV
JULY 1974.
•KEYWORDS: INTERNATIONAL, DEVELOPING COUNTRIES.
•NOTES: FILED.
•DATE: 740700

ABSTRACT 1410
•TITLE: L'AFFRIQUE DANS LE CADRE DE LA GEOGRAPHIE MONDIALE DE L'ENERGIE.
•AUTHOR: KARST J.
•KEYWORDS: INTERNATIONAL, AFRICA, RESOURCES.
•NOTES: FILED.
•DATE: 741200

ABSTRACT 1411
•TITLE: ENERGY RESOURCES, DEMAND AND CONSERVATION WITH SPECIAL REFERENCE TO
INDIA.
•AUTHOR: KASHKARI C.
•SOURCE: NEW DELHI/TATA MCGRAW-HILL PUBL CO LTD, JULY 1975, 231 PP.
•KEYWORDS: INTERNATIONAL, INDIA, ENERGY SOURCES, SUPPLY DEMAND, SOLAR, INDUSTRY,
CONSERVATION, ENERGY CONSUMPTION, FOSSIL FUELS, TRANSPORTATION, ELECTRICAL,
NUCLEAR, GEOTHERMAL, WIND.
•NOTES: FILED.
•DATE: 750703

ABSTRACT 1412
•TITLE: NEPAL - THE ENERGY SECTOR.
•AUTHOR: KASHKARI C.
•SOURCE: THE UNIV OF AKRON, DEPT OF E E, AKRON, OHIO, MARCH 1976, 110 PP.
•KEYWORDS: INTERNATIONAL, NEPAL.
•NOTES: 410. REPORT PREPARED BY KASHKARI FOR THE ENERGY R AND D GROUP IN
NEPAL.
•DATE: 761200

ABSTRACT 1413
•TITLE: ALTERNATE POWER SOURCES FOR DEVELOPING COUNTRIES.
•AUTHOR: KEAN S.
•SOURCE: UNPUBLISHED, AUG 1973, 29 PP.
•KEYWORDS: INTERNATIONAL, DEVELOPING COUNTRIES, ALTERNATIVES.
•NOTES: FILED.
•DATE: 730800
ABSTRACT 1428
*TITLE*: CHANGING RESOURCE PROBLEMS OF THE FOURTH WORLD.
*AUTHOR*: RIDKER R G.
*SOURCE*: WASHINGTON D C RESOURCES FOR THE FUTURE INC. 1976, 158 PP.
*KEYWORDS*: INTERNATIONAL, DEVELOPING COUNTRIES.
*NOTES*: FILED.
*DATE*: 750000

ABSTRACT 1429
*TITLE*: EFFICIENT ENERGY USE AND WELL-BEING--THE SWEDISH EXAMPLE.
*AUTHOR*: SCHRIPPER L, LICHTENBERG A J.
*KEYWORDS*: INTERNATIONAL, SWEDEN, USA, ENERGY CONSUMPTION.
*NOTES*: FILED. SWEDES USE LESS THAN TWO-THIRDS AS MUCH ENERGY PER CAPITA AS AMERICANS, AT THE SAME STANDARD OF LIVING.
*DATE*: 761205

ABSTRACT 1430
*TITLE*: ENERGY PROBLEMS FACING INDIA.
*AUTHOR*: SINGHAL W R.
*KEYWORDS*: INTERNATIONAL, INDIA.
*NOTES*: FILED.
*DATE*: 740621

ABSTRACT 1431
*TITLE*: RELATIONS BETWEEN FARM MECHANIZATION AND CROP YIELD FOR A FARMING DISTRICT IN INDIA.
*AUTHOR*: SINGH G, CHANCELLOR W J.
*KEYWORDS*: INTERNATIONAL, MECHANIZATION, INDIA.
*NOTES*: FILED.
*DATE*: 740000

ABSTRACT 1432
*TITLE*: CHANGES IN ENERGY USE PATTERNS FROM 1971 TO 1974 ON THE SELECTED FARMS IN A FARMING DISTRICT IN NORTHERN INDIA.
*AUTHOR*: SINGH G, CHANCELLOR W J.
*SOURCE*: ASAE PAPER 74-5038.
*KEYWORDS*: INTERNATIONAL, AGRICULTURE, MECHANIZATION, INDIA.
*NOTES*: FILED.
*DATE*: 760000

ABSTRACT 1433
*TITLE*: ENERGY INPUTS AND AGRICULTURAL PRODUCTION UNDER VARIOUS REGIMES OF MECHANIZATION IN NORTHERN INDIA.
*AUTHOR*: SINGH G, CHANCELLOR W J.
*SOURCE*: ASAE PAPER 74-5038.
*KEYWORDS*: INTERNATIONAL, AGRICULTURE, MECHANIZATION, INDIA.
*NOTES*: FILED.
*DATE*: 740000

ABSTRACT 1434
*TITLE*: ENERGY AND RESOURCES.
*AUTHOR*: SORENSEN B.
*KEYWORDS*: INTERNATIONAL, DENMARK, ENERGY SOURCES, SOLAR, WIND, POLICY, ECONOMICS, REQUIREMENTS.
*NOTES*: FILED.
*DATE*: 750725

ABSTRACT 1435
*TITLE*: ENERGY AND MINERAL RESOURCES (SAHEL-SUDAN ZONES).
*AUTHOR*: SOUSSOU J E.
*SOURCE*: MIT CENTER FOR POLICY ALTERNATIVES, CAMBRIDGE, MASS, 20 SEPT 1974, 97 PP.
*KEYWORDS*: INTERNATIONAL, AFRICA.
*NOTES*: AID.
*DATE*: 740920
Title: An Overview of Energy in Developing Countries
Author: Stout B A, Myers C A
Keywords: International, Agriculture, USA, France, Senegal, Energy Flow, Developing Countries
Notes: Filed
Date: 770000

Title: Energy and the Less Developed Countries - Need for Additional Research
Author: Stout A
Keywords: International, Agriculture
Notes: Filed
Date: 760000

Title: Power for Remote Areas
Author: Tabor H Z
Keywords: International
Notes: NAS
Date: 670500

Title: Unused Resources in Agriculture
Author: Takeda S et al.
Keywords: International, Agriculture, Cooling, Heat, Wastes, Solar
Notes: Filed
Date: 770000

Title: The Role of Energy in Underdeveloped Areas
Author: Thacker M S
Source: UNESCO Discussion Theme, Energy in the Service of Man, 1951
Keywords: International
Notes: Dated
Date: 510000

Title: Energy Research in Agriculture Canada - A 1978 Review
Author: Timbers G et Munroe J A, Jackson H A
Keywords: International, Agriculture, Conservation, Drying, Solar, Organic, Greenhouse, Wind, Canada
Notes: Filed
Agriculture Canada has a Contract Research Program which covers several areas of Energy Research. These include Data Base Studies on Energy Use in the Canadian Farm Sector, Work on Renewable Energy Resources Including Biomass Studies and Solar Applications. A Program on Solar Adapted Greenhouses is being Expanded and a Limited Feasibility Study for the Application of Wind Energy is Being Contracted.
Date: 780000

Title: Interaction of Energy and Food Prices in Less Developed Countries
Author: Timmer C P
Source: Amer J Agr Econ, 57(2)/219-224, May 1975
Keywords: International, Economics, India
Notes: AID
Date: 750500
ABSTRACT 1443
TITLE: APPRAISAL OF CURRENT ENERGY SITUATION AND FUTURE PROSPECTS IN AFRICA.
AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL.
SOURCE: UNITED NATIONS, ECONOMIC COMMISSION FOR AFRICA, ACCRA, GHANA, 1-12 MARCH 1976, 22 PP.
KEYWORDS: INTERNATIONAL, AFRICA, ENERGY SOURCES, PRODUCTION.
DATE: 760301

ABSTRACT 1444
TITLE: INCREASED ENERGY ECONOMY AND EFFICIENCY IN THE ECE REGION.
AUTHOR: UN-ECONOMIC COMMISSION FOR EUROPE.
SOURCE: E/ECE/885/REV.1, UN, NY, 1976, 101 PP.
KEYWORDS: INTERNATIONAL, ECONOMIC, CONSERVATION.
DATE: 760000

ABSTRACT 1445
TITLE: PROCEEDINGS OF THE SECOND SESSION OF THE COMMITTEE ON NATURAL RESOURCES.
AUTHOR: UN-ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC.
SOURCE: ENERGY RESOURCES DEV SERIES 15, SALES NO E/76/II/F/11, UN, NY, 1976, 111 PP.
KEYWORDS: INTERNATIONAL, ELECTRICAL, ENERGY SOURCES, ECONOMIC, DEVELOPING COUNTRIES.
DATE: 760900

ABSTRACT 1446
TITLE: PROCEEDINGS OF THE TWELFTH SESSION OF THE SUB-COMMITTEE ON ENERGY RESOURCES AND ELECTRIC POWER.
AUTHOR: UN-ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC.
SOURCE: ENERGY RESOURCES DEV SERIES 11, SALES NO E/74/II/F/14, UN, NY, 1974, 316 PP.
KEYWORDS: INTERNATIONAL, ELECTRICAL, NUCLEAR, ENERGY SOURCES.
DATE: 740900

ABSTRACT 1447
TITLE: THE ROLE OF ENERGY IN THE DEVELOPMENT OF HUMAN SETTLEMENTS IN AFRICA.
AUTHOR: UN-EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION.
SOURCE: UNESCO, ECON COMMISSION FOR AFRICA, AFRICA REGIONAL CONF ON HUMAN SETTLEMENTS, CAIRO, EGYPT, 21-26 JUNE 1975, 15 PP.
KEYWORDS: INTERNATIONAL, AFRICA.
DATE: 750621

ABSTRACT 1448
TITLE: THE USE OF ENERGY IN EUROPEAN AGRICULTURE.
AUTHOR: UN-FOOD AND AGRICULTURE ORGANIZATION.
SOURCE: ECA/25/76(53), TWENTIETH SESSION, EUROPEAN COMMISSION ON AGR. UN FAO, ROME, ITALY, 17-23 JUNE 1976, 10 PP.
KEYWORDS: INTERNATIONAL, POLICY.
DATE: 760617

ABSTRACT 1449
TITLE: ENERGY - AN INTERNATIONAL APPROACH.
AUTHOR: UN-INSTITUTE FOR TRAINING AND RESEARCH.
KEYWORDS: INTERNATIONAL, DEVELOPING COUNTRIES, ENVIRONMENT, ECONOMICS, ENERGY SOURCES, RESOURCES.
DATE: 740802

ABSTRACT 1450
TITLE: A HUNGRY WORLD - THE CHALLENGE TO AGRICULTURE.
AUTHOR: UNIVERSITY OF CALIFORNIA.
KEYWORDS: INTERNATIONAL, ENERGY CONSUMPTION, LAND USE, SUPPLY DEMAND, PETROLEUM, COAL, FOSSIL FUELS, GEOTHERMAL, POPULATION, ANIMAL, ENVIRONMENT, SOCIAL IMPLICATIONS, HISTORICAL.
DATE: 740700
ABSTRACT 1451

• TITLE: CHINA - ROLE OF SMALL PLANTS IN ECONOMIC DEVELOPMENT.
• SOURCE: DOCUMENT EXPEDITING PROJECT, EXCHANGE AND GIFT DIV., LIBRARY OF CONGRESS, WASHINGTON DC 20540; MAY 1974, 18 PP.
• KEYWORDS: INTERNATIONAL, CHINA, ECONOMICS, INDUSTRY.
• NOTES, FILED.
• DATE: 740500

ABSTRACT 1452

• TITLE: THE INTERNATIONAL ENERGY SITUATION--OUTLOOK TO 1985.
• AUTHOR: US-CENTRAL INTELLIGENCE AGENCY.
• SOURCE: STOCK NO 041-015-00045-5; US GOVT PRINTING OFFICE, WASHINGTON DC 20402, APRIL 1977, 18 PP.
• KEYWORDS: INTERNATIONAL, SUPPLY, DEMAND.
• NOTES, FILED. AN EXAMINATION OF WORLD OIL DEMAND AND SUPPLY BETWEEN NOW AND 1985. ESTIMATED TOTAL ENERGY DEMAND FOR MAJOR CONSUMING COUNTRIES IS GIVEN BASED ON RATES OF ECONOMIC GROWTH AND THE EFFECTS OF CONSERVATION. PREDICTED ENERGY PRODUCTION IS COMPARED.
• DATE: 770400

ABSTRACT 1453

• TITLE: ENERGY AND WORLD AGRICULTURE.
• AUTHOR: US-DEPARTMENT OF AGRICULTURE.
• SOURCE: FOREIGN AGR., USDA., 8 APRIL 1974.
• KEYWORDS: INTERNATIONAL, AGRICULTURE, PETROLEUM, ECONOMICS, FERTILIZER, TRANSPORTATION.
• NOTES, FILED.
• DATE: 740400

ABSTRACT 1454

• TITLE: EXPECTED DEVELOPMENTS OF THE POWER-LABOR RATIO IN AGRICULTURE THROUGH INTERCOUNTRY COMPARISON.
• AUTHOR: WEBER A.
• SOURCE: INST FUR AGRARPOLITIK UND MARKTLEHRE DER CHRISTIAN - ALBRECHTS-UNIV., 23 KIEL, HOLZKOPPELWEG 14, FEDERAL REPUBLIC OF GERMANY, 7 PP, UNDATED.
• KEYWORDS: INTERNATIONAL, AGRICULTURE, PRODUCTION, MODELS, POLICY, LABOR.
• NOTES, FILED.
• DATE:

ABSTRACT 1455

• TITLE: SOME ASPECTS OF ENERGY RESOURCE DEVELOPMENT IN INDONESIA TO THE YEAR 2000.
• AUTHOR: WIJARSO.
• SOURCE: 1975, 12 PAGE DOCUMENT.
• KEYWORDS: INTERNATIONAL, INDONESIA.
• NOTES, AID.
• DATE: 750600

ABSTRACT 1456

• TITLE: SYSTEMS AND ENERGY IN TROPICAL FARMING.
• AUTHOR: WIJEWARDENE R.
• SOURCE: ASAE PAPER 78-1511; 1978, 14 PP.
• KEYWORDS: INTERNATIONAL, AGRICULTURE, ENVIRONMENT, TILLAGE.
• NOTES, FILED. A SYSTEMS APPROACH IS TAKEN TO ANALYSING AND RESOLVING THE PRIME CONSTRAINTS TO SMALL FARMER PRODUCTIVITY IN THE HUMID TROPICS. APPROPRIATE TOOLS ARE DEVELOPED TO COMPLEMENTS THE SYSTEMS EVOLVED, AND THEIR PERFORMANCE IS ASSESSED AT THE HANDS OF FARMERS.
• DATE: 780600

IRRIGATION 1457 -- 1505

ABSTRACT 1457

• TITLE: FACTORS AFFECTING THE EFFICIENCY OF NATURAL GAS POWERED PUMPING PLANTS.
• AUTHOR: ABERNATHY G H, COOK M D.
• SOURCE: ASAE PAPER 77-2017; 1977, 9PP.
• KEYWORDS: IRRIGATION, PUMPS, NATURAL GAS, EFFICIENCY.
• NOTES, FILED. THE RESULTS OF AN ON-FARM PUMPING PLANT TESTING PROGRAM HAS SHOWN THE EFFICIENCY OF NATURAL GAS ENGINES.
• DATE: 770700
ABSTRACT 1458

**TITLE**: CAN SUNSHINE POWER THE IRRIGATION PUMP.
*AUTHOR*: ABERNATHY G H, MANCINI T R.
*KEYWORDS*: IRRIGATION, SOLAR.
*NOTES*: ASPECTS OF AN EXPERIMENTAL SOLAR POWERED PUMPING PLANT ARE PRESENTED.
*DATE*: 771000

ABSTRACT 1459

**TITLE**: DESIGN AND INSTALLATION OF A SOLAR-POWERED IRRIGATION PUMP.
*AUTHOR*: ABERNATHY G H, MANCINI T R.
*SOURCE*: ASAE PAPER 77-4020, 1977, 7 PP.
*KEYWORDS*: IRRIGATION, SOLAR, PUMPS.
*NOTES*: DESIGNED, INSTALLED AND OPERATION BEGUN.
*DATE*: 770000

ABSTRACT 1460

**TITLE**: ELECTRIC WATER PUMPS ON THE FARM.
*AUTHOR*: ALTMAN L B.
*SOURCE*: USDA LEAFLET NO. 436, JAN 1972, 3 PP.
*KEYWORDS*: IRRIGATION, PUMPS.
*NOTES*: FILED.
*DATE*: 720100

ABSTRACT 1461

**TITLE**: SCHEDULING IRRIGATION BY TEMPERATURE TO MANAGE ELECTRIC LOADS.
*AUTHOR*: ANSCHUTZ J A, LIPPER R.
*SOURCE*: ASAE PAPER 77-3045, 1977, 8 PP.
*KEYWORDS*: IRRIGATION, ELECTRICAL, EFFICIENCY.
*NOTES*: THREE SINGLE TOWER CENTER-PIVOT IRRIGATION SYSTEMS WERE SCHEDULED (TWO BY A SINGLE THERMOSTAT AND THE OTHER MANUALLY) TO DETERMINE EFFECTS TEMPERATURE CONTROL WOULD HAVE ON PEAK ELECTRICAL DEMANDS AND CROP YIELDS.
*DATE*: 770000

ABSTRACT 1462

**TITLE**: SCHEDULING IRRIGATION FOR ELECTRIC LOAD MANAGEMENT.
*AUTHOR*: ANSCHUTZ J A.
*SOURCE*: DEPT. OF AGR. ENG., KANSAS STATE UNIV., MANHATTAN, KS, 1978, 7 PP.
*KEYWORDS*: IRRIGATION, ELECTRICAL.
*NOTES*: IN THE REPORT OF THE FIFTY-THIRD ANNUAL MEETING OF THE KANSAS COMMITTEE ON THE RELATION OF ELECTRICITY TO AGRICULTURE.
*DATE*: 780000

ABSTRACT 1463

**TITLE**: EXPERIENCES WITH IRRIGATION SCHEDULING FOR ELECTRIC LOADS.
*AUTHOR*: ANSCHUTZ J A, GINTHER C, LIPPER R D.
*SOURCE*: ASAE PAPER 78-501, 1978, 9 PP.
*KEYWORDS*: IRRIGATION, ELECTRICAL.
*NOTES*: IN THE REPORT OF THE FIFTY-THIRD ANNUAL MEETING OF THE KANSAS COMMITTEE ON THE RELATION OF ELECTRICITY TO AGRICULTURE.
*DATE*: 780000

ABSTRACT 1464

**TITLE**: IMPACTS OF INCREASING ENERGY SCARCITY IN IRRIGATED AGRICULTURE - AN EMPIRICAL STUDY FROM THE ARID SOUTHWEST.
*AUTHOR*: AYER M W, LIPPER D J.
*KEYWORDS*: IRRIGATION, ECONOMICS.
*NOTES*: FILED.
*DATE*: 771024
ABSTRACT 1465

*TITLE: ENERGY INPUTS TO IRRIGATION.*
*AUTHOR: BATTY J C, HAMED S & KELLER J.*
*SOURCE: J IRRIGATION AND DRAINAGE DIV, ASAE.*
*KEYWORDS: IRRIGATION.*
*DATE: 750000*

ABSTRACT 1466

*TITLE: MINIMUM ENERGY DESIGNS FOR SELECTED IRRIGATION SYSTEMS.*
*AUTHOR: BATTY J C, HAMED S & WOLFE J W.*
*SOURCE: ASAE PAPER 76-2037, 22 PP.*
*KEYWORDS: IRRIGATION, MODELS, REQUIREMENTS.*
*DATE: 760000*

ABSTRACT 1467

*TITLE: A MODEL TO PREDICT TOTAL ENERGY REQUIREMENTS AND ECONOMIC COSTS OF IRRIGATION SYSTEMS.*
*AUTHOR: BATTY J C, HAMED S & WOLFE J W.*
*SOURCE: ASAE PAPER 76-2527, 1976.*
*KEYWORDS: IRRIGATION, MODELS, ECONOMICS.*
*DATE: 760000*

ABSTRACT 1468

*TITLE: MODELING ENERGY SUPPLIES FOR IRRIGATION.*
*AUTHOR: CLARK S J.*
*SOURCE: ASAE PAPER 76-2527, 1976.*
*KEYWORDS: IRRIGATION, MODELS.*
*DATE: 760000*

ABSTRACT 1469

*TITLE: ENERGY AND WATER IN CALIFORNIA - HIGHLIGHTS OF A STUDY BY U.C. WATER SCIENTISTS.*
*AUTHOR: COPPOCK R & OSTERLI Y P.*
*SOURCE: WALLACE S F, WATER RESOURCES CENTER, UNIV OF CALIF, DAVIS, JAN-FEB 1976, 11 PP.*
*KEYWORDS: IRRIGATION, CALIFORNIA.*
*DATE: 760000*

ABSTRACT 1470

*TITLE: IRRIGATION ENERGY REQUIREMENTS IN THE 17 WESTERN STATES.*
*AUTHOR: DYOSKIN D, NICOL K & HEADY E D.*
*SOURCE: CENTER FOR AGR AND RURAL DEVELOPMENT, IOWA STATE UNIV, MAY 1975, 15 PP.*
*KEYWORDS: IRRIGATION, REQUIREMENTS.*
*DATE: 750500*

ABSTRACT 1471

*TITLE: ENERGY REQUIREMENTS OF IRRIGATED CROPS IN THE WESTERN UNITED STATES.*
*AUTHOR: DYOSKIN D & HEADY E D.*
*SOURCE: CENTER FOR AGR AND RURAL DEVELOPMENT, IOWA STATE UNIV, AMES, NOV 1976, 33 PP.*
*KEYWORDS: IRRIGATION, USA, ENERGY CONSUMPTION.*
*DATE: 761100*

ABSTRACT 1472

*TITLE: WHEN IRRIGATING, HERE'S HOW TO SAVE WATER AND ENERGY.*
*AUTHOR: FISCHBACK P E, SOMMERHALDER B R.*
*KEYWORDS: IRRIGATION, CONSERVATION.*
*DATE: 750300*
ABSTRACT 1480

**Title:** Impact of Natural Gas on Irrigated Agriculture.
**Author:** Lacewell R D, Cordova G D, Fish B.
**Source:** Technical Article 125% Texas Agr Expt Sta., Texas A and M Univ., College Station, 22 pp., Undated.
**Keywords:** Irrigation, Agriculture, Natural Gas, Texas.
**Notes:** Filed.
**Date:**

ABSTRACT 1481

**Title:** Solar Energy for Irrigation Pumping.
**Author:** Larson D L.
**Source:** ASAE Paper 77-4021, 1977, 14 pp.
**Keywords:** Irrigation, Pumps, Solar.
**Notes:** Filed. On-farm Solar Power Plants could be used independently or in conjunction with supplementary energy sources to drive irrigation pumps. Independent solar power plant capacity probably will not be fully utilized. Some methods for utilizing the solar energy effectively and economically are in this paper.
**Date:** 770000

ABSTRACT 1482

**Title:** Energy in Irrigated Crop Production.
**Author:** Larson D L, Fangmeier D D.
**Keywords:** Irrigation, Pumps, Solar, Storage, Economics.
**Notes:** Filed. This paper compares the use of water storage and solar supplemented systems with a solar power plant sized to meet peak pumping requirements. The smaller plants are found to have higher output utilization and in some cases be more economical than the plant sized to meet peak demand.
**Date:** 780000

ABSTRACT 1483

**Title:** Utilization of an On-Farm Solar Powered Pumping Plant.
**Author:** Larson D L.
**Source:** Series 2901, Arizona Agr Expt Sta., 1978, 18 pp.
**Keywords:** Irrigation, Pumps, Solar, Storage, Economics.
**Notes:** Filed. This paper compares the use of water storage and solar supplemented systems with a solar power plant sized to meet peak pumping requirements. The technical and economic feasibility of using solar energy to drive irrigation pumps have been studied to determine the conditions required for serviceable, competitive use of solar systems. Solar power plant component development, changes in irrigation and pumping practices, investment incentives and higher fuel prices may all be required for economical use of solar energy.
**Date:** 780000

ABSTRACT 1484

**Title:** Notes on Conserving Energy in Irrigation.
**Author:** Lea D M.
**Keywords:** Irrigation.
**Notes:** Filed.
**Date:** 760500

ABSTRACT 1485

**Title:** Preliminary Economic Analysis of Solar Irrigation Systems (SIS) for Selected Locations.
**Author:** Lukens L L, Perins A M, VandeVender L G.
**Source:** Sandia Laboratory, Albuquerque, NM 87115, Nov 1977, 53 pp.
**Keywords:** Irrigation, Solar, Economics, Efficiency.
**Notes:** Filed. A preliminary analysis of the economic feasibility of stand-alone solar irrigation systems for certain applications in various locations. The economic feasibility was determined by comparing the life cycle cost (LCC) of the solar system to the LCC of conventional systems.
**Date:** 771100
ABSTRACT 1487

**Title**: Save Energy with an Efficient Well and Pumping Plant

**Author**: Manbeck D. M.

**Source**: Paper prepared for Irrigation Short Courses, Agr Engr Dept, Univ of Nebraska, Lincoln, Ne, Jan 1975, pp 55-61.

**Keywords**: Irrigation, pumps, efficiency.

**Date**: 750160

ABSTRACT 1488

**Title**: Fitting Traveling Guns into the Energy Puzzle or Water Techniques Can Increase Your Yield

**Author**: McIntosh J. P.


**Keywords**: Irrigation, conservation, energy consumption.

**Date**: 760000

ABSTRACT 1489

**Title**: Food Production and World Energy Supplies

**Author**: Pimentel D.


**Keywords**: Irrigation, world wide, population, energy consumption.

**Date**: 740000

ABSTRACT 1490

**Title**: Irrigation Efficiencies in Producing Calories and Proteins - An Annotated Bibliography

**Author**: Rada E. L., Berquast R. J.

**Source**: Report No 31, Calif Water Resources Center, Univ of Calif, Davis, Feb 1975, 50 pp.

**Keywords**: Irrigation, bibliography, food energy.

**Date**: 750220

ABSTRACT 1491

**Title**: Irrigation and the Energy Economics of Water Management for Hydrologic Basins

**Author**: Rawlins S. L.

**Source**: US Salinity Lab Publ 587, Po Box 672, Riverside, Calif, June 1976, 16 pp.

**Keywords**: Irrigation, economics.

**Date**: 760600

ABSTRACT 1492

**Title**: Modeling Energy Use in Irrigation

**Author**: Schmidt G. M., Clark S. J., Whitmer L.


**Keywords**: Irrigation, models.

**Date**: 780000

ABSTRACT 1493

**Title**: Energy Used for Pumping Irrigation Water in the United States, 1974

**Author**: Sloggett G.

**Source**: Unpublished, Oklahoma State Univ, Stillwater, 1974, 25 pp.

**Keywords**: Irrigation, usa, energy consumption.

**Date**: 740300
ABSTRACT 1494

AUTHOR: SLOGGETT G.
SOURCE: AGR ECON REPORT 376, ECON RESEARCH SERVICE, USDA.
WASHINGTON DC 20250, SEPT 1974, 39 PP.
KEYWORDS: IRRIGATION, ECONOMICS.
NOTES: FILED.
DATE: 770900

ABSTRACT 1495

TITLE: YES, OUR LIVES DEPEND ON WATER AND ENERGY CONSERVATION.
AUTHOR: SHERDON E.
KEYWORDS: IRRIGATION, CONSERVATION.
NOTES: FILED.
DATE: 260300

ABSTRACT 1496

TITLE: ENERGY CONSERVATION PRACTICES IN IRRIGATED AGRICULTURE.
AUTHOR: SHERDON E.
SOURCE: 1974 ANNUAL TECH CONF PROC. SPRINKLER IRRIGATION ASSOC.
13975 CONN AVE, SUITE 310, SILVER SPRING, MD 20956, 1974, PP 11-15.
KEYWORDS: IRRIGATION, CONSERVATION.
NOTES: FILED.
DATE: 740000

ABSTRACT 1497

TITLE: URBAN OPEN SPACE PLANNING AND ENERGY CONSERVATION.
AUTHOR: SMITH G.L.
SOURCE: 1974 ANNUAL TECH CONF PROC. SPRINKLER IRRIGATION ASSOC.
13975 CONN AVE, SUITE 310, SILVER SPRING, MD 20956, 1974, PP 91-94.
KEYWORDS: IRRIGATION, CONSERVATION, LAND USE.
NOTES: FILED.
DATE: 740000

ABSTRACT 1498

TITLE: CENTER-PIVOT IRRIGATION.
AUTHOR: SPLINTER W.
KEYWORDS: IRRIGATION.
NOTES: FILED.
DATE: 760600

ABSTRACT 1499

TITLE: ENERGY OPTIONS FOR THE IRRIGATOR.
AUTHOR: SPLINTER W.
KEYWORDS: IRRIGATION, FUEL CONSUMPTION, WIND, NUCLEAR, WASTES.
NOTES: FILED.
DATE: 770200

ABSTRACT 1500

TITLE: FORECAST - SUNNY, DRY .. WITH RAIN.
AUTHOR: STOUT E.
KEYWORDS: IRRIGATION.
NOTES: FILED.
DATE: 750300

ABSTRACT 1501

TITLE: ENERGY EFFICIENT IRRIGATION PRACTICES IN IDAHO.
AUTHOR: STROM R C, WELLS R D, BUSCH J R.
SOURCE: ASAE PAPER 78-2553, 1978, 19 PP.
KEYWORDS: IRRIGATION, PUMPS, IDAHO, EFFICIENCY.
NOTES: FILED. THE METHOD AND ORGANIZATION OF A FIRST YEAR PROGRAM INVESTIGATING ENERGY USE IN IDAHO AGRICULTURE INVOLVING PUMPS IS DESCRIBED. RESULTS OF PUMP EFFICIENCY, NOZZLE WEAR, AND DISTRIBUTION SYSTEM INVESTIGATIONS ARE PRESENTED.
DATE: 780000
ABSTRACT 1502

-TITLE- ECONOMICS OF WIND ENERGY USE FOR IRRIGATION IN INDIA.
-AUTHOR- TEWARI S K.
-KEYWORDS- IRRIGATION, WIND, ECONOMICS, INDIA.
-NOTES- FILED. THE PRODUCTION OF ENERGY FROM WINDMILLS DESIGNED SPECIFICALLY TO OPERATE IN THE LOW WIND VELOCITIES THAT USUALLY PREVAIL IN INDIA DURING THE MAIN IRRIGATION SEASON IS ESTIMATED TO BE REASONABLY ECONOMICAL FOR IRRIGATING SMALL FARMS FROM OPEN WELLS. THE CALCULATIONS MADE HERE ARE EXPECTED TO BE VALID FOR THE WINDIER 13 PERCENT OF THE LOCATIONS IDENTIFIED FROM AVAILABLE WIND SPEED RECORDS.
-DATE- 781103

ABSTRACT 1503

-TITLE- CONSIDERATION OF IRRIGATION SYSTEMS IN THE SOLAR PHOTOVOLTAIC ENERGY PROGRAM.
-AUTHOR- TVERSKY M, FISCHBACK P E.
-SOURCE- ASAE PAPER 78-2551, 1978, 18 PP.
-KEYWORDS- IRRIGATION, CONSERVATION, SOLAR.
-NOTES- FILED. PHOTOVOLTAIC SYSTEMS ARE CONSIDERED FOR ON-FARM IRRIGATION. SOLAR CELLS CAN BE LINKED WITH REQUIREMENTS OF AUTOMATION FOR IRRIGATION AND INTEGRATED WITH OTHER LOW-ENERGY FARM USES.
-DATE- 780000

ABSTRACT 1504

-TITLE- IRRIGATION MANAGEMENT FOR CORN.
-AUTHOR- VITOSCH M L, KIDDER E H.
-SOURCE- EXTENSION BULLETIN E-853, MICH STATE UNIV, EAST LANSING, JUNE 1975, 2 PP.
-KEYWORDS- IRRIGATION, OPERATING PROCEDURE.
-NOTES- FILED.
-DATE- 750600

ABSTRACT 1505

-TITLE- AN ECONOMIC CONSIDERATION OF ENERGY USE AND ALTERNATIVES FOR PUMPING IRRIGATION WATER.
-AUTHOR- WILLETT G S.
-SOURCE- FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, WASHINGTON D C, 20 AUG 1975, 17 PP.
-KEYWORDS- IRRIGATION, REQUIREMENTS, ECONOMICS, ALTERNATIVES.
-NOTES- FILED.
-DATE- 750820

ABSTRACT 1506

-TITLE- REDUCING AIR POLLUTION WITH LP GAS.
-AUTHOR- GAXTER M C.
-KEYWORDS- LP GAS.
-NOTES- FILED.
-DATE- 720000

ABSTRACT 1507

-TITLE- PROPANE OFFERS TODAY'S VEHICLES BEST REMEDY FOR POOR PERFORMANCE.
-AUTHOR- CLARK W W.
-KEYWORDS- LP GAS.
-NOTES- FILED.
-DATE- 721100
ABSTRACT 1508

*TITLE*: A PRACTICAL GUIDE TO LP GAS UTILIZATION.
*AUTHOR*: CLIFFORD E A.
*SOURCE*: LP GAS MAGAZINE, 1 E FIRST ST, DULUTH, MN, 5TH EDITION, 1975.
*KEYWORDS*: LP GAS, GENERAL.
*NOTES*: FILED.
*DATE*: 750000.

ABSTRACT 1509

*TITLE*: LIQUEFIED PETROLEUM GAS - SOME THOUGHTS ON MANDATORY CONTROLS AND EFFECTIVE ALLOCATION.
*AUTHOR*: DOERING D C, MCKENZIE B A.
*SOURCE*: PURDUE UNIV, WEST LAFAYETTE, INDIANA, SEPT 1973, 8 PP.
*KEYWORDS*: LP GAS, TRANSPORTATION, CONSERVATION.
*NOTES*: FILED.
*DATE*: 730900.

ABSTRACT 1510

*TITLE*: HOW THE RETAIL PRICE FREEZE HAS INTENSIFIED THE LIQUEFIED PETROLEUM GAS SHORTAGE.
*AUTHOR*: DOERING D C.
*SOURCE*: AGR ECON DEPT, PURDUE UNIV, WEST LAFAYETTE, INDIANA, AUG 1973, 12 PP.
*KEYWORDS*: LP GAS, ECONOMICS, ALTERNATIVES.
*NOTES*: FILED.
*DATE*: 730800.

ABSTRACT 1511

*TITLE*: STORAGE AND HANDLING LIQUEFIED PETROLEUM GASES, 1974.
*AUTHOR*: KEEPERS H V.
*SOURCE*: NO 58, NATIONAL FIRE PROTECTION ASSOCIATION, 470 ATLANTIC AVE, BOSTON, MASS, 1974, 155 PP.
*KEYWORDS*: LP GAS, AWARENESS, GENERAL, STORAGE, TRANSPORTATION.
*NOTES*: FILED.
*DATE*: 740000.

ABSTRACT 1512

*TITLE*: LP FUEL - DOES IT MAKE SENSE FOR YOUR CAR.
*AUTHOR*: LINDSLEY E F.
*KEYWORDS*: LP GAS.
*NOTES*: FILED.
*DATE*: 750200.

ABSTRACT 1513

*TITLE*: PROPANE AS AN ENGINE FUEL FOR CLEANER AIR.
*AUTHOR*: NATIONAL LP GAS ASSOC.
*KEYWORDS*: LP GAS, AWARENESS.
*NOTES*: FILED.
*DATE*: 710000.

ABSTRACT 1514

*TITLE*: CARE AND HANDLING OF LP GAS AS AN ENGINE FUEL.
*AUTHOR*: NORTHERN PROPANE GAS CO.
*SOURCE*: NORTHERN PROPANE GAS CO, 4820 EXCELSIOR BLVD, MINNEAPOLIS, MN.
*KEYWORDS*: LP GAS, GENERAL.
*NOTES*: FILED.
*DATE*.

ABSTRACT 1515

*TITLE*: REPORT ON THE USE OF LIQUEFIED PETROLEUM GAS IN INDIANA.
*AUTHOR*: PURDUE UNIVERSITY.
*SOURCE*: AGR ECON DEPT, PURDUE UNIV, WEST LAFAYETTE, IN 47907, 17 SEPT 1973, 17 PP.
*KEYWORDS*: LP GAS, INDIANA, INDUSTRY.
*NOTES*: FILED.
*DATE*: 730917.
MECHANIZATION 1524 — 1527

ABSTRACT 1524

*TITLE: AGRICULTURAL MECHANIZATION.
*AUTHOR: MERRILL W C.
*SOURCE: OCCASIONAL PAPER 1: ECON AND SECTOR PLANNING DIV, OFFICE OF AGR. TECH ASSISTANCE BUREAU, US AGENCY FOR INTERNATIONAL.DEV, WASHINGTON DC 20523, SEPT 1975, 42 PP.
*KEYWORDS: MECHANIZATION, AGRICULTURE, LAND USE.
*NOTES: FILED.
*DATE: 750900

ABSTRACT 1525

*TITLE: DETERMINING CAPACITIES OF FARM MACHINES.
*AUTHOR: WHITE R G.
*SOURCE: E-1216, FARMING KNOW-HOW, MICH STATE UNIV, E LANSING, MI 48824, APRIL 1976, 6 PP.
*KEYWORDS: MECHANIZATION, MACHINERY, AGRICULTURE.
*NOTES: FILED.
*DATE: 760400

ABSTRACT 1526

*TITLE: TIPS FOR BUYING A USED TRACTOR.
*AUTHOR: WHITE R G.
*SOURCE: E-1113, FARMING KNOW-HOW, MICH STATE UNIV, E LANSING, MI 48824, JUNE 1977, 4 PP.
*KEYWORDS: MECHANIZATION, TRACTOR.
*NOTES: FILED.
*DATE: 770605

ABSTRACT 1527

*TITLE: MATCHING TRACTOR HORSEPOWER AND FARM IMPLEMENT SIZE.
*AUTHOR: WHITE R G.
*SOURCE: E-1152, FARMING KNOW-HOW, CES, MICHIGAN STATE UNIV, E LANSING, MI 48824, NOV 1977, 4 PP.
*KEYWORDS: MECHANIZATION, TRACTOR REQUIREMENTS, AGRICULTURE.
*NOTES: FILED.
*DATE: 771100

MHD 1528

ABSTRACT 1528

*TITLE: MHD GENERATORS - SUPER BLOWTORCHES DELIVER MORE POWER WITH LESS FUEL.
*AUTHOR: EDELSON E.
*KEYWORDS: MHD, ELECTRICAL.
*NOTES: FILED.
*DATE: 740303
NATURAL GAS 1530 -- 1545

ABSTRACT 1530

*TITLE: A REALISTIC VIEW OF US NATURAL GAS SUPPLY.
*AUTHOR: ALLEN F C, ZARESKI G K, BOYD E R.
*SOURCE: STAFF REPORT NO 2, FEDERAL POWER COMMISSION, BUREAU OF NATURAL GAS, WASHINGTON D C, DEC 1974, 21 PP.
*KEYWORDS: NATURAL GAS, USA.
*NOTES, FILED.
*DATE: 741200

ABSTRACT 1532

*AUTHOR: BAKER F E, ET AL.
*SOURCE: STAFF REPORT NO 2, FEDERAL POWER COMMISSION, BUREAU OF NATURAL GAS, WASHINGTON D C, FEB 1972, 150 PP.
*KEYWORDS: NATURAL GAS, SUPPLY DEMAND, WORLD WIDE, USA.
*NOTES, FILED.
*DATE: 720200

ABSTRACT 1534

*TITLE: NATURAL GAS DEREGULATION AND FOOD PRICES - RIPPLE.
*AUTHOR: BURKE C.
*SOURCE: NATIONAL CONSUMERS CONGRESS, 1346 CONNECTICUT AVE N W, WASHINGTON D C, 7 PP, UNDATED.
*KEYWORDS: NATURAL GAS, FERTILIZER, PRODUCTION, FOOD PROCESSING.
*NOTES, FILED.
*DATE:
ABSTRACT 1535

*TITLE* NATURAL GAS IN CALIFORNIA AGRICULTURE.  
*AUTHOR* CERVINKA V. ET AL.  
*SOURCE* AGR ENGR DEPT., UNIV OF CALIF, DAVIS, CA, JULY 1978, 73 PP.  
*KEYWORDS* NATURAL GAS, AGRICULTURE, CALIFORNIA, FOOD PROCESSING,  
SUPPLY DEMAND.  
*NOTES* FILED.  
*DATE* 760700

ABSTRACT 1536

*TITLE* THE IMPORTATION OF LIQUEFIED NATURAL GAS.  
*AUTHOR* DRAKE E, REID R C.  
*SOURCE* SCIENTIFIC AMER., 236(4)/22-29, APRIL 1977.  
*KEYWORDS* NATURAL GAS, USA, STORAGE, TRANSPORTATION, RESOURCES.  
*NOTES* FILED.  
*DATE* 770460

ABSTRACT 1537

*TITLE* PUMPING-PLANT EFFICIENCY CHECK FOR NATURAL GAS ENGINES.  
*AUTHOR* HOHN C, ABERNATHY G H.  
*SOURCE* GUIDE 440A-12L COOPERATIVE EXTENSION SERVICE, NEW MEXICO STATE UNIV., DEC 1975, 2 PP.  
*KEYWORDS* NATURAL GAS, ENGINE, EFFICIENCY, PUMPS.  
*NOTES* FILED.  
*DATE* 751202

ABSTRACT 1538

*AUTHOR* KITZMAN L.  
*SOURCE* MN MN ENERGY AGENCY, RESEARCH DIV. 740 AMERICAN CENTER BUILDING, ST PAUL, MN, SEPT 1975, 47 PP.  
*KEYWORDS* NATURAL GAS, MINNESOTA, SUPPLY DEMAND, ECONOMICS.  
*NOTES* FILED.  
*DATE* 750900

ABSTRACT 1539

*TITLE* POWER UNIT MODIFICATION TO ACCOMMODATE INTERRUPTIBLE FLOW OF NATURAL GAS.  
*AUTHOR* MILES J A.  
*KEYWORDS* NATURAL GAS, DIESEL, ARIZONA, ENGINE, IRRIGATION.  
*NOTES* FILED.  
*DATE* 770900

ABSTRACT 1540

*TITLE* NATURAL GAS.  
*AUTHOR* MOBIL OIL CORP.  
*SOURCE* MOBIL OIL CORPS NATIONAL ENERGY POLICY SERIES, 1974: 10 PP.  
*KEYWORDS* NATURAL GAS, POLICY.  
*NOTES* FILED.  
*DATE* 740900

ABSTRACT 1541

*TITLE* THE CONSUMER COSTS OF Deregulation OF THE FIELD PRICE OF NATURAL GAS.  
*AUTHOR* SEIDEL H R, BRYAN H G.  
*SOURCE* FEDERAL POWER COMMISSION, 28 APRIL 1975: 10 PP.  
*KEYWORDS* NATURAL GAS.  
*NOTES* FILED.  
*DATE* 750428

ABSTRACT 1542

*TITLE* THE CRISIS IN NATURAL GAS.  
*AUTHOR* UNION CARBIDE CORP.  
*SOURCE* UNION CARBIDE CORP. DEC 1975: 14 PP.  
*KEYWORDS* NATURAL GAS, LEGISLATION, ECONOMICS.  
*NOTES* FILED.  
*DATE* 751200
ABSTRACT 1543

*TITLE: ACTIONS ON NATURAL GAS CURTAILMENTS.
*AUTHOR: US-FEDERAL ENERGY ADMINISTRATION.
*SOURCE: FEA FACT SHEET, 10 SEPT 1975, 8 PP.
*KEYWORDS: NATURAL GAS, LEGISLATION, CONSERVATION.
*NOTES: FILED.
*DATE: 750910

ABSTRACT 1544

*TITLE: A PRELIMINARY EVALUATION OF THE COST OF NATURAL GAS DEREGULATION.
*AUTHOR: US-FEDERAL POWER COMMISSION.
*SOURCE: INTRAGENCY TASK FORCE, FEDERAL POWER COMMISSION, JAN 1975, 53 PP.
*KEYWORDS: NATURAL GAS, MODELS.
*NOTES: FILED.
*DATE: 750100

ABSTRACT 1545

*TITLE: WHEN THE WELL RUNS DRY.
*AUTHOR: WILLIAMS R H.
*KEYWORDS: NATURAL GAS, ALTERNATIVES, SUPPLY DEMAND.
*NOTES: FILED.
*DATE: 720600

NUCLEAR 1546 -- 1609

ABSTRACT 1546

*TITLE: QUESTION AROUND THE WORLD - WHEN CAN WE GET A POWER.
*AUTHOR: ANON.
*KEYWORDS: NUCLEAR, WORLD WIDE, SOCIAL IMPLICATIONS.
*NOTES: FILED.
*DATE: 740930

ABSTRACT 1547

*TITLE: HOW SAFE IS NUCLEAR POWER.
*AUTHOR: ANON.
*SOURCE: NEWSWEEK, 12 APRIL 1976, PP 70-75.
*KEYWORDS: NUCLEAR, ECONOMICS, GENERAL.
*NOTES: FILED.
*DATE: 760412

ABSTRACT 1548

*TITLE: WORLDS WITHIN WORLDS/THE STORY OF NUCLEAR ENERGY, VOL 1 - ATOMIC WEIGHTS, ENERGY, ELECTRICITY.
*AUTHOR: ASIMOV I.
*SOURCE: USERDA, OFFICE OF PUBLIC AFFAIRS, WASHINGTON D C, 1972, 62 PP.
*KEYWORDS: NUCLEAR, GENERAL.
*NOTES: FILED.
*DATE: 720000

ABSTRACT 1549

*AUTHOR: ASIMOV I.
*KEYWORDS: NUCLEAR, GENERAL.
*NOTES: FILED.
*DATE: 720000
ABSTRACT 1550

TITLE: WORLDS WITHIN WORLDS/THE STORY OF NUCLEAR ENERGY, VOL 3 - NUCLEAR FISSION, NUCLEAR FUSION, BEYOND FUSION.

AUTHOR: ASIMOV I.


KEYWORDS: NUCLEAR, GENERAL.

NOTES: FILED.

DATE: 720500

ABSTRACT 1551

TITLE: HOW FARES THE ATOM.

AUTHOR: BATTelle MEMORIAL INSTITUTE.

SOURCE: ENERGY PERSPECTIVES 23, BATTelle MEMORIAL INST, 509 KING AVE, COLUMBUS, OH, MAY 1976, 4 PP.

KEYWORDS: NUCLEAR.

NOTES: FILED.

DATE: 760500

ABSTRACT 1552

TITLE: NUCLEAR ENERGY - A FATEFUL CHOICE FOR FRANCE.

AUTHOR: BAUER E. ET AL.


KEYWORDS: NUCLEAR, FRANCE, THERMOELECTRIC.

NOTES: FILED.

DATE: 760100

ABSTRACT 1553

TITLE: THE HEALTH HAZARDS OF NOT GOING NUCLEAR.

AUTHOR: BECKMANN P.

SOURCE: BOULDER, CO/GOLEM PRESS, 1976, 190PP.

KEYWORDS: NUCLEAR, AWARENESS, ENVIRONMENT.

NOTES: FILED, NUCLEAR POWER ACCIDENTS, POLITICS, EMISSIONS, ECONOMY.

AND WASTE DISPOSAL ARE MAJOR TOPICS.

DATE: 760100

ABSTRACT 1554

TITLE: ELECTRIC POWER FROM NUCLEAR FISSION.

AUTHOR: BENEDICT M.


KEYWORDS: NUCLEAR, ELECTRICAL, FOSSIL FUELS.

NOTES: FILED.

DATE: 710300

ABSTRACT 1555

TITLE: THE NECESSITY OF FISSION POWER.

AUTHOR: BETHE H A.


KEYWORDS: NUCLEAR, USA, ENERGY SOURCES, POLLUTION.

NOTES: FILED.

DATE: 760100

ABSTRACT 1556

TITLE: NUCLEAR POWER PLANTS.

AUTHOR: CALTEX OIL CORP.


KEYWORDS: NUCLEAR.

NOTES: FILED.

DATE: 600200

ABSTRACT 1557

TITLE: NUCLEAR POWER AND THE ENVIRONMENT.

AUTHOR: CAMPANA R JOHN, LANGER S.

SOURCE: AMER NUCLEAR SOCIETY, 244 E OGDEN AVE, MINSDALE, ILL, MARCH 1974, 64 PP

KEYWORDS: NUCLEAR, ENVIRONMENT, RADIATION, FOSSIL FUELS.

NOTES: FILED.

DATE: 740300
THE ECONOMIC ISSUES OF THE FAST BREEDER REACTOR PROGRAM.

AUTHOR: CHOW B G.


KEYWORDS: NUCLEAR, BREEDER REACTOR, ECONOMICS.

NOTES: FILED. THE ECONOMIC BENEFITS OF THE FAST BREEDER REACTOR MAY NOT BE AS DEFINITIVE AS ITS PROPONENTS CLAIM.

DATE: 770211

ABSTRACT 1559

THE DISPOSAL OF RADIOACTIVE WASTES FROM FISSION REACTORS.

AUTHOR: COHEN B L.


KEYWORDS: NUCLEAR, WASTES.

NOTES: FILED.

DATE: 770600

ABSTRACT 1560

NUCLEAR POWER - THE DEVIL WE DON'T KNOW.

AUTHOR: COYNE P.


KEYWORDS: NUCLEAR, SOCIAL IMPLICATIONS, USA, WORLD WIDE.

NOTES: FILED.

DATE: 750100

ABSTRACT 1561

PROSPECTS FOR NUCLEAR POWER GENERATION IN PRIVATE INDUSTRY.

AUTHOR: DECKER G L.


KEYWORDS: NUCLEAR, INDUSTRY, ELECTRICAL, HEAT.

NOTES: FILED.

DATE: 750906

ABSTRACT 1562

HIGH-LEVEL RADIOACTIVE WASTE - SAFE STORAGE AND ULTIMATE DISPOSAL.

AUTHOR: DUKERT L M.

SOURCE: USERDA TECH INFO CENTER, PO BOX 62, OAK RIDGE, TENN 1975, 23 PP.

KEYWORDS: NUCLEAR, WASTES, STORAGE.

NOTES: FILED.

DATE: 750800

ABSTRACT 1563

FUSION POWER - IS IT ALL COMING TOGETHER?

AUTHOR: EDELSON E.


KEYWORDS: NUCLEAR.

NOTES: FILED.

DATE: 740800

ABSTRACT 1564

THE SILENT BOMB - A GUIDE TO THE NUCLEAR ENERGY CONTROVERSY.

AUTHOR: FAULKNER P. ED.

SOURCE: NEW YORK NY/VINTAGE BOOKS, DIV OF RANDOM HOUSE, 1977, 382PP.

KEYWORDS: NUCLEAR, AWARENESS, SOCIAL IMPLICATIONS, SAFETY.

NOTES: FILED. NUCLEAR POWER IS TOO RISKY, THE BENEFITS DO NOT OUTWEIGH THE RISKS. NUCLEAR POWER PLANTS COULD BECOME NUCLEAR BOMBS. THESE VIEWPOINTS ARE PRESENTED ALONG WITH OTHER ASPECTS OF NUCLEAR POWER.

DATE: 770800

ABSTRACT 1565

COMPARATIVE BREEDING CHARACTERISTICS OF FUSION AND FAST REACTORS.

AUTHOR: FORTESCUE P.


KEYWORDS: NUCLEAR, BREEDER REACTOR.

NOTES: FILED. EXPRESSIONS ARE DEVELOPED TO ALLOW READY COMPARISON OF A HYBRID FISSION-FUSION PLANT AND A FAST BREEDER WITH RESPECT TO THE NUMBER OF THERMAL REACTORS THAT THEIR FISSILE PRODUCTION COULD SUPPORT. RESULTS ARE PRESENTED GRAPHICALLY BOTH FOR THE STEADY STATE AND FOR INDUSTRIES OF ARBITRARY GROWTH RATE.

DATE: 770617
ABSTRACT 1567

TITLE: ATOMIC ENERGY AND YOUR WORLD.
AUTHOR: GLASSTONE S., THOMAS S.
SOURCE: ERDA, TECH INFO CENTER, OAK RIDGE, TENN., 1974, 57 PP.
KEYWORDS: NUCLEAR, GENERAL.
NOTES: FILED.
DATE: 741000

ABSTRACT 1568

TITLE: CONTROLLED NUCLEAR FUSION.
AUTHOR: GLASSTONE S.
SOURCE: ERDA, TECH INFO CENTER, OAK RIDGE, TENN., 1974, 84 PP.
KEYWORDS: NUCLEAR.
NOTES: FILED.
DATE: 741000

ABSTRACT 1569

TITLE: NUCLEAR FUELS POLICY REPORT OF THE ATLANTIC COUNCILS NUCLEAR FUELS POLICY WORKING GROUP.
AUTHOR: GRAY J. E.
KEYWORDS: NUCLEAR, POLICY, ALTERNATIVES, SUPPLY DEMAND.
NOTES: FILED.
DATE: 760000

ABSTRACT 1570

TITLE: NUCLEAR PROLIFERATION (II)--WARNINGS FROM THE ARMS CONTROL COMMUNITY.
AUTHOR: HAMMOND A. L.
KEYWORDS: NUCLEAR, ECONOMICS.
NOTES: FILED.
DATE: 760709

ABSTRACT 1571

TITLE: LIVING WITH THE FAUCIUS BARGAIN.
AUTHOR: HARDI D. G.
KEYWORDS: NUCLEAR, SAFETY, SOCIAL IMPLICATIONS.
NOTES: FILED. ATOMIC ENERGY IS NO SAFER THAN ITS WEAKEST LINK, THE MECHANICAL ELEMENTS CAN BE STRENGTHENED, BUT WHAT CAN BE DONE TO IMPROVE THE PEOPLE.
DATE: 761100

ABSTRACT 1572

TITLE: NUCLEAR POWER - THE FIFTH HORSEMAN.
AUTHOR: HAYES D. W.
SOURCE: WORLDWATCH PAPER 6, WORLDWATCH INST., 1776 MASSACHUSETTS AVE N W, WASHINGTON D.C., MAY 1976, 68 PP.
KEYWORDS: NUCLEAR, ENVIRONMENT.
NOTES: FILED.
DATE: 760500

ABSTRACT 1573

TITLE: NUCLEAR REACTORS.
AUTHOR: MOGERTON J. F.
SOURCE: USEC, TECH INFO CENTER, PO BOX 62, OAK RIDGE, TENN., 1974, 54 PP.
KEYWORDS: NUCLEAR, GENERAL, DESIGN.
NOTES: FILED.
DATE: 740000
ABSTRACT 1574

TITLE: THE DISTRUST OF NUCLEAR POWER.
AUTHOR: HOFMENSEN C. R. KATES R.
KEYWORDS: NUCLEAR, COAL, HYDROPOWER, SAFETY.
NOTES: FILED. NUCLEAR POWER IS ASSESSED HYPERCRITICALLY BECAUSE OF ITS UNIQUE HISTORY, COMPLEXITY, AND SAFETY MANAGEMENT.
DATE: 770401

ABSTRACT 1575

TITLE: THE DISTRUST OF NUCLEAR POWER.
AUTHOR: HOFMENSEN C. R. KATES R.
KEYWORDS: NUCLEAR, COAL, HYDROPOWER, SAFETY.
NOTES: FILED. NUCLEAR POWER IS ASSESSED HYPERCRITICALLY BECAUSE OF ITS UNIQUE HISTORY, COMPLEXITY, AND SAFETY MANAGEMENT.
DATE: 770401

ABSTRACT 1576

TITLE: MARKET SURVEY FOR NUCLEAR POWER IN DEVELOPING COUNTRIES.
AUTHOR: INTERNATIONAL ATOMIC ENERGY AGENCY.
SOURCE: INTERNATIONAL ATOMIC ENERGY AGENCY, KARNTNER RING 11, PO BOX 590, 1 A-1010, VIENNA, AUSTRIA.
KEYWORDS: NUCLEAR, ECONOMICS, INTERNATIONAL, DEVELOPING COUNTRIES.
NOTES: AID, DOZEN OR MORE VOLUMES FOR VARIOUS LOCALS.
DATE: 780414

ABSTRACT 1577

TITLE: NUCLEAR POWER ISSUES AND CHOICES.
AUTHOR: KEENY S R, ET AL.
SOURCE: CAMBRIDGE, MA/BALLINGER PUBLISHING CO, 1977, 410PP.
KEYWORDS: NUCLEAR, ALTERNATIVES, BREEDER REACTOR, ECONOMICS, ENVIRONMENT, POLICY, SAFETY.
NOTES: FILED. GENERAL OVERVIEW OF ALL ASPECTS OF NUCLEAR POWER.
DATE: 770500

ABSTRACT 1578

TITLE: THE FAUSTIAN BARGAIN.
AUTHOR: KNEESE A Y.
KEYWORDS: NUCLEAR, ECONOMICS, SOCIAL IMPLICATIONS.
NOTES: FILED.
DATE: 750900

ABSTRACT 1579

TITLE: LASER ENRICHMENT OF URANIUM—THE PROLIFERATION CONNECTION.
AUTHOR: KRASS A S.
KEYWORDS: NUCLEAR.
NOTES: FILED. SERIOUS POLICY ISSUES ARE RAISED BY THE PROSPECT OF SMALL, EFFICIENT URANIUM ENRICHMENT PLANTS.
DATE: 770513

ABSTRACT 1580

TITLE: RADIATION POLLUTION OF THE ENVIRONMENT.
AUTHOR: LINDOP P J, ROTBLAT J.
KEYWORDS: NUCLEAR, ENVIRONMENT, POLLUTION, RADIATION.
NOTES: FILED.
DATE: 710900

ABSTRACT 1581

TITLE: NUCLEAR POWER PLANTS.
AUTHOR: LYERLY R L, MITCHELL W.
SOURCE: USAEC, TECH INFO CENTER, PO BOX 62, OAK RIDGE, TENN, 1974, 55 PP.
KEYWORDS: NUCLEAR, GENERAL.
NOTES: FILED.
DATE: 740500
ABSTRACT 1582

• TITLE: EUROPEAN BREEDERS (I) - FRANCE LEADS THE WAY.
• AUTHOR: METZ W D.
• SOURCE: SCIENCE. DEC 1975, PP 1279-1281.
• KEYWORDS: NUCLEAR, FRANCE, UNITED KINGDOM, SOVIET UNION, USA, BREEDER REACTOR.
• NOTES: FILED.
• DATE: 75-1200

ABSTRACT 1583

• TITLE: FUSION RESEARCH (I)--WHAT IS THE PROGRAM BUYING THE COUNTRY.
• AUTHOR: METZ W D.
• KEYWORDS: NUCLEAR, BREEDER REACTOR, ELECTRICAL.
• NOTES: FILED.
• DATE: 76-0625

ABSTRACT 1584

• TITLE: FUSION RESEARCH (III)--DETAILED REACTOR STUDIES IDENTIFY MORE PROBLEMS.
• AUTHOR: METZ W D.
• KEYWORDS: NUCLEAR, BREEDER REACTOR, DESIGN.
• NOTES: FILED.
• DATE: 76-0702

ABSTRACT 1585

• TITLE: FUSION RESEARCH (III)--NEW INTEREST IN FUSION-ASSISTED BREEDERS.
• AUTHOR: METZ W D.
• KEYWORDS: NUCLEAR, BREEDER REACTOR.
• NOTES: FILED.
• DATE: 76-0723

ABSTRACT 1586

• TITLE: REPROCESSING--HOW NECESSARY IS IT FOR THE NEAR TERM.
• AUTHOR: METZ W D.
• SOURCE: SCIENCE. 196(4285)/41, 43-45, 1 APRIL 1977.
• KEYWORDS: NUCLEAR, BREEDER REACTOR.
• NOTES: FILED.
• DATE: 77-0401

ABSTRACT 1587

• TITLE: THE NUCLEAR POWER CONTROVERSY.
• AUTHOR: MURPHY A W. ED.
• SOURCE: ENGLEVWOOD CLIFFS, N J: PRENTICE-HALL 1976, 188PP.
• KEYWORDS: NUCLEAR, SAFETY, ECONOMICS.
• NOTES: FILED. SIX AUTHORS WRITE ON NUCLEAR SAFETY, ECONOMICS, REGULATIONS, APPLICABILITY, LIMITS AND THE POLITICAL IMPLICATIONS OF NUCLEAR POWER.
• DATE: 76-0000

ABSTRACT 1588

• TITLE: UNACCEPTABLE RISK - THE NUCLEAR POWER CONTROVERSY.
• AUTHOR: OLSON M C.
• SOURCE: BANTAM BOOK INC, 666 FIFTH AVE, NEW YORK 10019, AUG 1976, 307 PP.
• KEYWORDS: NUCLEAR, POLICY, LEGISLATION, USA, SOCIAL IMPLICATIONS.
• NOTES: FILED.
• DATE: 76-0800

ABSTRACT 1589

• TITLE: ATOMS IN AGRICULTURE - APPLICATIONS OF NUCLEAR SCIENCE TO AGRICULTURE.
• AUTHOR: OSBORNE T S.
• SOURCE: UNDERSTANDING THE ATOM SERIES, USAEC, TECN INFO CENTER, OAK RIDGE, TENN. 1963, 23 PP.
• KEYWORDS: NUCLEAR, AGRICULTURE.
• NOTES: FILED.
• DATE: 63-0000

ABSTRACT 1590

• TITLE: NUCLEAR POWER.
• AUTHOR: PATTERSON W C.
• SOURCE: BALTIMORE/PENGUIN BOOKS INC, 1976, 304 PP.
• KEYWORDS: NUCLEAR.
• NOTES: FILED.
• DATE: 76-0000
ABSTRACT 1591

*TITLE* FUSION POWER - THE UNCERTAIN CERTAINTY.
*AUTHOR* POST R F.
*KEYWORDS* NUCLEAR.
*NOTES* FILED.
*DATE* 711009

ABSTRACT 1592

*TITLE* FUSION REACTORS AS FUTURE ENERGY SOURCES.
*AUTHOR* POST R F + RIDE F L.
*SOURCE* SCIENCE, 186(4162)/397-407, 1 NOV 1974.
*KEYWORDS* NUCLEAR, ENVIRONMENT, ECONOMICS, ENERGY SOURCES.
*NOTES* FILED.
*DATE* 741101

ABSTRACT 1593

*TITLE* NUCLEAR POWER, POTENTIAL FOR THE SHORT TERM.
*AUTHOR* POWERS P M.
*SOURCE* FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, WASHINGTON D C, 20-24, 1975, 18 PP.
*KEYWORDS* NUCLEAR.
*NOTES* FILED.
*DATE* 750923

ABSTRACT 1594

*TITLE* NUCLEAR REACTOR SAFETY.
*AUTHOR* PRINACK J.
*SOURCE* BULLETIN OF THE ATOMIC SCIENTISTS, 31(7)/15-51, SEPT 1975.
*KEYWORDS* NUCLEAR, SOCIAL IMPLICATIONS.
*NOTES* FILED.
*DATE* 750906

ABSTRACT 1595

*TITLE* NUCLEAR WASTE DISPOSAL - TWO SOCIAL CRITERIA.
*AUTHOR* ROCHLIN G I.
*SOURCE* SCIENCE, 195(4273)/23-31, 7 JAN 1977.
*KEYWORDS* NUCLEAR WASTES.
*NOTES* FILED. TECHNICAL IRREVERSIBILITY AND SITE MULTIPLICITY ARE SUGGESTED AS CRITERIA FOR SAFE NUCLEAR WASTE DISPOSAL.
*DATE* 770107

ABSTRACT 1596

*TITLE* NUCLEAR POWER - COMPARED TO WHAT.
*AUTHOR* ROSE D J, WALSH P W, LESKOVJAN L L.
*KEYWORDS* NUCLEAR, ENVIRONMENT, ECONOMICS, SOCIAL IMPLICATIONS.
*NOTES* FILED.
*DATE* 760502

ABSTRACT 1597

*TITLE* NUCLEAR POWER, NUCLEAR WEAPONS AND INTERNATIONAL STABILITY.
*AUTHOR* ROSE D J, LESTER R K.
*SOURCE* SCIENTIFIC AMER, 230(41)/45-57, APRIL 1978.
*KEYWORDS* NUCLEAR, INTERNATIONAL.
*NOTES* FILED. IRRESOLUTION OVER DOMESTIC ENERGY POLICY AND THE ROLE OF NUCLEAR POWER MAY ACT TO UNDERMINE CURRENT US EFFORTS TO CONTROL THE PROLIFERATION OF NUCLEAR WEAPONS.
*DATE* 770400

ABSTRACT 1598

*TITLE* ECONOMICS OF NUCLEAR POWER.
*AUTHOR* ROSSIN A D, RIES G T A.
*SOURCE* SCIENCE, 211(552)/582-589, 18 AUG 1978.
*KEYWORDS* NUCLEAR, ECONOMICS.
*NOTES* FILED.
*DATE* 780818
*TITLE: THE TOKAMAK - MODEL T FUSION REACTOR.  
*AUTHOR: STEINER D. CLARKE J. F.  
*KEYWORDS: NUCLEAR, TECHNOLOGY ASSESSMENT.  
*NOTES: FILED.  
*DATE: 780331

ABSTRACT 1600

*TITLE: ISSUES IN THE RADIATION CONTROVERSY.  
*AUTHOR: TAMPLIN A. R.  
*KEYWORDS: NUCLEAR, RADIATION.  
*NOTES: FILED.  
*DATE: 710900

ABSTRACT 1601

*TITLE: PROSPECTS FOR UTILIZATION OF NUCLEAR POWER IN AFRICA.  
*AUTHOR: UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL, ECONOMIC COMMISSION FOR AFRICA, SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976.  
*KEYWORDS: NUCLEAR, AFRICA.  
*NOTES: FILED.  
*DATE: 760301

ABSTRACT 1602

*TITLE: THE USES OF ATOMIC ENERGY IN FOOD AND AGRICULTURE.  
*AUTHOR: UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL.  
*SOURCE: FAO, ROME, ITALY, JULY 1955, 19 PP.  
*KEYWORDS: NUCLEAR, AGRICULTURE, WORLD WIDE.  
*NOTES: FILED. A SURVEY PREPARED FOR SUBMISSION TO THE UNITED NATIONS CONF ON THE PEACEFUL USES OF ATOMIC ENERGY, GENEVA, AUG 1955.  
*DATE: 550700

ABSTRACT 1603

*TITLE: LIGHT WATER BREEDER REACTOR.  
*AUTHOR: US-ATOMIC ENERGY COMMISSION.  
*SOURCE: US ATOMIC ENERGY COMMISSION, TECH INFO CENTER, PO BOX 62, OAK RIDGE, TN.  
*KEYWORDS: NUCLEAR, BREEDER REACTOR.  
*NOTES: FILED.  
*DATE: 790600

*ABSTRACT 1604

*TITLE: NUCLEAR TERMS - A GLOSSARY.  
*AUTHOR: US-ATOMIC ENERGY COMMISSION.  
*SOURCE: US ATOMIC ENERGY COMMISSION, TECH INFO CENTER, PO BOX 62, OAK RIDGE, TN, 1979, 60 PP.  
*KEYWORDS: NUCLEAR, CATALOG.  
*NOTES: FILED.  
*DATE: 790600

ABSTRACT 1605

*TITLE: LIQUID METAL FAST BREEDER REACTOR PROGRAM.  
*AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.  
*SOURCE: ERDA FACT SHEET, JAN 1976, 11 PP.  
*KEYWORDS: NUCLEAR, ENVIRONMENT, BREEDER REACTOR.  
*NOTES: FILED.  
*DATE: 760100

ABSTRACT 1606

*TITLE: SUPERPHENIX - A FULL-SCALE BREEDER REACTOR.  
*AUTHOR: YENDRES G. A.  
*KEYWORDS: NUCLEAR, FRANCE, WORLD WIDE, BREEDER REACTOR.  
*NOTES: FILED.  
*DATE: 770300
ABSTRACT 1607

•TITLE: SOCIAL INSTITUTIONS AND NUCLEAR ENERGY.
•AUTHOR: WEINBERG A M.
•SOURCE: SCIENCE, 177(27-34), 7 JULY 1972.
•KEYWORDS: NUCLEAR, ENVIRONMENT, SOCIAL IMPLICATIONS, WASTES.
•NOTES: FILED.
•DATE: 720707

ABSTRACT 1608

•TITLE: THE MANY DIMENSIONS OF SCIENTIFIC RESPONSIBILITY
•AUTHOR: WEINBERG A M.
•KEYWORDS: NUCLEAR, SAFETY, SOCIAL IMPLICATIONS.
•NOTES: FILED.
•DATE: 761110

ABSTRACT 1609

•TITLE: NUCLEAR ENERGY QUESTIONS ASKED BY DELEGATES TO EMPLOYE NEWS CONFERENCE.
•AUTHOR: WOOD J & SULLIVAN F.
•KEYWORDS: NUCLEAR, INDUSTRY.
•NOTES: FILED.
•DATE: 760614

ORGANIC — 1997

ABSTRACT 1610

•TITLE: ECONOMICS OF CORN STOVER AS A COAL SUPPLEMENT IN STEAM-ELECTRIC POWER PLANTS IN THE NORTH CENTRAL UNITED STATES.
•AUTHOR: ABDALLAH M H, HIZHUSEN F, HUSHAK L.
•KEYWORDS: ORGANIC, ALTERNATIVES, CORN STALKS.
•NOTES: ABSTRACT FILED.
•DATE: 780900

ABSTRACT 1611

•TITLE: ECONOMICS OF CORN STOVER AS A COAL SUPPLEMENT IN STEAM-ELECTRIC POWER PLANTS IN THE NORTH CENTRAL UNITED STATES.
•AUTHOR: ABDALLAH M H.
•SOURCE: DEPT OF AGR ECON, OHIO STATE UNIV, COLUMBUS, OH, 1978, 28 PP.
•KEYWORDS: ORGANIC, ALTERNATIVES, CORN STUBBLE.
•NOTES: FILED.
•DATE: 780800

ABSTRACT 1612

•TITLE: SAFETY AND DESIGN CONSIDERATIONS FOR FARM DIGESTERS.
•AUTHOR: ABELES T P, DALL E H.
•KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, SAFETY.
•NOTES: FILED.
•DATE: 771024
ABSTRACT 1613

•TITLE• ENERGY AND ECONOMIC ANALYSIS OF ANAEROBIC DIGESTERS.
•AUTHOR• ABELES T B.
•SOURCE• IN THE BOOK - ENERGY, AGRICULTURE AND WASTE MANAGEMENT, W J JEWELL, ANN ARBOR, MI/ANN AGER SCI PUBL INC, 1975, PP 353-360.
•KEYWORDS• ORGANIC, MANURE, ANAEROBIC FERMENTATION, BIOGAS.
•NOTES• FILED. BASED ON A PROTOTYPE DIGESTER FOR A FEW COWS AND A LARGER SYSTEM MEANT TO HANDLE 100 HEAD. THIS REPORT IS A TOTAL SYSTEMS STUDY TO DETERMINE THE OPTIMUM OPERATING SYSTEM FOR USE ON MIDWEST DAIRY FARMS, COVERING THE MECHANICS OF OPERATION, ENERGY OPTIMIZATION AND ENVIRONMENTAL IMPACT. ALSO A SOCIOLOGICAL STUDY TO DETERMINE THE ACCEPTABILITY OF ANAEROBIC DIGESTERS AS A VAILABLE FARM MANAGEMENT TECHNIQUE. THERE IS ALSO A SECTION ON NEW TYPES OF AGRIBUSINESS AND AN IMPACT THEORY THE DIGESTERS WOULD HAVE ON THE UTILITY COMPANIES.
•DATE• 750000

ABSTRACT 1614

•TITLE• THE ECONOMICS OF RESOURCE RECOVERY FROM MUNICIPAL SOLID WASTE.
•AUTHOR• ABERT J G, HARVEY A, BERNHEISER J F.
•SOURCE• SCIENCE, 183/1052-1058, 15 MARCH 1974.
•KEYWORDS• ORGANIC, RECYCLING, ECONOMICS, MUNICIPAL WASTE.
•NOTES• FILED.
•DATE• 740315

ABSTRACT 1615

•TITLE• PRODUCTION OF SUGARCANE AND TROPICAL GRASSES AS A RENEWABLE ENERGY SOURCE.
•AUTHOR• ALEXANDER A G.
•SOURCE• AGR EXPT STA, UNIV OF PUERTO RICO, CENTER FOR ENERGY AND ENVIR RESEARCH, RIO PIEDRAS, PUERTO RICO, 1976, 100 PP.
•KEYWORDS• ORGANIC, ENERGY CROPS.
•NOTES• FILED. GREENHOUSE EXPERIMENTS DEalt WITH THE RAPID SCREENING OF COMMERCIAL SACCHARUM HYBRIDS, PRIMITIVE SACCHARUM SPECIES, AND SPECIES FROM THE GENERA PENNISETUM, SORGHUM, ESIANTHUS, ARANDA AND PANICUM. PRINCIPLE TEST PARAMETERS INCLUDED TOTAL BIOMASS-PRODUCING CAPABILITIES, CHARACTERISTIC GROWTH CURVES, RECURRENT TOLERANCE, SATURATION PROFILES (CONVERSION OF GREEN TISSUE TO DRY MATTER), RESPONSE TO CHEMICAL GROWTH REGULATORS, AND RESPONSE TO VARIABLE NITROGEN SUPPLIES. FIELD PLOT EXPERIMENTS WERE ESTABLISHED WITH CONTROLLED VARIABLES INCLUDING VARIETIES - 3 SUGARCON, 3 NAPIER GRASS AND SORDAN TO-A, ROW CENTERS, 150, 50 AND 25 CM AND HARVEST FREQUENCY - 2, 4, 6 AND 12 MONTH INTERVALS. THE DATA OBSERVATIONS ARE BASED ON PARTIALLY COMPLETE DATA OVER A TIME COURSE OF TEN MONTHS.
•DATE• 780000

ABSTRACT 1616

•TITLE• PRODUCTION OF SUGARCANE AND TROPICAL GRASSES AS A RENEWABLE ENERGY SOURCE FIRST ANNUAL REPORT 1977-1978.
•AUTHOR• ALEXANDER A G.
•SOURCE• AGR EXPT STA, UNIV OF PUERTO RICO, CENTER FOR ENERGY AND ENVIR RESEARCH, RIO PIEDRAS, PUERTO RICO, 1976, 100 PP.
•KEYWORDS• ORGANIC, ENERGY CROPS.
•NOTES• FILED. GREENHOUSE EXPERIMENTS DEalt WITH THE RAPID SCREENING OF COMMERCIAL SACCHARUM HYBRIDS, PRIMITIVE SACCHARUM SPECIES, AND SPECIES FROM THE GENERA PENNISETUM, SORGHUM, ESIANTHUS, ARANDA AND PANICUM. PRINCIPLE TEST PARAMETERS INCLUDED TOTAL BIOMASS-PRODUCING CAPABILITIES, CHARACTERISTIC GROWTH CURVES, RECURRENT TOLERANCE, SATURATION PROFILES (CONVERSION OF GREEN TISSUE TO DRY MATTER), RESPONSE TO CHEMICAL GROWTH REGULATORS, AND RESPONSE TO VARIABLE NITROGEN SUPPLIES. FIELD PLOT EXPERIMENTS WERE ESTABLISHED WITH CONTROLLED VARIABLES INCLUDING VARIETIES - 3 SUGARCON, 3 NAPIER GRASS AND SORDAN TO-A, ROW CENTERS, 150, 50 AND 25 CM AND HARVEST FREQUENCY - 2, 4, 6 AND 12 MONTH INTERVALS. THE DATA OBSERVATIONS ARE BASED ON PARTIALLY COMPLETE DATA OVER A TIME COURSE OF TEN MONTHS.
•DATE• 780000

ABSTRACT 1617

•TITLE• PREPARATION AND UTILIZATION OF METHANE BACTERIA AS STARTER IN BIOGAS PRODUCTION.
•AUTHOR• ALCIBUSAN R V, JOSE V R, RODULFO B R.
•SOURCE• WORLD SCIENCE NEWS, 1104 ABDUL REMMAN RD, KAROL BAGH, NEW DELHI-1, INDIA, 2 PP, UNDATED.
•KEYWORDS• ORGANIC, PHILIPPINES, METHANE, ANAEROBIC FERMENTATION.
•NOTES• FILED.
•DATE•

ABSTRACT 1618

•TITLE• ENERGY FROM AGRICULTURE.
•AUTHOR• ALICH J A, INMAN R E.
•SOURCE• ICECC 1975 RECORD, PP 834-841.
•KEYWORDS• ORGANIC, WASTES, BIOGAS, AGRICULTURE.
•NOTES• FILED.
•DATE• 750000
ABSTRACT 1619

**TITLE**: AGRICULTURAL AND FORESTRY WASTES AS AN ENERGY SOURCE.

**AUTHOR**: ALICH J A, WITMER J G.


**KEYWORDS**: ORGANIC, WASTES, ECONOMICS, MODELS.

**NOTES**: THE ECONOMICS OF BIOMASS ENERGY IN THE CONTEXT OF THE US ENERGY SYSTEM ARE STUDIED USING A COMPLEX COMPUTER MODEL. THE MODEL PERMITS AN INVESTIGATION OF LEVELS AND PRICES AT WHICH BIOMASS CAN BE USED AND AN APPRAISAL OF THE ENERGY PROCESS THAT BIOMASS CAN DISPLACE. THE FEASIBILITY OF CONVERTING AGRICULTURAL AND FORESTRY RESIDUES TO ENERGY CAN BE EVALUATED ON A COUNTY-BY-COUNTY BASIS FOR THE CONterminous US.

**DATE**: 760815

ABSTRACT 1620

**TITLE**: EFFECTIVE UTILIZATION OF SOLAR ENERGY TO PRODUCE CLEAN FUEL.

**AUTHOR**: ALICH J A, INMAN R E.

**SOURCE**: IN THE BOOK - CLEAN FUELS FROM BIOMASS; SEWAGE, URBAN REFUSE, AND AGRICULTURAL WASTES; J W WHITE, ED; INST OF GAS TECH, 3424 S STATE ST, CHICAGO, IL 60611, MARCH 1976, PP 287-310.

**KEYWORDS**: ORGANIC, SOLAR, PHOTOSYNTHESIS, ECONOMICS, BIBLIOGRAPHY.

**NOTES**: FILED. THIS REFERENCE DISCUSSES FACTORS AFFECTING PLANT BIOMASS PRODUCTION, ENERGY CONTENT OF PLANT BIOMASS, BIOMASS SPECIES AND YIELDS, ECONOMICS AND GEOGRAPHICAL CONSIDERATIONS IN PLANTATION SIGHTING. BIOMASS UTILIZATION IS DISCUSSED. CONSIDERS BIOMASS AN IMPORTANT NATURAL RESOURCE WITH SEVERAL ENERGY PRODUCTION POTENTIALS.

**DATE**: 740600

ABSTRACT 1621

**TITLE**: ENERGY FROM AGRICULTURE.

**AUTHOR**: ALICH J A.

**SOURCE**: IN THE BOOK - CLEAN FUELS FROM BIOMASS, SEWAGE, URBAN REFUSE, AND AGRICULTURAL WASTES; J W WHITE, ED; INST OF GAS TECH, 3424 S STATE ST, CHICAGO, IL 60611, MARCH 1976, PP 287-310.

**KEYWORDS**: ORGANIC, ENERGY CROPS, ECONOMICS, TECHNOLOGY ASSESSMENT.

**NOTES**: FILED. IT IS PROJECTED THAT UNDER THE ACCELERATED IMPLEMENTATION PLAN BIODEGRADATION MIGHT PROVIDE AS MUCH AS 8 PERCENT OF OUR ENERGY REQUIREMENTS IN THE YEAR 2005. FURTHER SPECULATION THAT UNDER THIS SCENARIO BIOMASS WILL BE THE SINGLE MOST IMPORTANT SOLAR ENERGY CONCEPT. UNDER BIODEGRADATION FOUR SOURCES OF BIOMASS ARE INCLUDED - URBAN SOLID WASTE, AGRICULTURAL RESIDUES, AND ENERGY CROPS, BOTH TERRESTRIAL AND MARINE. THIS PAPER CONCENTRATES ON TERRESTRIAL ENERGY CROPS, WHILE ONLY BRIEFLY COMMENTING ON OTHER SCHEMES. THE TYPES OF VEGETATION BEST SUITED FOR AN INTENSIVE ENERGY PLANTATION AS WELL AS SELECTION CRITERIA IS DISCUSSED. THE TYPE AND AVAILABILITY OF LAND FOR AS WELL AS THE LOGISTICS AND ECONOMICS OF GROWING ENERGY CROPS ON A CONCEPTUAL TERRESTRIAL PLANTATION IS DISCUSSED. AN ENERGY BUDGET FOR PLANT MATERIALS PRODUCTION AND HARVESTING IS DEVELOPED. A TDNOCOMPARISON OF FIRING THE CROPS DIRECTLY FOR ELECTRICITY WITH CONVERSION TO METHANE OR LOW BTU GAS EITHER AT THE FARMSITE OR AT SELECTED MARKETS IS MADE.

**DATE**: 760300

ABSTRACT 1622

**TITLE**: UTILIZATION OF PLANT BIOMASS AS AN ENERGY FEEDSTOCK.

**AUTHOR**: ALICH J A, INMAN R E.

**SOURCE**: IN THE BOOK - CLEAN FUELS FROM BIOMASS; SEWAGE, URBAN REFUSE, AND AGRICULTURAL WASTES; J W WHITE, ED; INST OF GAS TECH, 3424 S STATE ST, CHICAGO, IL 60611, MARCH 1976, PP 287-310.

**KEYWORDS**: ORGANIC, ENERGY CROPS, CONVERSION, ALTERNATIVE FUELS, ECONOMICS, TECHNOLOGY ASSESSMENT.


**DATE**: 750000

ABSTRACT 1623

**TITLE**: ENERGY FROM TRASH.

**AUTHOR**: ANDERSON R J, BALL D A, ENGDAL R B.

**SOURCE**: ENERGY PERSPECTIVES, 32/4PP, OCT 1975, Battelle Memorial Inst, 585 KING AVE, COLUMBUS, OH.

**KEYWORDS**: ORGANIC, RECYCLING, ENERGY SOURCES, MUNICIPAL WASTE.

**NOTES**: FILED.

**DATE**: 751000
ABSTRACT 1624

**TITLE:** ENERGY POTENTIAL FROM ORGANIC WASTES - A REVIEW OF THE QUANTITIES AND SOURCES.

**AUTHOR:** ANDERSON L L.

**SOURCE:** US DEPT OF INTERIOR, BUREAU OF MINES INFO CIRCULAR 8549, 1972 14 PP.

**KEYWORDS:** ORGANIC WASTES, CONVERSION.

**NOTES:** THIS REPORT ITEMS ORGANIC MATERIAL THAT ARE MOISTURE- AND ASH-FREE AND HAVE A POTENTIAL FOR FUEL OIL OR FUEL GAS. ORGANIC MATERIAL FROM MANURE, URBAN REFUSE, INDUSTRIAL AND AGRICULTURAL WASTES AND SEWAGE SOLIDS ARE EXAMINED AND THEIR POTENTIAL DISCUSSED.

**DATE:** 720900

**ABSTRACT 1625**

**TITLE:** COMPOST - FROM WASTE TO RESOURCE.

**AUTHOR:** ANON.

**SOURCE:** AGR RESEARCH, FEB 1976, PP 7-11.

**KEYWORDS:** ORGANIC WASTES.

**NOTES:** FILED.

**DATE:** 760200

**ABSTRACT 1626**

**TITLE:** UTILIZATION OF WASTES.

**AUTHOR:** ANON.

**SOURCE:** WORLD SCIENCE NEWS, NEW DELHI, PP 424-406, UNDATED.

**KEYWORDS:** ORGANIC, INDIA, METHANE, BIOGAS, FUEL CONSUMPTION, ANAEROBIC FERMENTATION.

**NOTES:** FILED.

**DATE:**

**ABSTRACT 1627**

**TITLE:** FUELS FROM BIOMASS.

**AUTHOR:** ANON.

**SOURCE:** US GOVT PRINTING OFFICE, WASHINGTON DC 20402, MARCH 1977, 136 PP.

**KEYWORDS:** ORGANIC.

**NOTES:** FILED. SOLAR PROGRAM ASSESSMENT.

**DATE:** 770300

**ABSTRACT 1628**

**TITLE:** LE CHAUFFAGE AU BOIS.

**AUTHOR:** ANON.

**SOURCE:** CANIER 16, CAMIERS DU CENTRE TECHNIQUE DU BOIS, 10 AVENUE DE SAINT-MARIE, 75012 PARIS, SEPT 1975, 40 PP.

**KEYWORDS:** ORGANIC, WOOD, HEAT, FRANCE.

**NOTES:** FILED.

**DATE:** 750900

**ABSTRACT 1629**

**TITLE:** OVERALL IMPACT OF BIOMASS CONVERSION - TECHNOLOGY ASSESSMENTS.

**AUTHOR:** ANON.

**SOURCE:** PRESENTED AT WASHINGTON CENTER FOR METROPOLITAN STUDIES CONF ON BIOCONVERSION, WASHINGTON DC, 10-12 MARCH 1976, PP 677-656.

**KEYWORDS:** ORGANIC, ENVIRONMENT, ECONOMICS, SOCIAL IMPLICATIONS.

**NOTES:** FILED. BIOCONVERSION TECHNOLOGIES ARE ASSESSED FOR ENVIRONMENTAL, ECONOMIC, AND SOCIAL IMPACTS. DEVELOPMENT OF MECHANISMS FOR INCREASED REPRESENTATION OF A WIDE SPECTRUM OF PEOPLE IN TECHNOLOGY ASSESSMENT EFFORTS IS ALSO SUGGESTED.

**DATE:** 760310

**ABSTRACT 1630**

**TITLE:** AGRICULTURAL RESIDUES AS A SOURCE OF ENERGY.

**AUTHOR:** ANON.

**SOURCE:** PAPERS PRESENTED AT THE RURAL ELECTRIC CONF, UNIV OF CALIF, DAVIS, CA 95616, 21 JAN 1976, 48 PP.

**KEYWORDS:** ORGANIC, CROP RESIDUES, AGRO-INDUSTRIAL WASTES, PYROLYSIS.

**NOTES:** FILED. VARIOUS AUTHORITIES EXAMINED THE USE OF CERTAIN BIOMASS MATERIAL AS AN ENERGY FEEDSTOCK FOR THE PRODUCTION OF ELECTRICITY. TOPICS DISCUSSED ARE - 1) CROP RESIDUES AND THEIR MANAGEMENT, 2) UTILIZATION OF CROP RESIDUES FOR GASIFICATION OR POWER GENERATION, 3) COTTON GIN TRASH, 4) CONVERTING RICE HULLS INTO ENERGY AND USEFUL INDUSTRY PRODUCTS, 5) USING WOOD WASTE RECOVERY METHODS IN AGRICULTURE, 6) PYROLYSIS OF AGRICULTURAL WASTES FOR RESOURCE RECOVERY, 7) PRODUCER GAS GENERATION AND 8) EXTRACTING ENERGY FROM LIVESTOCK WASTES. ALL THESE ARTICLES EXPRESS THE FEELING THAT BIOMASS-TO-ENERGY HAS A PLACE IN OUR CURRENT ENERGY SITUATION.

**DATE:** 760121
**ABSTRACT 1631**

*TITLE*: CAPTURING THE SUN THROUGH BIOCONVERSION.
*AUTHOR*: ANON.
*SOURCE*: CONF PROC, WASHINGTON CENTER FOR METROPOLITAN STUDIES, 1717 MASS AVE NW, WASHINGTON DC 20036, MARCH 1976, 962 PP.
*KEYWORDS*: ORGANIC, CONVERSION, ALTERNATIVE FUELS.
*NOTES*: FILED. A FAIRLY EXTENSIVE MATERIAL ON VARIOUS ASPECTS OF BIOMASS. THE FOLLOWING SUBTITLES ARE DISCUSSED IN A FAIR AMOUNT OF DETAIL: EACH BY SEVERAL AUTHORITIES - - BIOMASS SOURCES - - URBAN AND INDUSTRIAL WASTE - AGROINDUSTRIAL, ETC, BIOCONVERSION PROCESSES AND PRODUCTS, AND OVERALL IMPACTS. A GOOD REFERENCE AND EASY-READING.
*DATE*: 760512

**ABSTRACT 1632**

*TITLE*: MODERN GAS PRODUCERS.
*AUTHOR*: ANON.
*SOURCE*: NOT AVAILABLE.
*KEYWORDS*: ORGANIC, GASIFICATION.
*NOTES*: FILED. 1920 VINTAGE REPORT ON COAL GASIFICATION, 303 PAGES.
*DATE*: 220000.

**ABSTRACT 1633**

*TITLE*: TOWER POWER - PRODUCING FUELS FROM SOLAR ENERGY.
*AUTHOR*: ANANT M J.
*KEYWORDS*: ORGANIC, SOLAR, ECONOMICS.
*NOTES*: FILED.
*DATE*: 760500

**ABSTRACT 1634**

*TITLE*: CONVERSION OF URBAN REFUSE TO OIL.
*AUTHOR*: APPELL H R, WENDER I, MILLER R D.
*SOURCE*: TECH PROGRESS REPORT 25, BUREAU OF MINES SOLID WASTE PROGRAM, US DEPT OF INTERIOR, MAY 1976, 5 PP.
*KEYWORDS*: ORGANIC, MUNICIPAL WASTE, RECYCLING.
*NOTES*: FILED.
*DATE*: 700500

**ABSTRACT 1635**

*TITLE*: FUEL GAS PRODUCTION FROM ANIMAL RESIDUE.
*AUTHOR*: ASHARE E, WISE D L, WENTWORTH R L.
*SOURCE*: REPORT 1551, DYNATECH R/D CO, CAMBRIDGE, MA, 14 JAN 1977, 210 PP.
*KEYWORDS*: ORGANIC, MANURE, TECHNOLOGY ASSESSMENT.
*NOTES*: NTIS: COO/2991-10.
*DATE*: 770114

**ABSTRACT 1636**

*TITLE*: FUEL GAS PRODUCTION FROM ANIMAL WASTES - PHASE 1.
*AUTHOR*: ASHARE E, WENTWORTH R L, WISE D L, AUGENSTEIN D C.
*SOURCE*: REPORT 1594, DYNATECH R/D CO, CAMBRIDGE, MA, 15 MARCH 1977, 12 PP.
*KEYWORDS*: ORGANIC, MANURE, ANAEROBIC FERMENTATION.
*NOTES*: NTIS: COO/2991-14.
*DATE*: 770315

**ABSTRACT 1637**

*TITLE*: FUEL GAS PRODUCTION FROM ANIMAL WASTE.
*AUTHOR*: ASHARE E, WENTWORTH R L, WISE D L.
*SOURCE*: REPORT 1573, DYNATECH R/D CO, CAMBRIDGE, MA, 1 FEB 1977, 50 PP.
*KEYWORDS*: ORGANIC, MANURE, ANAEROBIC FERMENTATION.
*NOTES*: NTIS: 84-50.
*DATE*: 770201
ABSTRACT 1638

**Title:** Technical and Economic Assessment of Methods for Direct Conversion of Agricultural Residue to Usable Energy.

**Author:** Bailie R C.

**Source:** Dept of Chem Engr, West Virginia Univ, Morgantown, WV 26506.

**Keywords:** Organic, Conversion.

**Notes:** Filed.

**Date:** 761020

**Abstract:** This study attempts to define and point out the characteristics of non-fuel discharges that leave the agricultural process. These must ultimately be disposed of outside the battery. Some mention as to how the disposal may be accomplished is provided. The study is also constrained to the consideration of small sized conversion systems. The study considers design capacities ranging from two tons per day to two hundred tons per day. This range covers systems that are limited to individual homestead operations to small industrial scale operations.

**Date:** 761020

ABSTRACT 1639

**Title:** Technical and Economic Assessment of Methods for Direct Conversion of Agricultural Residue to Usable Energy.

**Author:** Bailie R C.

**Source:** Dept of Chem Engr, West Virginia Univ, Morgantown, WV 26506.

**Keywords:** Organic, Wastes, Pyrolysis.

**Notes:** Filed. This study attempts to define and point out the characteristics of non-fuel discharges that leave the agricultural process. These must ultimately be disposed of outside the battery. Some mention as to how the disposal may be accomplished is provided. The study is also constrained to the consideration of small sized conversion systems. The study considers design capacities ranging from two tons per day to two hundred tons per day. This range covers systems that are limited to individual homestead operations to small industrial scale operations.

**Date:** 761020

ABSTRACT 1640

**Title:** Current Developments and Problems in Biomass Gasification.

**Author:** Bailie R C.

**Source:** Presented at Forest and Field Fuels Symposium, Winnipeg, Canada; 11-13 Oct 1977; 18 pp.

**Keywords:** Organic, Pyrolysis.

**Notes:** This paper outlines the current developments and problems in biomass gasification.

**Date:** 771011

ABSTRACT 1641

**Title:** Economics Associated with Waste of Biomass Pyrolysis Systems.

**Author:** Bailie R C, Richmond C A.

**Source:** Dept of Chem Engr, West Virginia Univ, Morgantown, WV 26506; 28 pp.

**Keywords:** Organic, Pyrolysis.

**Notes:** Filed. Biogas may be converted to a medium-BTU fuel gas. Discusses two processes available to produce 300-400 BTU/cu ft fuel gas from biomass - 1)Pyrolysis (Union Carbide) and 2)Pyrolysis (Kikai Kuni, Japan). Conclusions - 1)Biomass and municipal waste can be converted to an intermediate gas, 2)Cost of wood gas - 2-5 dollars per 1000 Btu, 3)For power generating systems economics of scale and significant for direct fired systems. Wood is emphasized.

**Date:**

ABSTRACT 1642

**Title:** Potential Impact of Energy Farming for Supplementing Energy Requirements of Food Production.

**Author:** Bailie R C, Doner D M, Henry J A.

**Source:** Dept of Chem Engr, West Virginia Univ, Morgantown, WV 26506.

**Keywords:** Organic, Wastes.

**Notes:** Filed. Defined energy farming as the use of crop wastes of entire crops as a source for fuel. Sources discussed are waste biomass found in present farming practices, wastes returned to soil, energy farm utilizing part of the farm. Factors considered were yield of biomass material, ease of cultivation, ease of harvest, fuel conversion efficiency, can poor area of farm be used, can crop rotation scheme be used and climate conditions. Several agricultural and forest products are discussed in terms of their potential energy production.

**Date:** 741203
ABSTRACT 1643

+TITLE: TECHNICAL AND ECONOMIC ASSESSMENT OF METHODS FOR DIRECT CONVERSION OF AGRICULTURAL RESIDUE TO USABLE ENERGY.
+AUTHOR: BAILIE R C.
+SOURCE: DEPT OF CHEM ENG, WEST VIRGINIA UNIV, MORGANTOWN, WV 26506.
+KEYWORDS: ORGANIC CONVERSION, TECHNOLOGY ASSESSMENT, ECONOMICS.
+NOTES: FILED. THIS REPORT IS A TECHNICAL AND ECONOMIC ASSESSMENT OF METHODS FOR DIRECT CONVERSION OF AGRICULTURAL RESIDUES TO USABLE ENERGY ON SINGLE FARMS, FEEDLOTS, PROCESSING PLANTS, OR SMALL AGRICULTURAL COMMUNITIES. THE SIZE CONSTRAINT IMPLIES THAT THE AMOUNT OF TECHNICAL SKILLS AND OPERATOR TIME BE MINIMIZED. THE STUDY CONSIDERS ENERGY CONVERSION SYSTEMS WITH DESIGN CAPACITIES RANGING FROM 2 TO 200 TONS OF ORGANIC MATERIAL PER DAY. PRODUCTION OF ENERGY FORMS BOTH MOBILE AND STATIONARY USAGE WAS CONSIDERED. THE MORE PRACTICAL ALTERNATIVES ARE EXAMINED IN TERMS OF ENERGY CONVERSION EFFICIENCY, ECONOMICS, ENVIRONMENTAL IMPACT, TECHNICAL AND OPERATIONAL PROBLEMS AND THE STATE OF THE ART. SYSTEMS EXAMINED IN DETAIL ARE ANAEROBIC DIGESTION, PYROLYTIC PRODUCTION OF LOW BTU GAS, HYDROLYSIS AND FERMENTATION TO ETHANOL, AND FISCHER-TROPSCH PYROLYSIS TO LIQUID FUELS.
+DATE: 761023

ABSTRACT 1644

+TITLE: BURNING WOOD.
+AUTHOR: BAKER L D, ET AL.
+SOURCE: NE-191, NREAS, NORTHEAST REGIONAL AGR ENGR SERVICE, RILEY-ROBB, CORNELL UNIV, ITHACA, NY 14853, AUG 1977, 24 PP.
+KEYWORDS: ORGANIC WOOD.
+NOTES: FILED. DETAILS GIVEN ON HOW TO USE WOOD AS A FUEL SOURCE.
+DATE: 770800

ABSTRACT 1645

+TITLE: TREE PLANTATIONS AS RESOURCES FOR RENEWABLE ENERGY PRODUCTION.
+AUTHOR: BALIS J R.
+SOURCE: ASAE PAPER 77-6532, 1977. 13 PP.
+KEYWORDS: ORGANIC WOOD.
+NOTES: FILED.
+DATE: 770000

ABSTRACT 1646

+TITLE: FERMENTATIVE UTILIZATION OF CASSAVA.
+AUTHOR: BANION J R.
+KEYWORDS: ORGANIC.
+NOTES: FILED.
+DATE: 910000

ABSTRACT 1647

+TITLE: ENERGY AND NUTRIENT CONSERVATION IN SWINE WASTE MANAGEMENT.
+AUTHOR: BARTH C L, MILL D T.
+SOURCE: ASAE PAPER 75-4040, 1977. 16 PP.
+KEYWORDS: ORGANIC, ANIMAL WASTE, METHANE, ENERGY SOURCES, CONVERSION.
+NOTES: FILED.
+DATE: 750000

ABSTRACT 1648

+TITLE: EXPERIENCES FROM OPERATING A FULL SIZE ANAEROBIC DIGESTER.
+AUTHOR: BARTLETT H, PERSON R, REGAN R W, BRANDING A E.
+SOURCE: ASAE PAPER 77-4053, 1977. 9 PP.
+KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, DESIGN, EFFICIENCY.
+NOTES: FILED. A 100 CUBIC METER ANAEROBIC DIGESTER FOR BIOGAS PRODUCTION HAS BEEN USED FOR THE SWINE WASTE FROM A 50 COW BARN. THE CONSTRUCTION, SLURRY HANDLING METHODS, HEATING SYSTEMS AND GAS AGITATION SYSTEM ARE DESCRIBED.
+DATE: 770000
**ABSTRACT 1649**

*NUTRIENT CHANGES DURING STORAGE OF ANAEROBIC DIGESTER EFFLUENT.*

*AUTHOR:* BARTLETT H. D.

*SOURCE:* ASAE PAPER 78-4563, 1978, 13 PP.

*KEYWORDS:* ORGANIC, ANAEROBIC FERMENTATION, FERTILIZER

*NOTES:* FILED. THE EFFECT OF PHOSPHORIC ACID ADDITIONS ON NITROGEN LOSSES FROM EFFLUENT AND EFFLUENT FOR A DAIRY MANURE ANAEROBIC DIGESTER DURING AEROBIC AND ANAEROBIC STORAGE WAS EVALUATED DURING A 60 DAY PERIOD. THE ADDITIONS WERE MOST EFFECTIVE AT THE HIGHEST RATE AND SHOW POTENTIAL BY CONSERVING BIOLOGICALLY-FIXED NITROGEN.

*DATE:* 78090

**ABSTRACT 1650**

*NON FOSSIL CARBON SOURCES.*

*AUTHOR:* BATTELLE MEMORIAL INSTITUTE.

*SOURCE:* PREPARED BY BATTELLE RESEARCH CENTRE FOR THE UNEP/FAO JOINT SEMINAR ON WASTE MANAGEMENT - UTILIZATION OF AGR AND AGRO-INDUSTRIAL WASTES, ROME, 18-21 JAN 1977, 17 PP.

*KEYWORDS:* ORGANIC, WASTES, INDUSTRY

*NOTES:* FILED.

*DATE:* 770118

**ABSTRACT 1651**

*SYSTEMS STUDY OF FUELS FROM SUGARCANE, SWEET SORGHUM, SUGAR BEETS, AND CORN.*

*AUTHOR:* BATTELLE MEMORIAL INSTITUTE.

*SOURCE:* BATTELLE COLUMBUS LAB, COLUMBUS, OH 43201

*KEYWORDS:* ORGANIC, ENERGY CROPS, ALCOHOL.

*NOTES:* HTIS, BMI 1977 (FOR VOL 1, 2, 3) AND BMI 1978 (FOR VOL 4, 5).

*VOLS 1 - COMPREHENSIVE EVALUATION OF SUGAR CROPS.
VOL 2 - SUGAR CROPS AGRICULTURE.
VOL 3 - CONVERSION.
VOL 4 - CORN AGRICULTURE.
VOL 5 - COMPREHENSIVE EVALUATION OF CORN.*

*DATE:* 761200

**ABSTRACT 1652**

*RICE HUSK CONVERSION TO ENERGY.*

*AUTHOR:* BEAGLE E C.

*SOURCE:* FAO, ROME, DEC 1976, 213 PP, IN PRESS.

*KEYWORDS:* ORGANIC, CONVERSION, ENERGY SOURCES, WORLD WIDE, MAINTENANCE.

*NOTES:* FILED.

*DATE:* 761200

**ABSTRACT 1653**

*METHANE = FUEL OF THE FUTURE.*

*AUTHOR:* BELL C, BOULTER S, DUNLOP O, KEILLER P.

*SOURCE:* DORCHESTER, ENGLAND/PRISM PRESS, 1973, 85 PP.

*KEYWORDS:* ORGANIC, METHANE, ANAEROBIC FERMENTATION, ALGAE, DEVELOPING COUNTRIES, MUNICIPAL WASTE.

*NOTES:* FILED.

*DATE:* 730000

**ABSTRACT 1654**

*A NEW LOOK AT AN OLD FUEL.*

*AUTHOR:* BELL L E, KOELLING M R.

*SOURCE:* EXT BULLETIN E-779, NATURAL RESOURCES SERIES, MICH STATE UNIV, EAST LANSING, MI 48823, APRIL 1974, 6 PP.

*KEYWORDS:* ORGANIC, WOOD.

*NOTES:* FILED.

*DATE:* 740400

**ABSTRACT 1655**

*BIO-ENERGY DIRECTORY.*

*AUTHOR:* BENTE P P, ET AL.

*SOURCE:* THE BIO-ENERGY COUNCIL, SUITE 204, 1337 CONN AVE., WASHINGTON DC 20036, JUNE 1978, 220 PP.

*KEYWORDS:* ORGANIC.

*NOTES:* FILED. A LISTING OF PROJECTS THAT ARE OCCURRING THAT DEAL WITH BIO-ENERGY.

*DATE:* 780600
ABSTRACT 1656

• TITLE: AGRICULTURAL RESIDUES AND THEIR UTILIZATION IN SOME COUNTRIES OF SOUTH AND SOUTHEAST ASIA.
• AUTHOR: BHUSHAN B.
• SOURCE: UNEP/F/O/ISS/4/06, ROME, ITALY, 18-21 JAN 1977, 55 PP.
• KEYWORDS: ORGANIC, WASTES, ASIA, DEVELOPING COUNTRIES.
• NOTES: FILED.
• DATE: 770118

ABSTRACT 1657

• TITLE: ENERGY POTENTIAL THROUGH BIO-CONVERSION OF AGRICULTURAL WASTES.
• AUTHOR: BIO-GAS OF COLORADO INC, COLORADO ENERGY RESEARCH INSTITUTE.
• SOURCE: BIO-GAS OF COLORADO INC AND COLORADO ENERGY RESEARCH INST, OCT 1976, 29 PP.
• KEYWORDS: ORGANIC, WASTES, ANAEROBIC FERMENTATION, ECONOMICS.
• NOTES: FILED. THIS BOOKLET DISCUSSES CONVERTING ORGANIC MATERIALS TO FUEL, FERTILIZER AND FEED THROUGH BIO-CONVERSION. A BIO-CONVERSION PLANT IS ENVISIONED AND DISCUSSED THROUGH ITS VARIOUS PROCESSES. THE STUDY DID AN INVENTORY AND EVALUATION OF POSSIBLE BIOMASS PROCESSING SITES AND THE METHODS USED ARE FAIRLY EXTENSIVELY DISCUSSED. AN ECONOMIC ANALYSIS OF A UTILITY PLANT IS MADE AND RESOURCE RECYCLING IS EXAMINED AS A MEANS OF FUTURE ENERGY PLANNING.
• DATE: 761000

ABSTRACT 1658

• TITLE: PROCEEDINGS INTERNATIONAL BIOMASS CONFERENCE.
• AUTHOR: BIOMASS ENERGY INSTITUTE.
• KEYWORDS: ORGANIC, HISTORICAL, BIOMASS, ENERGY SOURCES, PHOTOSYNTHESES, SOCIAL IMPLICATIONS, ANAEROBIC FERMENTATION, PYROLYSIS, METHANE, SINGLE CELL PROTEIN, CANADA.
• NOTES: FILED.
• DATE: 730513

ABSTRACT 1659

• TITLE: QUANTITIES AND CHARACTERISTICS OF FARM-ANIMAL WASTES.
• AUTHOR: BLACK R J, KEHR W Q.
• KEYWORDS: ORGANIC, ANIMAL WASTE, POLLUTION, FERTILIZER.
• NOTES: FILED.
• DATE: 691100

ABSTRACT 1660

• TITLE: NETWORK FOR THE DEVELOPMENT OF SUITABLE LOW COST BIOGAS GENERATORS FOR RURAL AREAS IN LGCS.
• AUTHOR: BLACKLEDGE J P.
• SOURCE: OFFICE OF INTERNATIONAL PROGRAMS, UNIV OF DENVER, DENVER RESEARCH INST, UNIVERSITY PARK, DENVER, CO, APRIL 1976, 7 PP.
• KEYWORDS: ORGANIC, INTERNATIONAL.
• NOTES: AID.
• DATE: 760419

ABSTRACT 1661

• TITLE: SILVICULTURAL BIOMASS FARMS, VOLUME V, CONVERSION PROCESSES AND COSTS.
• AUTHOR: BLISS C, ET AL.
• SOURCE: MITRE TECHNICAL REPORT 7347, NTIS, US DEPT COMMERCE SPRINGFIELD, VA.
• KEYWORDS: ORGANIC, WOOD, CONVERSION ALTERNATIVES, TECHNOLOGY ASSESSMENT, ECONOMICS.
• NOTES: FILED. THIS VOLUME PRESENTS AN ASSESSMENT OF THE PRODUCTS AND PROCESSES THAT APPEAR TO BE CONSENSUS FOR THE CONVERSION OF WOOD BIOMASS TO ENERGY FORMS SUITED TO THE NATIONAL ENERGY SCENE. THE PRODUCTS ASSESSED INCLUDE ELECTRICITY FROM COMBUSTION OF WOOD, WOOD AND WOOD CHARCOAL IN COMBUSTION WITH OIL OR COAL, AMMONIA, METHANOL, MEDIUM-BTU FUEL GAS, STEAM, NATURAL GAS, AND ETHANOL. CONVERSION TECHNOLOGIES ARE REVIEWED AND DATA AND INFORMATION GAPS AND ULTIMATE DESIGN OF VIABLE PROCESSES ARE IDENTIFIED AS AN INPUT TO THE FORMULATION OF RESEARCH AND DEVELOPMENT NEEDS.
• DATE: 770500
ABSTRACT 1662

*TITLE: BIOLOGICAL CONVERSION OF SOLAR ENERGY.
*AUTHOR: BOORDMAN R K.
*SOURCE: PROC OF SYMPOSIUM ON REALISTIC PROSPECTS FOR SOLAR POWER IN AUSTRALIA, INTERNATIONAL SOLAR ENERGY SOC, 22 NOV 1973.
*KEYWORDS: ORGANIC, PHOTOSYNTHESIS, ANAEROBIC FERMENTATION, SOLAR, PYROLYSIS, ALCOHOL, METHANE, HYDROGEN.
*NOTES: FILED.
*DATE: 731122

ABSTRACT 1663

*TITLE: BIOLOGICAL CONVERSION OF SOLAR ENERGY.
*AUTHOR: BOARDMAN R K.
*SOURCE: PROC OF SYMPOSIUM ON REALISTIC PROSPECTS FOR SOLAR POWER IN AUSTRALIA, INTERNATIONAL SOLAR ENERGY SOC, 22 NOV 1973.
*KEYWORDS: ORGANIC, PHOTOSYNTHESIS, ANAEROBIC FERMENTATION, SOLAR, PYROLYSIS, ALCOHOL, METHANE, HYDROGEN.
*NOTES: FILED.
*DATE: 731122

ABSTRACT 1664

*TITLE: ENERGY PLAN TO USE PEAT AS FUEL STIRS CONCERN IN MINNESOTA.
*AUTHOR: DUFFY P M.
*SOURCE: SCIENCE, 190(4206), 12 DEC 1975.
*KEYWORDS: ORGANIC, MINNESOTA, LAND USE, SOCIAL IMPLICATIONS, PEAT.
*NOTES: FILED.
*DATE: 751212

ABSTRACT 1665

*TITLE: WHAT ABOUT CORN REFUSE SILAGE RETRIEVAL SYSTEMS?
*AUTHOR: DOLEH J S, GREATHOUSE T R.
*SOURCE: INFO SERIES 248, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, 14 MAY 1969, 6 PP.
*KEYWORDS: ORGANIC, AGRICULTURE, WASTE, EFFICIENCY.
*NOTES: FILED.
*DATE: 690514

ABSTRACT 1666

*TITLE: LANDFILL FILL LAND.
*AUTHOR: BONDI A A.
*KEYWORDS: ORGANIC, ENVIRONMENT, WASTE, CONVERSION.
*NOTES: SANITARY LAND FILL, ABOVEGROUND BIOGASIFICATION, HYDROGASIFICATION TO METHANE, COBUSTION OF SOLID WASTE, RESOURCES, RECYCLING, PYROLYSIS, AND COMPOSTING ARE SUMMARIZED AS METHODS TO REDUCE LANDFILL OPERATIONS FOR MOST US MUNICIPALITIES.
*DATE: 750900

ABSTRACT 1667

*TITLE: CORN REFUSE SILAGE RETRIEVAL SYSTEM.
*AUTHOR: DOLEH J S, GREATHOUSE T R.
*SOURCE: INFO SERIES 248, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, 14 MAY 1969, 6 PP.
*KEYWORDS: ORGANIC, AGRICULTURE, WASTE, EFFICIENCY.
*NOTES: FILED.
*DATE: 690514

ABSTRACT 1668

*TITLE: METHANE GENERATION FROM LIVESTOCK WASTES IN NORTHERN GEORGIA.
*AUTHOR: DOONAN C H, NEATON G L, HALEY P.
*SOURCE: ASAE PAPER 75543, 9 PP.
*KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, ANIMAL WASTE, GEORGIA, OPERATING PROCEDURE.
*NOTES: FILED.
*DATE: 750900

ABSTRACT 1669

*TITLE: FINAL REPORT ON RESEARCH IN METHANE GENERATION.
*AUTHOR: BOSKEN J, JOHNSON A L.
*KEYWORDS: ORGANIC, METHANE, ANAEROBIC FERMENTATION, WASTES.
*NOTES: FILED.
*DATE: 760915
ABSTRACT 1669

• TITLE: METHANE GENERATION FROM HUMAN, ANIMAL AND AGRICULTURAL WASTES.
• AUTHOR: BROOK M. L., ET AL.
• SOURCE: NRC, NAS, WASHINGTON DC, 1977, 131 PP.
• KEYWORDS: ORGANIC, METHANE, WASTES, ANAEROBIC FERMENTATION, TECHNOLOGY ASSESSMENT, DEVELOPING COUNTRIES, INDIA.
• NOTES: FILED.

This report gives a general overview of the anaerobic digestion process together with a description of the state of the art and a discussion of the technology involved. It is a general yet thorough enough guide to serve as an excellent introduction to methane generation, though it does address itself primarily to the needs of rural areas in developing countries (most notably India). Included in this report are sections discussing public health concerns, plant safety, raw materials and their preparation, sludge use, as well as a chemical analysis of the fermentation process, design considerations for the biogas plant itself, and advice on their operation and maintenance. There are also plans for two different biogas generators. This report calls for additional research dealing with generator designs which utilize lower cost construction materials, the biodegradability of feedstocks, and the use of sludge as fertilizer under a wide variety of conditions. The reference list is excellent.
• DATE: T79000

ABSTRACT 1670

• TITLE: DESIGN OF GAS PRODUCER USING CORNSTALK BALES AS FUEL.
• AUTHOR: BUCHELE W. F., ET AL.
• SOURCE: AGR. ENGR, IOWA STATE UNIV, AMES, IA, 40 PP.
• KEYWORDS: ORGANIC, DESIGN, PRODUCER GAS GENERATION, TECHNOLOGY ASSESSMENT.
• NOTES: FILED.

ABSTRACT 1671

• TITLE: HARVESTING AND UTILIZATION OF CORN STALKS FROM IOWA FARMS.
• AUTHOR: BUCHELE W. F.
• SOURCE: REPORT 3, DEPT. OF AGR. ENGR, IOWA STATE UNIV, AMES, IA, 10 JUNE 1975, 23 PP.
• KEYWORDS: ORGANIC, HARVESTING, STORAGE, ECONOMICS.
• NOTES: FILED.

Corn stalks, one of the most important renewable resources of the nation, remain in the field after the harvest, the farmer expends considerable money chopping and disking the stalks before burying them with a moldboard plow. The development of a system for harvesting and utilizing this unused resource is covered in this report. Starting with cornstalks moisture content, through the economic aspects of burning cornstalks in electric generating plants, and the effect of crop removal on the yield and tillth of soil are all covered.
• DATE: T750610

ABSTRACT 1672

• TITLE: A PROGRESS REPORT—DIRECT COMBUSTION OF CROP RESIDUES IN BOILER FURNACES.
• AUTHOR: BUCHELE W. F.
• KEYWORDS: ORGANIC, CORN STALKS, COMBUSTION, ECONOMICS.
• NOTES: FILED.

Research was conducted on converting the energy value of corn stalks to useful forms of energy by burning corn stalks as a companion fuel with high-sulfur coal in boilers of electric generating plants. The value of the corn stalks was compared with that of coal, costed collection, transportation and proceeds were calculated.
• DATE: T780503

ABSTRACT 1673

• TITLE: EXPERIMENTS IN RECYCLING SWINE MANURE IN FISHPONDS.
• AUTHOR: BUCK D. H., BAUR R. W., ROSE C. R.
• SOURCE: CONFERENCE ON AQUACULTURE, FAO, ROME, ITALY, FEB 1976, 5 PP.
• KEYWORDS: ORGANIC, RECYCLING, MANURE.
• NOTES: FILED.

• DATE: T780200

ABSTRACT 1674

• TITLE: BIO-GAS OF COLORADO.
• AUTHOR: BURFORD J. C.
• SOURCE: BIO-GAS OF COLORADO CORP.
• KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, ANIMAL WASTE, ECONOMICS, OPERATING PROCEDURE.
• NOTES: FILED.

• DATE:
ABSTRACT 1675

*TITLE* THE LAMAR BIO-CONVERSION PLANT DESIGN.
*AUTHOR* BURFORD J C; VARANI F T.
*SOURCE* BIO-GAS OF COLORADO, 342 E THIRD ST., LOVELAND, CO 80537.
*KEYWORDS* ORGANIC; BIOGAS; WASTES; ECONOMICS.
*NOTES* FILED. THIS PAPER ADDRESSES THE EVOLUTION OF DESIGN AND PRESENT STATUS OF A LARGE-SCALE ANAEROBIC DIGESTION FACILITY PROPOSED FOR THE CITY OF LAMAR, COLORADO TO PROVIDE METHANE GAS TO THE CITY'S ELECTRIC UTILITY PLANT AND CATTLE FEEDSTUFF TO AREA FEEDLOTS.
*DATE* 760920

ABSTRACT 1676

*TITLE* SOLAR BIOMASS ENERGY - AN OVERVIEW OF US POTENTIAL.
*AUTHOR* BURWELL C C.
*KEYWORDS* ORGANIC; ENERGY CROPS; USA.
*NOTES* FILED. THE AUTHOR DISCUSSES THE FOLLOWING ITEMS IN SOME DETAIL -
1) ENERGY SUPPLY AND CONSUMPTION IN THE US;
2) BIOMASS PRODUCTION IN AGRICULTURAL, SIVICULTURAL, OTHER TERRESTRIAL;
3) ENERGY REQUIREMENTS;
4) INTENSIVE TREE FARMING;
5) MARKET FOR BIOMASS FUELS;
6) ENVIRONMENTAL CONSIDERATIONS;
7) PHOTOSYNTHESIS. CONCLUDES THAT BIOMASS CAN SUPPLY ABOUT 25 PERCENT OF THE NATIONS ENERGY NEEDS, GIVEN THE TOTAL OF EACH YEARS BIOMASS PRODUCTION IN THE US.
*DATE* 780310

ABSTRACT 1677

*TITLE* A GASOLINE TREE PLANTATION.
*AUTHOR* CALVIN ".
*SOURCE* AGR ENGR, NOV 1977, PP 13-16.
*KEYWORDS* ORGANIC; PHOTOSYNTHESIS.
*NOTES* FILED.
*DATE* 771110

ABSTRACT 1678

*TITLE* FERMENTATION AND HYDROCARBONS.
*AUTHOR* CALVIN M.
*SOURCE* LBL 7270, LAWRENCE BERKELEY LAB, UNIV OF CALIF, BERKELEY, CA 94720, 12 JAN 1978, 60 PP.
*KEYWORDS* ORGANIC; PHOTOSYNTHESIS, ALCOHOL, FOSSIL FUELS.
*NOTES* FILED.
*DATE* 780112

ABSTRACT 1679

*TITLE* PETROLEUM PLANTATIONS.
*AUTHOR* CALVIN M.
*SOURCE* LAB OF CHEM BIODYNAMICS, UNIV OF CALIF, BERKELEY, CA, 24 PP.
*KEYWORDS* ORGANIC; PHOTOSYNTHESIS.
*NOTES* FILED.
*DATE* 750440

ABSTRACT 1680

*TITLE* GREEN FACTORIES FOR LIQUID FUEL.
*AUTHOR* CALVIN G J; CALVIN M.
*SOURCE* LBL-7654, US DEPT OF ENERGY, APRIL 1978, 18 PP.
*KEYWORDS* ORGANIC; ENERGY SOURCES.
*NOTES* FILED.
*DATE* 780400

ABSTRACT 1681

*TITLE* GREEN FACTORIES.
*AUTHOR* CALVIN M.
*KEYWORDS* ORGANIC; ENERGY SOURCES.
*NOTES* FILED.
*DATE* 780330
ABSTRACT 1682

TITLE: HYDROCARBONS VIA PHOTOSYNTHESIS.

AUTHOR: CALVIN M.


KEYWORDS: ORGANIC, PHOTOSYNTHESIS, FOSSIL FUELS.

NOTES: FILED. PHOTOSYNTHESIS IS EXAMINED AS A POSSIBLE ANNUALLY RENEWABLE RESOURCE FOR MATERIALS AND ENERGY. THE PRODUCTION OF FERMENTATION ALCOHOL FROM SUGAR CANE AS A MAJOR COMPONENT OF MATERIALS FOR CHEMICAL FEEDSTOCK IS EXAMINED AS WELL AS THE DIRECT PHOTOSYNTHETIC PRODUCTION OF HYDROCARBONS FROM EUPHORBIA, ASCLEPIAS, AND OTHER HYDROCARBON-CONTAINING PLANTS WITH A VIEW TOWARDS DETERMINING THEIR VARIOUS CHEMICAL COMPONENTS. IN ADDITION, EXPERIMENTAL PLANTINGS OF PLANTS OF THIS TYPE HAVE BEEN TO OBTAIN DATA ON WHICH SPECIES WOULD BE THE MOST SUCCESSFUL. WORK IS ALSO UNDERWAY ON THE DEVELOPMENT OF CHEMICAL PROCESS TECHNIQUES FOR THE EXTRACTION OF PLANT MATERIALS AFTER HARVEST. IN ADDITION, THE CONSTRUCTION OF SYNTHETIC SYSTEMS BASED ON THE KNOWLEDGE OF THE NATURAL PHOTOSYNTHETIC PROCESSES ARE UNDERWAY. THESE SYSTEMS COULD BE USED TO PRODUCE FUEL, FERTILIZERS AND POWER, AS A RESULT OF STUDIES OF THE NATURAL QUANTUM CONVERSION PROCESS IN GREEN PLANTS, SEVERAL PHOTOELECTRON TRANSFER PROCESSES CAN BE EXAMINED. SOME OF WHICH HAVE ALREADY BEEN DEMONSTRATED IN SYNTETIC SYSTEMS. SYSTEMS OF CONSTRUCTING SYSTEMS OF THIS TYPE AND THE PRINCIPLES OF THEIR USE ARE DESCRIBED.

DATE: 770530

ABSTRACT 1683

TITLE: UTILIZATION OF URBAN WASTES IN CROP PRODUCTION.

AUTHOR: CARLSON C W, RENZIES J D.


KEYWORDS: ORGANIC, AGRICULTURE, FERTILIZER.

NOTES: FILED. NAS.

DATE: 710615

ABSTRACT 1684

TITLE: FOOD, FUEL, FERTILIZER.

AUTHOR: CATANIA P J.

SOURCE: PROC OF A SYMPOSIUM ON USES OF AGR WASTES, 4-5 NOV 1974, CANADA PLAINS RESEARCH CENTER, UNIV OF REGINA, SASKATCHEWAN, CANADA, 371 PP.

KEYWORDS: ORGANIC, METHANE, RECYCLING, MANURE, PYROLYSIS, BIOMASS, ANEROBIC FERMENTATION.

NOTES: FILED.

DATE: 741104

ABSTRACT 1685

TITLE: FOOD AND ENERGY CROP SYSTEM.

AUTHOR: CERVENKA V E, ROLLINS E S, SCHWEICKART L.

SOURCE: CALIF DEPT OF FOOD AND AGR, SACRAMENTO, CA, FEB 1977, 21 PP.

KEYWORDS: ORGANIC, AGRICULTURE.

NOTES: FILED.

DATE: 780200

ABSTRACT 1686

TITLE: CELLULOSE FROM SUNLICH.

AUTHOR: CHEED G.

SOURCE: NEW SCIENTIST, 6 MARCH 1975, PP 572-575.

KEYWORDS: ORGANIC, SOLAR.

NOTES: FILED.

DATE: 750306

ABSTRACT 1687

TITLE: BIOMASS CONVERSION - ECONOMICS INHIBIT PROGRESS.

AUTHOR: CHEMICAL AND ENGINEERING NEWS.


KEYWORDS: ORGANIC, ECONOMICS.

NOTES: FILED. THE POTENTIAL OF BIOMASS PLANT AS A SOURCE OF HYDROCARBON FUELS AND CHEMICAL RAW MATERIALS IS DEMONSTRABLY LARGE, BUT SO FAR MOST OF THE PRACTICAL APPLICATIONS OF BIOMASS CONVERSION TECHNOLOGY ARE INEXTRACTABLY RELATED TO WASTE RECYCLE. REASONS FOR THE APPARENT LAG IN PROGRESS OF DEVELOPING A BIOMASS CONVERSION INDUSTRY RANGE FROM BIOCHEMICAL IGNORANCE OF PLANT ECOLOGY TO OPPOSITION FROM THE FIRMLY ENTRENCHED ENERGY INDUSTRIES. BUT THEY COME DOWN TO UNFAVORABLE ECONOMICS.

DATE: 770228
ABSTRACT 1688

*TITLE: UTILIZATION OF WASTE PRODUCTS IN ANIMAL FEEDING.  
*AUTHOR: CHEIOST M.  
*SOURCE: UNEP/FAO/ISSt-12, ROME, ITALY, 18-21 JAN 1977, 5 PP.  
*KEYWORDS: ORGANIC, WASTES.  
*NOTES: FILED.  
*DATE: 770118

ABSTRACT 1689

*TITLE: PYROLYTIC CONVERSION OF AGRICULTURAL AND FORESTRY WASTES IN GHANA.  
*AUTHOR: CHIANG T I. ET AL.  
*SOURCE: PREPARED BY THE ECON DEV LAB, ENGR EXPT STA, GEORGIA INST OF TECH, FOR THE AGENCY FOR INTERNATIONAL DEV, OFFICE OF SCI AND TECH, WASHINGTON DC 20525; JULY 1976; 39 PP.  
*KEYWORDS: ORGANIC, WASTES, CONVERSION, GHANA.  
*NOTES: FILED. THIS REPORT DESCRIBES THE RESULTS OF A FIELD STUDY TO DETERMINE THE QUANTITIES AND CHARACTERISTICS OF WASTE IN GHANA AND THE FEASIBILITY OF USING PYROLYTIC CONVERSION OF THESE WASTES. A PRELIMINARY DESCRIPTION OF AN APPROPRIATE TECHNOLOGY VERSION OF A CONTINUOUS BATCH PYROLYTIC CONVERSION SYSTEM IS ALSO PRESENTED, INCLUDING AN ECONOMIC OVERVIEW.  
*DATE: 760700

ABSTRACT 1690

*TITLE: WOOD AS FUEL - FORESTS CAN BE UTILIZED MORE FULLY AS AN ENERGY SOURCE.  
*AUTHOR: CHOW P.  
*KEYWORDS: ORGANIC, WOOD, CONVERSION.  
*NOTES: FILED.  
*DATE: 770000

ABSTRACT 1691

*TITLE: CROP RESIDUES - ENERGY FOR IRRIGATION PUMPING AND CROP DRYING.  
*AUTHOR: CLARK S J.  
*SOURCE: ASAE PAPER 78-2550, 1978; 36 PP.  
*KEYWORDS: ORGANIC, WASTES, ANAEROBIC FERMENTATION, DIRECT COMBUSTION, GASIFICATION.  
*NOTES: FILED. IRIGATION FARMERS HAVE A SOURCE OF ENERGY THAT THEY CAN AND SHOULD UTILIZE.  
*DATE: 780000

ABSTRACT 1692

*TITLE: BIODIGESTION OF CROP MATERIALS TO METHANE.  
*AUTHOR: CLAUSEN E C, SITTON D C, GADDY J L.  
*KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, METHANE, ECONOMICS, TECHNOLOGY ASSESSMENT.  
*NOTES: THE FEASIBILITY OF PRODUCING METHANE BY ANAEROBIC DIGESTION OF VARIOUS CROP MATERIALS IS STUDIED.  
*DATE: 770900

ABSTRACT 1693

*TITLE: TIMBER - THE RENEWABLE MATERIAL.  
*AUTHOR: CLIFF E P.  
*KEYWORDS: ORGANIC, WOOD, WASTES, HARVESTING.  
*NOTES: FILED.  
*DATE: 730800

ABSTRACT 1694

*TITLE: ECONOMIC EVALUATION OF ASSET RECOVERY FROM ANIMAL WASTE BY ANAEROBIC FERMENTATION.  
*AUTHOR: COLI W B, TURK M.  
*SOURCE: AMER SOC FOR MICROBIOLOGY, ANNUAL MEETING, MAY 1973, 27PP.  
*KEYWORDS: ORGANIC, ECONOMICS, ANAEROBIC FERMENTATION, ANIMAL WASTE.  
*NOTES: FILED.  
*DATE: 730500
**ABSTRACT 1695**

**TITLE**: Methane production from livestock wastes.

**AUTHOR**: Collins E R, Hughes H A.


**KEYWORDS**: Organic, Methane, Wastes, Anaerobic Fermentation.

**DATE**: 761000

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**ABSTRACT 1696**

**TITLE**: Dairy manure degradation under mesophilic and thermophilic temperatures.

**AUTHOR**: Converse J C, Zeikus J G, Graves R E, Evans G M.

**SOURCE**: ASAE Paper 75-4540, 1975, 14 pp.

**KEYWORDS**: Organic, Anaerobic Fermentation, Manure, Statistics, Design.

**DATE**: 750700

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**ABSTRACT 1697**

**TITLE**: Facts on methane production from animal manure.

**AUTHOR**: Converse J C, Graves R E.


**KEYWORDS**: Organic, Animal Waste, Anaerobic Fermentation, Operating Procedure.

**DATE**: 740700

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**ABSTRACT 1698**

**TITLE**: Performance of a large size anaerobic digester for poultry manure.

**AUTHOR**: Converse J C, Evans G M, Verdoeyen C R.


**KEYWORDS**: Organic, Methane, Manure, Technology Assessment.

**DATE**: 770300

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**ABSTRACT 1699**

**TITLE**: Thermophilic anaerobic digestion of solid waste for fuel gas production.

**AUTHOR**: Cooney C L, Wise D L.


**KEYWORDS**: Organic, Anaerobic Fermentation.

**DATE**: 750600

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**ABSTRACT 1700**

**TITLE**: Energy out of agriculture.

**AUTHOR**: Cornforth J W.

**SOURCE**: Span, 18(1)/10-11, 1975.

**KEYWORDS**: Organic, Photosynthesis, Conversion.

**DATE**: 751011

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**ABSTRACT 1701**


**AUTHOR**: Dafler J R, Forsh E, Schreiber J D.


**KEYWORDS**: Organic, Hydrogen, Thermochernical, Nuclear.

**DATE**: 771130
ABSTRACT 1702
TITLE: PRODUCTION ET UTILISATIONS DU GAZ DE FUMIER-METHANE BIOLOGIQUE.
AUTHOR: DAO HUU-BANG.
KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, METHANE, DESIGN.
NOTES: FILED.
DATE: 740900

ABSTRACT 1703
TITLE: WASTE BIOCONVERSION - ENVIRONMENTAL MANAGEMENT FOR ECONOMIC PROGRESS IN DEVELOPING COUNTRIES.
AUTHOR: DASILVA E, BURGERS C, OLEMBO J.
KEYWORDS: ORGANIC, WASTES, DEVELOPING COUNTRIES.
NOTES: FILED.
DATE: 760000

ABSTRACT 1704
TITLE: THE DESIGN OF A FULL-SCALE EXPERIMENTAL FERMENTATION FACILITY.
AUTHOR: DAVENPORT A K.
SOURCE: ASA PAPER 78-4567, 1978, 9PP.
KEYWORDS: ORGANIC, BOVINE, MANURE, ANAEROBIC FERMENTATION.
NOTES: FILED.
THE SYSTEM DESIGNED DESCRIBED IN THIS PAPER IS FOR AN EXPERIMENTAL FACILITY WHICH UTILIZES ANAEROBIC FERMENTATION OF CATTLE RESIDUE FOR THE PURPOSE OF PRODUCING A METHANE-RICH FUEL GAS AND A PROTEIN-RICH CATTLE FEED. THE MAIN OBJECTIVE OF THE SYSTEM IS TO DEMONSTRATE THE PRACTICAL AND ECONOMICAL OPERATION OF THE PROCESS.
DATE: 780000

ABSTRACT 1705
TITLE: GASOHOL ECONOMIC FEASIBILITY STUDY.
AUTHORS: DAVID M L ET AL.
KEYWORDS: ORGANIC, ENERGY CROPS, ETHANOL, ECONOMICS.
NOTES: FILED.
DATE: 780700

ABSTRACT 1706
TITLE: ENERGY AND AGRICULTURE: BIOMASS PRODUCTION AND UTILIZATION IN CANADA.
AUTHOR: DOERING C G E.
SOURCE: PRESENTED AT ENERGy AGRICULTURE AND WASTE MANAGEMENT CONFERENCE, SYRACUSE, N Y, 16-18 APRIL 1975, 9 PP.
KEYWORDS: ORGANIC, CANADA, AGRICULTURE, BIOMASS, ENERGY CONSUMPTION.
NOTES: FILED.
DATE: 750415
ABSTRACT 1709

•TITLE: CHARCOAL.
•AUTHOR: EARL D E.
•SOURCE: FAO, ROME, 1974, 97 PP.
•KEYWORDS: ORGANIC, COAL, WOOD, WORLD WIDE, ENERGY SOURCES, ECONOMICS, UGANDA, PRODUCTION.
•NOTES: FILED.
•DATE: 740000

ABSTRACT 1710

•TITLE: THE OTHER ENERGY CRISIS/FOREST.
•AUTHOR: EKHOHL E P.
•KEYWORDS: ORGANIC, ALTERNATIVES.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 1711

•TITLE: GREEN PLANTS AS SOLAR ENERGY CONVERTERS.
•AUTHOR: EMBER L R.
•SOURCE: ENVIR SCI AND TECH, 10(6)/526-527, 1976.
•KEYWORDS: ORGANIC, WASTES, CONVERSION, TECHNOLOGY ASSESSMENT.
•NOTES: PROCESSES TO CONVERT SOLID WASTES AND FUEL CROPS TO FUEL ARE DISCUSSED; SOME POTENTIAL PROBLEMS OF BIOCONVERSION TECHNIQUES HAVE TO BE IRONED OUT BEFORE THE SYSTEMS BENEFITS ARE ENJOYED.
•DATE: 760000

ABSTRACT 1712

•TITLE: SENSITIZED PHOTODEGRADATION OF CELLULOSE AND CELLULOSIC WASTES.
•AUTHOR: ESKIN K, BUCHER B L, SLOMEKER J M.
•KEYWORDS: ORGANIC, MANURE.
•NOTES: FILED.
•DATE: 730000

ABSTRACT 1713

•TITLE: FUEL FROM LIVESTOCK WASTES - AN ECONOMIC ANALYSIS.
•AUTHOR: FAIRBANK W C.
•KEYWORDS: ORGANIC, ANIMAL WASTE, METHANE, CONVERSION, PYROLYSIS, ANAEROBIC FERMENTATION, ECONOMICS.
•NOTES: FILED.
•DATE: 740000

ABSTRACT 1714

•TITLE: FUEL FROM FECES.
•AUTHOR: FAIRBANK W C.
•SOURCE: ASAE PAPER PC74-03, 1974, 12 PP.
•KEYWORDS: ORGANIC, PYROLYSIS.
•NOTES: FILED.
•DATE: 740000

ABSTRACT 1715

•TITLE: SETTLING CHARACTERISTICS OF SWINE MANURE AS RELATED TO DIGESTER LOADING.
•AUTHOR: FISCHER J A, SIEVERS D M, FULMAGE C D.
•SOURCE: CONF PROC OF THE 3RD INTERNATIONAL SYMPOSIUM ON LIVESTOCK WASTES, ASAE, PO BOX 410, ST JOSEPH, MI 49085, 4 PP.
•KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION.
•NOTES.
•DATE:.
Abstract 1716

Title: Anaerobic Digestion in Swine Wastes

Author: Fischer J R, Sievers D M, Fulmage C D, Iannotti E L


Keywords: Organic, Wastes, Anaerobic Fermentation, Technology Assessment

Notes: Filed

Date: 750000

Abstract 1717

Title: Design and Operation of a Farm-Size Anaerobic Digester for Swine

Author: Fischer J R, Reador N F, Sievers D M, Fulmage C D, Iannotti E L

Source: ASAE Paper 77-4052, 1977, 25 PP

Keywords: Organic, Swine, Anaerobic Fermentation, Technology Assessment

Notes: Filed. The data over a 27 week period is reported on a 140 cu m anaerobic digester for swine.

Date: 770000

Abstract 1718

Title: Methane Production Systems for Swine Manure

Author: Fischer J R, Iannotti E L, Sievers D M

Source: ASAE Paper 78-4011, 1978, 15 PP

Keywords: Organic, Manure, Anaerobic Fermentation, Swine

Notes: Filed. A digestor was operated for one year with various operational problems. Changing the swine ration from predominantly corn to wheat resulted in lower gas production. Gas production is a good indicator of daily digester performance. But, other information such as TS in effluent indicate digester long term stability.

Date: 780000

Abstract 1719

Title: Biological and Chemical Fluctuations During Anaerobic Digestion of Swine Manure

Author: Fischer J R, Christianson L, Fulmage C D

Source: ASAE Paper 79-9020, 7-8 April 1978, 18 PP

Keywords: Organic, Anaerobic Fermentation

Notes: Filed. Average mass production rate of methane from the digester is 54 grams/hr/sow unit. Energy production from the digester varies according to the size and number of hogs in the system. Maximum energy produced is 950 watts/sow unit and the minimum is 596 watts/sow unit. Most of the electrical and thermal energy demands of the complex can be satisfied.

Date: 780407

Abstract 1720

Title: Utilizing the Energy From a Swine Anaerobic Digester

Author: Fischer J R, Christianson L, Fulmage C D

Source: ASAE Paper 79-4571, Winter 1979, 13 PP

Keywords: Organic, Anaerobic Fermentation

Notes: Filed. A control system for an anaerobic digester can become integrated into animal production in the US only if the digester system requires minimum labor. An automated control system has operated a swine digester located at Columbia, MO.

Date: 780627

Abstract 1721

Title: Three Years of Evaluating a Midwest Anaerobic Dairy Lagoon

Author: Fischer J R, Fulmage C D, Reador N F, Porter J M

Source: ASAE Paper 77-4571, Winter 1979, 25 PP

Keywords: Organic, Anaerobic Fermentation

Notes: Filed. Total and volatile solids, temperature, total kjeldahl nitrogen, ammonia nitrogen conductivity and pH values were obtained at eight depths and two locations in the lagoon. A method of lagoon designs based on temperature is presented.

Date: 780000
ABSTRACT 1723

TITLE: PRODUCING METHANE GAS FROM SWINE MANURE IN A PILOT-SIZE DIGESTER.
AUTHOR: FISCHER J R, IANNOTTI E L, PORTER J H, GARCIA A.
SOURCE: ASA E PAPER 77-604, 25-26 MARCH 1977, 12 PP.
KEYWORDS: ORGANIC, MANURE, METHANE.
NOTES: FILED. A 0.42 CUBIC METER DIGESTER WAS OPERATED FOR 1 YEAR AT A LOADING RATE OF 4.6% VOLATILE SOLIDS/LITER/DAY. GAS PRODUCTION WAS 1.2 CUBIC METERS GAS/CUBIC METER OF DIGESTER LIQUID. THE GAS COMPOSITION WAS 59 PERCENT METHANE AND 39 PERCENT CARBON DIOXIDE. 52 AND 61 PERCENT OF THE TOTAL AND VOLATILE SOLIDS WERE DESTROYED.
DATE: 771025

ABSTRACT 1724

TITLE: ALCOHOL AS A SOLUTION TO THE ENERGY CRISIS.
AUTHOR: FONG P.
KEYWORDS: ORGANIC, ALCOHOL, ETHANOL, ENGINE, SOCIAL IMPLICATIONS, ECONOMICS.
NOTES: FILED.
DATE: 740603

ABSTRACT 1725

TITLE: WOOD RESIDUE AS AN ENERGY SOURCE.
AUTHOR: FOREST PRODUCTS RESEARCH SOCIETY.
SOURCE: PROC P-75-13 OF THE ENERGY WORKSHOP ON WOOD RESIDUE AS AN ENERGY SOURCE, FOREST PRODUCTS RESEARCH SOC, 2001 MARSHALL COURT, MADISON, WI, 1975, 110 PP.
KEYWORDS: ORGANIC, WOOD.
NOTES: FILED.
DATE: 750803

ABSTRACT 1726

TITLE: WOOD AS A HOME FUEL.
AUTHOR: FOLDS R T.
SOURCE: EXTENSION SERVICE, UNIV OF VERMONT, BURLINGTON, 17 PP, UNDATED.
KEYWORDS: ORGANIC, WOOD, HOME.
NOTES: FILED.
DATE: 

ABSTRACT 1727

TITLE: THE ECONOMICS OF SNG PRODUCTION BY ANAEROBIC DIGESTION OF SPECIALTY-GROWN PLANT MATTER.
AUTHOR: FRASER R D.
KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, SNG, TECHNOLOGY ASSESSMENT, ECONOMICS.
NOTES: THIS REPORT DESCRIBES THE ENERGY PLANTATION SNG PRODUCTION PROCESS. STEPS IN THIS PROCESS INVOLVE PRETREATMENT OF PLANT MATERIAL, DIGESTION OF SLURRY ANAEROBICALLY FOR ABOUT 15 DAYS, REMOVAL OF CARBON DIOXIDE AND WATER VAPOR FROM THE DIGESTER GAS. MAJOR UNKNOWN PARAMETERS IN THE PROPOSED PROCESS ARE IDENTIFIED. ECONOMICS ARE ALSO INCLUDED.
DATE: 770129

ABSTRACT 1728

TITLE: ENERGY FROM WASTE - AN ENVIRONMENTAL SOLUTION THAT IS NOT PROBLEM FREE.
AUTHOR: FREEMAN J M, OLEXSET R A.
SOURCE: EPA CINCINNATI NEWSRELEASE, JULY 1977, 4 PP.
KEYWORDS: ORGANIC, ENVIRONMENT, WASTES, PYROLYSIS.
NOTES: PROJECTS BEEN SUPPORTED AND DIRECTED BY EPAS INDUSTRIAL ENVIRONMENTAL RESEARCH LAB IN CINCINNATI ARE DESCRIBED. ENVIRONMENTAL ISSUES ASSOCIATED WITH WASTE-TO-ENERGY PROCESSING AND DEVELOPING METHODS ARE EXAMINED. SUCH WASTE ENERGY SYSTEMS AS INCINERATORS WITH HEAT RECOVERY, COMBINED PIPING SYSTEMS, PYROLYSIS PROCESSES, ADVANCED COMBUSTION SYSTEMS, AND BIOCONVERSION ARE DEFINED.
DATE: 770700
ABSTRACT 1729

TITLE: METHANE GENERATION BY ANAEROBIC FERMENTATION - AN ANNOTATED BIBLIOGRAPHY.

AUTHOR: FREEMAN C. PYLE L.


KEYWORDS: ORGANIC, BIBLIOGRAPHY, ANAEROBIC FERMENTATION, METHANE.

NOTES: PRESENTED IS A BIBLIOGRAPHY OF LITERATURE CONCERNED WITH THE BUILDING, DESIGNING AND IMPROVING OF METHANE GENERATORS IN THE THIRD WORLD. THE REFERENCES ARE GROUPED INTO THREE CATEGORIES - 1) GENERAL BACKGROUND AND THEORY OF ANAEROBIC DIGESTION, 2) FACTORS AFFECTING PROCESS PERFORMANCE AND THEIR IMPORTANCE ON CONTROL, AND 3) USE OF THE NUTRIENT-RICH RESIDUE AS A FERTILIZER. ALL REFERENCES HAVE ABSTRACTS. AN AUTHOR INDEX IS PROVIDED. ALSO THE ADDRESSES OF PUBLISHERS AND INSTITUTIONS ARE PROVIDED.

DATE: 770000.

ABSTRACT 1730

TITLE: METHANE POWER PLANTS.

AUTHOR: FRY L.

SOURCE: D A KNOX, ANDOVER, HAMPSHIRE, 1974, 96 PP.

KEYWORDS: ORGANIC.

NOTES: FILED.

DATE: 740000.

ABSTRACT 1731

TITLE: METHANE DIGESTERS FOR FUEL GAS AND FERTILIZER.

AUTHOR: FRY L.

SOURCE: NEWSLETTER 3, THE NEW ALCHEMY INST, BOX 432, WOODS HOLE, MA 02543, SPRING 1973, 44 PP.

KEYWORDS: ORGANIC, WASTE, ANAEROBIC Fermentation, DESIGN.

NOTES: FILED.

DATE: 730000.

ABSTRACT 1732

TITLE: PRACTICAL BUILDING OF METHANE POWER PLANTS FOR RURAL ENERGY INDEPENDENCE.

AUTHOR: FRY L.

SOURCE: ANDOVER, HAMPSHIRE, GREAT BRITAIN/CHAPEL RIVER PRESS, 1974, 96 PP.

KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION, OPERATING PROCEDURE.

NOTES: FILED.

DATE: 740000.

ABSTRACT 1733

TITLE: GENERATING METHANE GAS FROM BIOLOGICAL MATERIALS.

AUTHOR: FULHAGE C D, SIEVERS D M, FISCHER J R.

SOURCE: SCI AND TECH GUIDE, DEPT. OF SUR ENGR, UNIV OF MISSOURI, COLUMBIA, MO, 1975, 4 PP.

KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION, EFFICIENCY, ECONOMICS.

NOTES: FILED.

DATE: 750000.

ABSTRACT 1734

TITLE: GENERATION OF METHANE GAS FROM BIOMATERIALS.

AUTHOR: FULHAGE C D, SIEVERS D M.

SOURCE: COOPERATIVE EXTENSION SERVICE, UNIV OF MISSOURI, COLUMBIA, 1974, 3 PP.

KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION, EFFICIENCY, ECONOMICS.

NOTES: FILED.

DATE: 740000.

ABSTRACT 1735

TITLE: ANAEROBIC LAGOON EFFLUENT AS FERTILIZER IN MISSOURI.

AUTHOR: FULHAGE C D.

SOURCE: ASAE PAPER 78-4560, 1978, 13 PP.

KEYWORDS: ORGANIC, FERTILIZER, ANAEROBIC FERMENTATION.

NOTES: FILED.

DATE: 780000.
ABSTRACT 1736

**TITLE:** ENVIRONMENTAL IMPACT OF SOLID WASTE AND BIOMASS CONVERSION TO ENERGY PROCESSES.

**AUTHOR:** GAGE S J, CHAPMAN R A.

**SOURCE:** PRESENTED AT INST OF GAS TECH SYMPOSIUM ON CLEAN FUELS FROM WASTE, ORLANDO, FL, 25-28 JAN 1977; PP 465-463.

**KEYWORDS:** ORGANIC, ENVIRONMENT, WASTE, CONVERSION, SUPPLY DEMAND.

**NOTES:** THE SUPPLY AND DEMAND OUTLOOK FOR FUELS DERIVED FROM SOLID WASTE AND BIOMASS IS SUMMARIZED THROUGH THE YEAR 2000. DISCUSSED ARE ENVIRONMENTALLY SIGNIFICANT POTENTIAL AIR, SOLID, AND LIQUID EMISSIONS FROM SELECTED SOLID WASTE ENERGY SYSTEMS THAT ARE COMMERCIALLY AVAILABLE OR IN FINAL DEVELOPMENT STAGES. EPAS PROGRAM IN THE FIELD IS DISCUSSED ALSO.

**DATE:** 77G125

ABSTRACT 1737

**TITLE:** CONVERSION OF BIOMASS MATERIALS INTO GASEOUS PRODUCTS - PHASE 1.

**AUTHOR:** GARRET D E.

**SOURCE:** GARRETT ENERGY RESEARCH AND ENGR, CLAREMONT, CA, OCT 1977, 143 PP.

**KEYWORDS:** ORGANIC, PYROLYSIS, TECHNOLOGY ASSESSMENT.

**NOTES:** NTIS, SAN/1241-77/1.

**DATE:** 770100

ABSTRACT 1738

**TITLE:** THE RELEVANCE OF PHOTOSYNTHESIS TO THE UTILIZATION OF SOLAR ENERGY.

**AUTHOR:** GARTSIDE G.

**SOURCE:** PROC OF SYMPOSIUM ON REALISTIC PROSPECTS FOR SOLAR POWER IN AUSTRALIA, INTERNATIONAL SOLAR ENERGY SOC, 22 NOV 1975.

**KEYWORDS:** ORGANIC, SOLAR, PHOTOSYNTHESIS, ALCOHOL, NET ENERGY.

**NOTES:** FILED.

**DATE:** 731122

ABSTRACT 1739

**TITLE:** ROW SPACING EFFECTS ON BIOMASS AND COMPOSITION OF SUGAR CANE IN FLORIDA.

**AUTHOR:** GASCHO G J, SHIH S F.

**SOURCE:** SUGAR JAZUCAR, 73C61/36, 1978.

**KEYWORDS:** ORGANIC.

**NOTES:** ABSTRACT FILED.

**DATE:** 711000

ABSTRACT 1740

**TITLE:** TWO-PHASE ANAEROBIC DIGESTION.

**AUTHOR:** GHOSH S, KASS D L.

**SOURCE:** PRESENTED AT INST OF GAS TECH SYMPOSIUM ON CLEAN FUELS FROM BIOMASS AND WASTE, ORLANDO, FL, 25-28 JAN 1977; PP 373-316.

**KEYWORDS:** ORGANIC, WASTE, ANAEROBIC FERMENTATION, METHANE.

**NOTES:** WORK DONE AT THE INSTITUTE OF GAS TECHNOLOGY TO DEVELOP A TWO-PHASE DIGESTION PROCESS IS SUMMARIZED. THE ADVANTAGE OF TWO-PHASE RELATIVE TO CONVENTIONAL PROCESSES, THE CONCEPT OF PROCESS OPTIMIZATION BY PHASE SEPARATION AND VARIOUS METHODS OF PHYSICALLY SEPARATING NONMETHANOGENIC AND METHANOGENIC DIGESTION PHASES IN SEPARATE REACTORS ARE DISCUSSED.

**DATE:** 770125.

ABSTRACT 1741

**TITLE:** ALCOHOL FROM PLANT PRODUCTS - A BRAZILIAN ALTERNATIVE TO THE ENERGY SHORTAGE.

**AUTHOR:** GOLDBERG J, MOREIRA J R.

**SOURCE:** P-126, INSTITUTO DE FISICA, UNIVERSIDADE DE SÃO PAULO, SÃO PAULO, BRAZIL, SEPT 1977, 16PP.

**KEYWORDS:** ORGANIC, ALCOHOL, BRAZIL.

**NOTES:** FILED. BRAZIL IS MEETING ONE CHALLENGE OF THE DECREASING FOSSIL FUEL SUPPLIES BY SUBSTITUTING ETHYL ALCOHOL IN VARYING AMOUNTS IN PLACE OF GASOLINE AS AN AUTOMOBILE FUEL.

**DATE:** 770900

ABSTRACT 1742

**TITLE:** ENERGY FROM COTTON GIM WASTE.

**AUTHOR:** GOODIN P L.

**SOURCE:** AGR RESEARCH, APRIL 1977, PP 3-5.

**KEYWORDS:** ORGANIC, EFFICIENCY, WASTE.

**NOTES:** FILED.

**DATE:** 770400
ABSTRACT 1743

TITLE: ECONOMIC POTENTIAL OF BAGASSE AS AN ALTERNATE ENERGY SOURCE - THE HAWAIIAN EXPERIENCE.

AUTHOR: GOPALAKRISHNAN C. NAMAN M.

SOURCE: UNPUBLISHED. DEPT OF AGR AND RESOURCE ECON AT THE UNIV OF HAWAI, 11 PP. UNDATED.

KEYWORDS: ORGANIC, ECONOMICS, HAWAI, ALTERNATIVES, ENERGY SOURCES.

NOTES: FILED.

DATE.

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ABSTRACT 1744

TITLE: FOOD, FOREST, WASTE - LOW BTU FUEL.

AUTHOR: GOSS J R.


KEYWORDS: ORGANIC TECHNOLOGY ASSESSMENT.

NOTES: FILED. THIS PAPER GIVES A QUICK EXPLANATION OF THE UNIVERSITY OF CALIFORNIA-DAVIS THREE-PHASE DEVELOPMENT PROJECT TO DESIGN GASIFIERS TO SAFELY TRANSFORM A VARIETY OF WASTE PRODUCTS INTO A USEABLE FUEL.

DATE: 780100

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ABSTRACT 1745

TITLE: ON-SITE EXTRACTION OF LOW-BTU GAS FROM AGRICULTURAL RESIDUES FOR THE REPLACEMENT OF NATURAL GAS IN AGRICULTURAL PROCESSING.

AUTHOR: GOSS J R. WILLIAMS R O.

SOURCE: ENERGY RESOURCES CONSERVATION AND DEV COMMISSION, STATE OF CALIF. PRELIMINARY REPORT, 28 PP.

KEYWORDS: ORGANIC, GASIFICATION, DESIGN, ECONOMICS.

NOTES: FILED. A METHOD OF EXTRACTING USEFUL ENERGY FROM CRACKED WALNUT SHELL HAS BEEN DEVELOPED. THIS INVOLVES THE CONVERSION OF SHELL TO PRODUCE GAS, A LOW BTU GAS IN WHICH THE MAJOR CONBUSTIBLE COMPONENTS ARE CARBON MONOXIDE 20-30 PERCENT AND HYDROGEN 10-15 PERCENT. AN EXPERIMENTAL GASIFIER CAPABLE OF PRODUCING SIX TO EIGHT MILLION BTU/HR WAS DESIGNED, CONSTRUCTED AND TESTED. OPERATING PROCEDURES WERE DETERMINED AND THE CAPITAL REQUIRED TO PRODUCE A NATURAL GAS SUBSTITUTE WAS ESTIMATED. THE ENERGY EXTRACTING CAPABILITY OF THE SYSTEM WAS DEMONSTRATED IN ACTUAL APPLICATION. THE THERMAL EFFICIENCY OF A GASIFICATION PROCESS IS IN THE REGION OF 85-90 PERCENT WHEN THE PRODUCT IS NOT GAS. THE GASIFIER HAS BEEN OPERATED SUCCESSFULLY FOR SOME PERIOD OF TIME AND IT HAS BEEN POSSIBLE TO REPLACE NATURAL GAS AS FUEL IN A LOW PRESSURE STEAM BIOLER. ALTHOUGH THE GASIFIER WAS EQUIPPED WITH CONTINUOUS FEED AND ASH REMOVAL SYSTEMS, IT HAS NOT BEEN POSSIBLE TO RUN CONTINUOUSLY AS YET. PROBLEMS HAVE BEEN EXPERIENCED WITH ALL MATERIALS HANDLING SYSTEMS.

DATE.

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ABSTRACT 1746

TITLE: WALNUT SHELLS - REPLACEMENT FOR NATURAL GAS.

AUTHOR: GOSS J R. WILLIAMS R O.

SOURCE: FOOD ENGR. DEPT OF AGR ENGR. UNIV OF CALIF. DAVIS CA 95616. SEPT 1977. 5 PP.

KEYWORDS: ORGANIC, DESIGN, ECONOMICS.

NOTES: FILED. A METHOD OF EXTRACTING USEFUL ENERGY FROM CRACKED WALNUT SHELLS HAS BEEN DEVELOPED BY THE UNIVERSITY OF CALIFORNIA IN COOPERATION WITH DIAMOND/SUNSWEET INC. AND THE CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION. A PILOT PLANT TO DO THIS AT DIAMOND/SUNSWEET IS NOW IN OPERATION. THE DESIGN, OPERATIONAL PROBLEMS AND OVERALL ECONOMICS ARE DISCUSSED ALONG WITH A SECTION ON EUROPEAN ACTIVITIES IN GASIFICATION.

DATE: 770900

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ABSTRACT 1747

TITLE: FUELS FROM CROPS - RENEWABLE AND CLEAN.

AUTHOR: GRAHAM R W.


KEYWORDS: ORGANIC, RENEWABLE ENERGY, ENERGY SOURCES, AGRICULTURE, SOCIAL IMPLICATIONS, PYROLYSIS, ECONOMICS.

NOTES: FILED.

DATE: 750500

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ABSTRACT 1748

*TITLE*: PRELIMINARY ASSESSMENT OF SYSTEMS FOR DERIVING LIQUID AND GASEOUS FUELS FROM WASTE OR GROWN ORGANICS.

*AUTHOR*: GRAHAM R W, REYNOLDS T W, HSU T Y.

*SOURCE*: NASA TECHNICAL NOTE D-8165, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, WASH D C, FEB 1976, 40 PP.

*KEYWORDS*: ORGANIC WASTES, ANAEROBIC FERMENTATION, PYROLYSIS, ECONOMICS.

*NOTES*: FILED.

*DATE*: 11/02/00

ABSTRACT 1749

*TITLE*: MANURE FACTS AND FIGURES.

*AUTHOR*: GRAVES R E, MASSIE L R.

*SOURCE*: EXTENSION SERVICE, UNIV OF WISC, MADISON, OCT 1972, 15 PP.

*KEYWORDS*: ORGANIC, MANURE, STATISTICS, FERTILIZER.

*NOTES*: FILED.

*DATE*: 721000

ABSTRACT 1750

*TITLE*: ENERGY POTENTIAL FROM AGRICULTURAL FIELD RESIDUES.

*AUTHOR*: GREEN F L.

*SOURCE*: TRANSACTIONS OF AMERICAN NUCLEAR SOCIETY, 1975, 21 PP.

*KEYWORDS*: ORGANIC, AGRICULTURE, ENERGY SOURCES, CONSERVATION, CONVERSION, EFFICIENCY.

*NOTES*: FILED.

*DATE*: 750000

ABSTRACT 1751

*TITLE*: CELLULOSE PRODUCTION BY TRICHODERMA VIRIDE ON FEEDLOT WAST.

*AUTHOR*: GRIFFIN H L, SLONEKER J H, INGLETT G E.


*KEYWORDS*: ORGANIC, MANURE.

*NOTES*: FILED.

*DATE*: 740600

ABSTRACT 1752

*TITLE*: GASIFICATION OF SOLID WASTE POTENTIALS AND APPLICATIONS OF THE CO-CURRENT MOVING BED GASIFIER.

*AUTHOR*: GROENEVELD H J.

*SOURCE*: IN THE BOOK SYMPOSIUM PAPERS ENERGY FROM BIOMASS AND WASTES, INST OF GAS TECH, IIT CENTER, 5424 S STATE ST CHICAGO, ILL 60616 PP. 525-536.

*KEYWORDS*: ORGANIC, WASTES, GASIFICATION.

*NOTES*: FILED. A SHORT REVIEW IS GIVEN ON GASIFICATION PROCESSES FOR SOLID FUELS WITH SPECIAL EMPHASIS ON WASTE GASIFICATION. THE CO-CURRENT GASIFIER PLANTS AND SOME OPERATION DATA IS GIVEN. POTENTIAL APPLICATION IS ELUCIDATED WITH EXAMPLES, SUCH AS GASIFICATION OF MAIZE COBS IN THE RURAL AREAS OF TANZANIA.

*DATE*: 780918

ABSTRACT 1753

*TITLE*: METHANE GAS GENERATION FROM MANURE.

*AUTHOR*: GROUP A R.

*SOURCE*: AGR ENGR DEPT, PENN STATE UNIV, UNIVERSITY PARK, MARCH 1973, 4PP.

*KEYWORDS*: ORGANIC, METHANE, ANAEROBIC FERMENTATION, OPERATING PROCEDURE.

*NOTES*: FILED.

*DATE*: 730330

ABSTRACT 1754

*TITLE*: ALCOHOL - A BRAZILIAN ANSWER TO THE ENERGY CRISIS.

*AUTHOR*: HAMMOND A L.


*KEYWORDS*: ORGANIC, BRAZIL, ETHANOL.

*NOTES*: FILED.

*DATE*: 770211
ABSTRACT 1755

**Title**: Photosynthetic Solar Energy - Rediscovering Biomass Fuels.

**Author**: Hammond A L.


**Keywords**: Organic, Conversion.

**Notes**: Filed. Looks at the biomass potential of the US in terms of ways in which it can help provide some relief from the energy crisis. Discusses several applications of solar energy utilization through biomass. Both forest and agricultural potential area discussed.

The author feels that biomass has a place in our energy system.

**Date**: 770819

ABSTRACT 1756

**Title**: Will Autos Go Alcoholic.

**Author**: Hampton W, Iamartino N R.

**Source**: CHEMICAL ENGR, 21 July 1975, pp 58-60.

**Keywords**: Organic, Methanol.

**Notes**: Filed.

**Date**: 750721

ABSTRACT 1757

**Title**: Wood As Fuel.

**Author**: Hand A J.

**Source**: POPULAR SCI, OCT 1976, pp 104-107.

**Keywords**: Organic, Wood, Design.

**Notes**: Filed.

**Date**: 761000

ABSTRACT 1758

**Title**: Methane Generation From Livestock Waste.

**Author**: Hansen R W.

**Source**: GREAT PLAINS BEEF CATTLE HANDBOOK, 6PE-7700, COOPERATIVE EXTENSION SERVICE, NOV 1975, 4 pp.

**Keywords**: Organic, Manure, Methane, Design.

**Notes**: Filed.

**Date**: 751100

ABSTRACT 1759

**Title**: Fuelwood Facts.

**Author**: Hansen N J.

**Source**: WRAES 70/6B, OREGON STATE UNIV, CORVALLIS, OR 97331, NOV 1977.

**Keywords**: Organic, Wood.

**Notes**: Filed.

**Date**: 771100

ABSTRACT 1760

**Title**: Wood Stove Installation Safety - A CheckList.

**Author**: Hansen N J.

**Source**: WRAES 65/14, OREGON STATE UNIV, CORVALLIS, OR 97331, AUG 1977.

**Keywords**: Organic, Wood, Safety, Home.

**Notes**: Filed.

**Date**: 770800

ABSTRACT 1761

**Title**: Methane and Biomass Production Systems for Beef Cattle Manure.

**Author**: Hashimoto A G, Prior R L, Chem Y R.

**Source**: PRESENTED AT THE GREAT PLAINS EXTENSION SEMINAR ON METHANE PRODUCTION FROM LIVESTOCK MANURE, LIBERAL, KS, 15 FEB 1978, 25 PP.

**Keywords**: Organic, Methane, Manure.

**Notes**: Filed.

**Date**: 780215

ABSTRACT 1762

**Title**: Design and Operation of a Demonstration Unit for Methane Generation.

**Author**: Hassan A E, Putnam S S, Smith N.

**Source**: ASAE PAPER 75-4539, 20 PP.

**Keywords**: Organic, Methane, Anaerobic Fermentation, Manure, Design, Operating Procedure.

**Notes**: Filed.

**Date**: 750800
ABSTRACT 1763

*TITLE: COMPACTION OF WOOD CHIPS - ENERGY COST*
*AUTHOR: HASSAN A. E.*
*SOURCE: ASAE PAPER 76-1568, 1976, 17 PP.*
*KEYWORDS: ORGANIC, WOOD, ECONOMICS*
*NOTES: FILED*
*DATE: 760000*

ABSTRACT 1764

*TITLE: ENERGY RECOVERY AND FEED PRODUCTION FROM POULTRY WASTES*
*AUTHOR: HASSAN A. E.*
*SOURCEx IN THE BOOK ENERGY A&RICULTURt AND VASTIIAN&GtII[NT W J J[Vt ANN ARBOR, Ill/AN~ ARBOR SCI PUBL INC 1975 PP 289•306.*
*KEYWORDS: ORGANIC, POULTRY, ANAEROBIC FERMENTATION, TECHNOLOGY ASSESSMENT.*
*DATE: 760000*

ABSTRACT 1765

*TITLE: COMPACTION OF WOOD CHIPS - PHYSICAL AND PULPING CHARACTERISTICS*
*AUTHOR: HASSAN A. E.*
*KEYWORDS: ORGANIC, WOOD*
*NOTES: FILED* PHYSICAL PARAMETERS OF CONTAINERIZED COMPACTED AND UNCOMPACTED CHIPS ARE DISCUSSED. THE PULPING RESULTS INDICATED THAT THE COMPACTION PROCESS DID NOT DAMAGE FIBERS OR ALTER THE CHIP RESPONSE TO CONVENTIONAL PULPING.
*DATE: 780000*

ABSTRACT 1766

*TITLE: BIOLOGICAL SOURCES OF COMMERCIAL ENERGY*
*AUTHOR: NAYES D.*
*SOURCE: BIOSCIENCE, 27(8)/540-547, AUG 1977.*
*KEYWORDS: ORGANIC, WASTES, CONVERSION, SOCIAL IMPLICATIONS*
*NOTES: ORGANIC FUELS INCLUDE BROAD CATEGORIES OF WASTE FROM NONENERGY PROCESSES AND CROPS GROWN EXPPLICITLY FOR THEIR ENERGY VALUE. TECHNIQUES FOR CONVERTING TREES AND OTHER ENERGY CROPS ARE REVIEWED. SOME ENVIRONMENTAL AND SOCIAL EFFECTS OF BIOLOGICAL ENERGY SYSTEMS ARE DISCUSSED. WITHIN BOUNDS SET BY NATURAL LIMITS, PHOTOSYNTHETIC FUELS CAN CONTRIBUTE SIGNIFICANTLY TO THE WORLD'S COMMERCIAL ENERGY SUPPLY.
*DATE: 770800*

ABSTRACT 1767

*TITLE: PLANT POWER - BIOLOGICAL SOURCES OF ENERGY*
*AUTHOR: NAYES D.*
*SOURCE: ECOLOGIST, 7(9)/349-357, NOV 1977.*
*KEYWORDS: ORGANIC, WASTES, CONVERSION, ALTERNATIVE FUELS*
*NOTES: THE FEASIBILITY OF USING ORGANIC SOURCES OF FUEL AS AN ENERGY ALTERNATIVE IS DISCUSSED. SEVERAL ORGANIC SOURCES AND CONVERSION TECHNOLOGIES ARE CONSIDERED.
*DATE: 771100*

ABSTRACT 1768

*TITLE: UTILIZATION OF AGRICULTURAL WASTES*
*AUTHOR: HEALD W R, LOEHR R C.*
*SOURCE: PROC FROM CORNELL CONF ON AGR WAST MANAGEMENT, 1971, PP 121-129.*
*KEYWORDS: ORGANIC, WASTES, AGRICULTURE, POLLUTION, LAND USE, FERTILIZER, FOOD PROCESSING, RECYCLING.*
*NOTES: FILED*
*DATE: 710000*

ABSTRACT 1769

*TITLE: ANAEROBIC DIGESTION OF BEEF MANURE AND CORN STOVER*
*AUTHOR: HEIN M E, SKITH R J, VETTER R L.*
*SOURCE: ASAE PAPER 75-5342, 18 PP.*
*KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION, DESIGN, STATISTICS, OPERATING PROCEDURE.*
*NOTES: FILED*
*DATE: 750000*
ABSTRACT 1770

**TITLE:** DRY MATTER YIELD, NUTRITIVE COMPOSITION, AND COMBUSTIBLE ENERGY VALUE OF BIOMASS GROWN IN SINGLE AND DOUBLE CROPPING SYSTEMS.

**AUTHOR:** HELSEL Z R.

**SOURCE:** DEPT OF AGRONOMY, IOWA STATE UNIV, AMES, IA, 1977, 250 PP.

**KEYWORDS:** ORGANIC, ENERGY CROP, NUTRITIVE COMPOSITION, COMBUSTIBLE ENERGY VALUE.

**NOTES:** FILED. THE INTENT OF THIS PROJECT WAS TO EVALUATE FOR POTENTIAL TOTAL BIOMASS PRODUCTION, MODERN AGRONOMIC PRACTICES FOR VARIOUS CROPS UNDER SINGLE AND DOUBLE CROPPING SYSTEMS, DETERMINATION OF THE NUTRITIVE COMPOSITION OF THESE CROPS, CROP RESIDUES OR SILAGES GROWN FOR UTILIZATION AS FEED OR FOOD STUFFS AND THE POTENTIAL OF THE CROPS OR RESIDUES AS SOURCES OF FUEL FOR ELECTRICAL ENERGY GENERATION IS PRESENTED. IT IS INTENDED THAT THIS RESEARCH WILL ACT AS A BASIS FOR FUTURE STUDIES GIVING INSIGHT AS TO THE PROBLEMS AND NEEDS OF DOUBLE CROPPING AND UTILIZATION OF BIOMASS AS A FUEL SOURCE.

**DATE:** 770000

ABSTRACT 1771

**TITLE:** FOOD OR ENERGY.

**AUTHOR:** HENDRIX J E.

**SOURCE:** NEW SCIENTIST, 18 JULY 1976, 1 P.

**KEYWORDS:** ORGANIC.

**NOTES:** FILED.

ABSTRACT 1772

**TITLE:** OPERATION OF 390 CUBIC METER DIGESTER AT THE WASHINGTON STATE DAIRY FARM.

**AUTHOR:** HERMANSON R E.

**SOURCE:** ASAE PAPER 78-4566, 1978, 21 PP.

**KEYWORDS:** ORGANIC, BOVINE, MANURE, ANAEROBIC FERMENTATION, ECONOMICS.

**NOTES:** FILED. THE OPERATION AND PERFORMANCE OF A LARGE SCALE ANAEROBIC DIGESTER PROCESSING WASTE FROM A 180 COW DAIRY IN MONROE, WASH IS PRESENTED. ENERGY PRODUCTION HAS REACHED THE EQUIVALENT OF 1800 GJ PER YEAR. TIE FEASIBILITY OF GENERATING ELECTRICITY WITH AN INTERNAL COMBUSTION ENGINE AND THE LIFE CYCLE ECONOMICS OF GAS AND ELECTRICITY PRODUCTION ARE EXAMINED.

**DATE:** 780000

ABSTRACT 1773

**TITLE:** SYSTEMS AND EQUIPMENT FOR LAND APPLICATION OF SLUDGE.

**AUTHOR:** HIGGINS A J.

**SOURCE:** ASAE PAPER 78-4567, 1978.

**KEYWORDS:** ORGANIC, WASTES, FERTILIZER, TECHNOLOGY ASSESSMENT.

**NOTES:** FILED. EQUIPMENT FOR LAND APPLICATION OF LIQUID AND SEMI-SOLID SEWAGE SLUDGES BY THE FLOW-FURROW-COVER AND SUBSOIL INJECTION TECHNIQUES HAVE BEEN DEVELOPED AND TESTED. SEVERAL LAND APPLICATION UNITS AND THEIR ASSOCIATED COMPONENTS ARE DISCUSSED IN TERMS OF THEIR UTILIZATION IN AGRICULTURAL SYSTEMS.

**DATE:** 780000

ABSTRACT 1774

**TITLE:** METHANOL FROM WOOD WASTE, A TECHNICAL AND ECONOMIC STUDY.

**AUTHOR:** HOKANSON A E, ROWELL R M.

**SOURCE:** FOREST PRODUCTS LAB FOREST SERVICE, USDA, GENERAL TECHNICAL REPORT 12, JUNE 1977, 20 PP.

**KEYWORDS:** ORGANIC, WOOD, METHANOL, TECHNOLOGY ASSESSMENT, ECONOMICS.

**NOTES:** FILED. A METHANOL FROM WOOD WASTE FACILITY HAVING A CAPACITY OF 36 MILLION GALLONS PER YEAR REQUIRES 1500 OVEN DRY TONS (ODT) OF WOOD WASTE PER DAY. THE YIELD OF METHANOL FROM WOOD IS ABOUT 56 PERCENT, OR ABOUT 100 GALLONS PER ODT OF WOOD. THIS YIELD IS BASED ON ALL PROCESS ENERGY REQUIRED COMING FROM THE WOOD WASTE. AT A WOOD WASTE COST OF $115/ODT, THE SELLING PRICE OF METHANOL IS ESTIMATED AT $0.77/GAL. AT $64/ODT, THE SELLING PRICE IS $0.96/GAL.

**DATE:** 770000

ABSTRACT 1775

**TITLE:** AN INQUIRY INTO BIOLOGICAL ENERGY CONVERSION.

**AUTHOR:** HOLLANDER A. ET AL.

**SOURCE:** NSF/FRANN WORKSHOP, UNIV OF TENN, KNOXVILLE, DEC 1972, 41 PP.

**KEYWORDS:** ORGANIC, SOLAR, WASTES, FOSSIL FUELS, METHANE, CONVERSION, ENERGY SOURCES.

**NOTES:** FILED.

**DATE:** 721200
ABSTRACT 1776

**TITLE**: TOTAL PLANT HARVESTING CONCEPTS FOR RICE.
**AUTHOR**: HORSFIELD B, BURKHARDT T M.
**SOURCE**: ASAE PAPER 75-15-0T 12 PP.
**KEYWORDS**: ORGANIC, HARVESTING.
**NOTES**: FILED.
**DATE**: 750300

ABSTRACT 1777

**TITLE**: DRYING ENERGY FROM CORN COBS - A TOTAL SYSTEM.
**AUTHOR**: HORSFIELD B, DOSTER D W, PEART R M.
**SOURCE**: DEPT OF AGR ENGR, UNIV OF CALIF, DAVIS, CA 95616, 25 PP, UNPUBLISHED.
**KEYWORDS**: ORGANIC, DRYING, ECONOMICS.
**NOTES**: FILED. STARTING WITH THE ENERGY CONTENT OF CORN COBS, COLLECTION AND HANDLING OF THE CORN COBS TO THE ENERGY EXTRACTION METHOD (THE USE OF PRODUCER GAS GENERATORS) AND THE ECONOMICS OF SUCH A SYSTEM ARE PRESENTED IN THIS PAPER.
**DATE**: 770500

ABSTRACT 1778

**TITLE**: ENERGY FOR AGRICULTURE AND THE GASIFICATION OF CROP RESIDUES.
**AUTHOR**: HORSFIELD B, WILLIAMS R O.
**SOURCE**: DEPT OF AGR ENGR, UNIV OF CALIF, DAVIS, CA 95616, 18 PP.
**KEYWORDS**: ORGANIC, WASTES, GASIFICATION, DESIGN.
**NOTES**: FILED. ALTHOUGH AGRICULTURE USES LARGE AMOUNTS OF ENERGY FOR GROWING AND PROCESSING FOODS, IT ALSO GENERATES EVEN LARGER AMOUNTS OF UNUSED ENERGY IN TERMS OF CROP RESIDUES. FOR THE SUCCESSFUL UTILIZATION OF THIS ENERGY SOURCE AT THE FARM OR FOOD PROCESSING LEVEL, A SIMPLE, LOW-COST METHOD OF CONVERTING RESIDUE ENERGY TO HEAT OR SHAFT HORSE-POWER IS NEEDED. SUCH A METHOD IS GASIFICATION. THE THEORY OF GASIFICATION IS REVIEWED AND ITS HISTORICAL APPLICATION TO CROP RESIDUE IS PRESENTED. SEVERAL POTENTIAL APPLICATIONS ARE DISCUSSED.
**DATE**: 780700

ABSTRACT 1779

**TITLE**: ENTEROBACTERA IN FEEDLOT WASTE AND RUNOFF.
**AUTHOR**: HRUBANT G R, DAUGHERTY R V, RHODES R A.
**SOURCE**: APPLIED MICROBIOLOGY, 24(5) 579-583, SEPT 1972.
**KEYWORDS**: ORGANIC, MANURE.
**NOTES**: FILED.
**DATE**: 720900

ABSTRACT 1780

**TITLE**: CHANGES IN MICROBIAL POPULATION DURING FERMENTATION OF FEEDLOT WASTE WITH CORN.
**AUTHOR**: HRUBANT G R.
**SOURCE**: APPLIED MICROBIOLOGY, 30(1) 113-119, JULY 1975.
**KEYWORDS**: ORGANIC, MANURE, ANAEROBIC FERMENTATION.
**NOTES**: FILED.
**DATE**: 750700

ABSTRACT 1781

**TITLE**: CHARACTERIZATION OF THE DOMINANT AEROBIC MICROORGANISM IN CATTLE FEEDLOT WASTE.
**AUTHOR**: HRUBANT G R.
**KEYWORDS**: ORGANIC, MANURE.
**NOTES**: FILED.
**DATE**: 731000

ABSTRACT 1782

**TITLE**: MODERN RESIDENTIAL HEATING WITH WOOD CHIPS.
**AUTHOR**: HUFF E R, RILEY J G, SMYTH D A.
**SOURCE**: ASAE PAPER 76-4555, 1976, 26 PP.
**KEYWORDS**: ORGANIC, WOOD, MORE, HEAT, DESIGN.
**NOTES**: FILED.
**DATE**: 760000
ABSTRACT 1703
• TITLE: METHANE THE ECONOMIC QUESTION.
• AUTHOR: HUGHES M A, PERUMRAL J V.
• SOURCE: SE REGION ASAЕ MEETING, NEW ORLEANS, LA, 2-5 FEB 1975, 10PP.
• KEYWORDS: ORGANIC, METHANE, ECONOMICS.
• NOTES: FILED.
• DATE: 750202

ABSTRACT 1784
• TITLE: FERMENTATION TECHNOLOGY.
• AUTHOR: HUMPHREY A E.
• KEYWORDS: ORGANIC, WASTES, ANAEROBIC FERMENTATION.
• NOTES: FERMENTATION, ONE OF THE OLDEST TECHNOLOGIES KNOWN, WILL PLAY AN IMPORTANT ROLE IN SUPPLYING FUTURE ENERGY, CHEMICALS, AND FOOD NEEDS, WHILE HELPING TO CONTROL POLLUTION. THREE MAIN AREAS FOR FERMENTATION APPLICATIONS ARE - TREATING INDUSTRIAL WASTES, CONVERTING RENEWABLE RESOURCES TO ENERGY, AND PRODUCING MICROBIAL METABOLITES.
• DATE: 770500

ABSTRACT 1785
• TITLE: SYNTHETIC FUELS FROM MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL WASTES.
• AUTHOR: HUNDEMANNo.
• SOURCE: NTIS 5285 PORT ROYAL RD, SPRINGFIELD, VA 22161, MAY 1978, 264 PP.
• KEYWORDS: ORGANIC, WASTE, BIBLIOGRAPHY.
• NOTES: FILED. THIS BIBLIOGRAPHY CITES WORLDWIDE LITERATURE ON THE PRODUCTION OF FUELS FROM WASTE MATERIALS, SUCH AS ANIMAL MANURE, WOOD CHIPS, SEWAGE SLUDGE, URBAN GARBAGE, AGRICULTURAL WASTES, AND OLD AUTOMOBILE TIRES. THE UPDATED BIBLIOGRAPHY CONTAINS 284 ABSTRACTS, 58 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.
• DATE: 780500

ABSTRACT 1786
• TITLE: FIREWOOD FOR YOUR FIREPLACE.
• AUTHOR: HUNT C, RANKRATH R.
• SOURCE: STOCK NO 0120-05195, US DEPT OF AG, FOREST SERVICE, US GOVT PRINTING OFFICE, WASHINGTON DC 20405, JULY 1974, 7 PP.
• KEYWORDS: ORGANIC, WOOD.
• NOTES: FILED. INFORMATION LEAFLET ON SELECTION, PURCHASE, AND USE OF FIREWOOD.
• DATE: 740700

ABSTRACT 1787
• TITLE: METHANE FARMING IN KENYA.
• AUTHOR: HUTCHINSON T M.
• KEYWORDS: ORGANIC, METHANE, KENYA.
• NOTES: NAS.
• DATE: 721100

ABSTRACT 1788
• TITLE: TECHNOLOGIES SUITABLE FOR RECOVERY OF ENERGY FROM LIVESTOCK MANURE.
• AUTHOR: IFADI C N, BROWN J B JR.
• KEYWORDS: ORGANIC, MANURE, ECONOMICS.
• NOTES: FILED.
• DATE: 750600
ABSTRACT 1789

- **TITLE**: SYMPOSIUM PAPERS ENERGY FROM BIOMASS AND WASTES
- **AUTHOR**: INSTITUTE OF GAS TECHNOLOGY
- **SOURCE**: INST OF GAS TECH IIT CENTER, 3424 S STATE ST CHICAGO, ILL 60616
- **KEYWORDS**: ORGANIC, WASTES, ENERGY CROPS, CONVERSION, TECHNOLOGY ASSESSMENTS
- **NOTES**: FILED. THE PAPERS GIVEN AT IGT SYMPOSIUM IN WASHINGTON DC AUG 14-18, 1978 ON ENERGY FROM BIOMASS AND WASTES ARE PRESENTED IN THIS BOOK. THE SCOPE AND CONTENT OF THESE PROCEEDINGS SHOW THAT THE TECH OF RENEWABLE ENERGY VIA BIOMASS AND AND WASTES IS DEVELOPING ON AN INTERNATIONAL SCALE
- **DATE**: 780918

ABSTRACT 1790

- **TITLE**: ALCOHOL FROM AGRICULTURAL COMMODITIES
- **AUTHOR**: JACOBS P B
- **SOURCE**: REPORT NO AGL-95, BUREAU OF AGR AND INDUSTRIAL CHEMISTRY, USDA, 1946
- **KEYWORDS**: ORGANIC
- **NOTES**: FILED
- **DATE**: 460000

ABSTRACT 1791

- **TITLE**: ANIMAL FEEDSTUFFS FROM WASTE AND SURPLUS FISH
- **AUTHOR**: JAMES D
- **SOURCE**: UNEP/FAO/ISMT4/14, ROME, ITALY, 18-21 JAN 1977, 5 PP
- **KEYWORDS**: ORGANIC
- **NOTES**: FILED
- **DATE**: 770118

ABSTRACT 1792

- **TITLE**: WOOD FOR HOME HEATING - SAFETY AND WOOD HEATING SYSTEMS
- **AUTHOR**: JENKINS J, VACCA R
- **SOURCE**: 628906, FOR HOME HEATING, UNIV OF WISC-EXTENSION, 432 NORTH LAKE ST, MADISON, WI 53706, MARCH 1978, 8 PP
- **KEYWORDS**: ORGANIC, WOOD, SAFETY, HOME
- **NOTES**: FILED
- **DATE**: 780300

ABSTRACT 1793

- **TITLE**: FUELWOOD AND FIREPLACE FACTS
- **AUTHOR**: JENSEN A S
- **SOURCE**: ENERGY CONSERVATION FACT SHEET EC-6, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 1976, 2 PP
- **KEYWORDS**: ORGANIC, WOOD
- **NOTES**: FILED
- **DATE**: 760000

ABSTRACT 1794

- **TITLE**: ENERGY FROM AGRICULTURAL WASTE-METHANE GENERATION
- **AUTHOR**: JEVIL W J
- **SOURCE**: AGR ENGR EXTENSION BULLETIN 387, CORNELL UNIV, ITHACA, N Y, JAN 1974, 13 PP
- **KEYWORDS**: ORGANIC, METHANE, AGRICULTURE, WASTES, DISTILLATION, ANAEROBIC FERMENTATION, ENERGY SOURCES
- **NOTES**: FILED
- **DATE**: 740100

ABSTRACT 1795

- **TITLE**: ENERGY, AGRICULTURE AND WASTE MANAGEMENT/ PROCEEDINGS OF 1975 CORNELL AGR WASTE MANAGEMENT CONFERENCE
- **AUTHOR**: JEVIL W J
- **SOURCE**: ANN ARBOR, MICH/ANN ARBOR SCIENCE PUB, 1975, 540 PP
- **KEYWORDS**: ORGANIC, MANURE, FOOD ENERGY
- **NOTES**: FILED
- **DATE**: 750000
ABSTRACT 1796

•TITLE: BIOCONVERSION OF AGRICULTURAL WASTES FOR POLLUTION CONTROL AND ENERGY CONSERVATION - FINAL REPORT.

•AUTHOR: JEWELL W J, DAVIS H R, GUNKEL W W, LATHWELL D J.

•SOURCE: NTIS, US DEPT OF COMMERCE, SPRINGFIELD, VA, SEPT 1976, 321 PP.

•KEYWORDS: ORGANIC, WASTES, ANAEROBIC FERMENTATION, METHANE.

•NOTES: FILED. EXAMINES THE FEASIBILITY OF ANAEROBIC FERMENTATION OF LIVESTOCK WASTE TO PROVIDE ENERGY AND CONTROL POLLUTION. CONCLUDES THAT, FOR LIVESTOCK OPERATIONS OF 100 COWS OR MORE ARE FEASIBLE IF ODOUR CONTROL AND OTHER BENEFITS ARE DERIVED. FOR LESS THAN 100 COWS, OTHER BENEFITS WILL HAVE TO OFFSET THE COSTS IN ORDER TO PRODUCE ENERGY AT PRICES COMPETITIVE TO EXISTING SYSTEMS.

•DATE: 760900

ABSTRACT 1797

•TITLE: BIOMASS FUELS - PAST, PRESENT, AND FUTURE.

•AUTHOR: JEWELL W J.

•SOURCE: DEPT OF AGRI ENGR, CORNELL UNIV, ITHICA NY, 1978, 10 PP.

•KEYWORDS: ORGANIC, CONVERSION, TECHNOLOGY ASSESSMENT.


•DATE: 780000

ABSTRACT 1798

•TITLE: PHOTOVOLTAIC AND BIOMASS UTILIZATION.

•AUTHOR: JOHNSON A C.


•KEYWORDS: ORGANIC, ENERGY CROPS, WASTES, PHOTOVOLTAIC, CONVERSION, PHOTOSYNTHESIS.

•NOTES: IN THIS PAPER THE DIRECT CONVERSION OF SUNLIGHT INTO ELECTRICITY BY PHOTOVOLTAIC SEMI-CONDUCTOR CELLS, AND PRODUCTION OF HEAT OR FUELS FROM ORGANIC WASTES, AND LAND OR WATER CROPS GROWN FOR ENERGY PURPOSES, ARE CONSIDERED FOR USE IN THE NEAR FUTURE.

•DATE: 760330

ABSTRACT 1799

•TITLE: FIBER WALL REACTOR DIGESTION OF DAIRY CATTLE MANURE.

•AUTHOR: JONES D D, DALE A C, NYE J C, HARRINGTON R B.

•SOURCE: ASAE PAPER 77-05-1, 1977, 24PP.

•KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION, DESIGN.

•NOTES: FILED. THE EFFECT OF A FIBER WALL IN A DIGESTER TO PROVIDE LONGER CELL RETENTION TIME WAS STUDIED USING SCREENED DAIRY COW MANURE.

•DATE: 770600

ABSTRACT 1800

•TITLE: WOOD FOR ENERGY IN DEVELOPING COUNTRIES.

•AUTHOR: JONGMA J.

•SOURCE: UNASILVA, AN INTERNATIONAL REVIEW OF FORESTRY AND FOREST INDUSTRIES, FTIF PRESS.

•KEYWORDS: ORGANIC, WOOD, DEVELOPING COUNTRIES.

•NOTES: FILED.

•DATE: 771118

ABSTRACT 1801

•TITLE: FOOD FROM WASTE AND NUTRITIONAL CONSIDERATIONS.

•AUTHOR: KAPSIOTIS G O.

•SOURCE: UNEP/FAO/ISS4/9/9, ROME, ITALY, 18-21 JAN 1977, 5 PP.

•KEYWORDS: ORGANIC, WASTES.

•NOTES: FILED.

•DATE: 770118
ABSTRACT 1802

*TITLE*: ENERGY PRODUCTION BY FIELD CROPS.
*AUTHOR*: KEENER H M, ROLLER W L.
*SOURCE*: ASAE PAPER 75-3221, 1975, 27 PP.
*KEYWORDS*: ORGANIC, ENERGY RATIO, FERTILIZER, ECONOMICS, STATISTICS.
*NOTES*: FILED. THE ENERGY REQUIREMENTS, EXPECTED AVERAGE YIELDS AND ENERGY OUTPUTS ARE PRESENTED FOR ALFALFA, POTATOES, SLASH PINE, SUGAR BEETS, WHEAT AND CORN. PLANTATION GROWN SLASH PINE GAVE A GROSS ENERGY RETURN OF 27 JOULES/JOULE OF INPUT ENERGY WHEN HARVESTED EVERY 20 YEARS. CORN AND ALFALFA RETURNED 10 JOULES OF DIGESTIBLE ENERGY FOR CATTLE PER JOULE OF INPUT ENERGY. CORN (GRAIN) RETURNED 7 JOULES AND WHEAT 4 JOULES OF DIGESTIBLE ENERGY FOR MAN FOR EACH JOULE OF INPUT ENERGY.
*DATE*: 750000

ABSTRACT 1803

*TITLE*: A CRITICAL LOOK AT ALTERNATIVE ENERGY SOURCES.
*AUTHOR*: KEMP C C.
*SOURCE*: SWEET BRIAR SYMPOSIUM/ENERGY AND THE NATION, SWEET BRIAR COLLEGE, 30 OCT 1974, INTERTECHNOLOGY CORP., BOX 340, WARRENTON, VIRGINIA, 11 PP.
*KEYWORDS*: ORGANIC, ENERGY SOURCES, FOSSIL FUELS, NUCLEAR, SOLAR, ANIMAL WASTE.
*NOTES*: FILED.
*DATE*: 741030

ABSTRACT 1804

*TITLE*: ADVANCES IN THE ENERGY PLANTATION CONCEPT.
*AUTHOR*: KEMP C C.
*SOURCE*: AAAS ANNUAL MEETING, 26-31 JAN 1975, NEW YORK, 15 PP.
*KEYWORDS*: ORGANIC, FOSSIL FUELS, NUCLEAR, SOLAR, ENERGY SOURCES, AGRICULTURE, ECONOMICS.
*NOTES*: FILED.
*DATE*: 750126

ABSTRACT 1805

*TITLE*: GRAIN ALCOHOL IN MOTOR FUELS-AN EVALUATION.
*AUTHOR*: KENDRICK J G, MURRAY P J.
*SOURCE*: REPORT 81, DEPT OF AGR ECON, UNIV OF NEBR., LINCOLN, NE, APRIL 1978, 60 PP.
*KEYWORDS*: ORGANIC, ALCOHOL, AUTOMOBILE.
*NOTES*: FILED.
*DATE*: 780430

ABSTRACT 1806

*TITLE*: GOBAR GAS - WHY AND HOW.
*AUTHOR*: KHADI AND VILLAGE INDUSTRIES COMMISSION.
*SOURCE*: KHADI AND VILLAGE INDUSTRIES COMMISSION, IRLA ROAD, VILE PARLE (WEST), BOMBAY-400 054, 25 PP.
*KEYWORDS*: ORGANIC, GOBARGAS, MANURE, METHANE, ANAEROBIC FERMENTATION, OPERATING PROCEDURE, ECONOMICS, INDIA.
*NOTES*: FILED.
*DATE*.

ABSTRACT 1807

*TITLE*: ALCOHOL AS AN ALTERNATIVE FUEL.
*AUTHOR*: KIRIK M.
*KEYWORDS*: ORGANIC, ALCOHOL, AUTOMOBILE, HISTORICAL.
*NOTES*: FILED.
*DATE*: 770900
ABSTRACT 1808

• TITLE: A CANADIAN VIEWS ALCOHOL AS A FARM FUEL
• AUTHOR: KIRIK M.
• SOURCE: AGR ENG, 59(13-14) MAY 1978.
• KEYWORDS: ORGANIC, ALCOHOL.
• NOTES: FILED. THIS IS A QUICK, TWO-PAGE QUESTION AND ANSWER STYLE REPORT IN WHICH THE AUTHOR DISCUSSES THE USE OF ALCOHOL DERIVED FROM A RENEWABLE, CROP RESOURCE AS A SUBSTITUTE FOR GASOLINE AND DIESEL FUELS. THE AUTHOR CONTENDS THAT THE USE OF ALCOHOL AS A FUEL IS SURELY FEASIBLE AND EVEN ADVANTAGEOUS. THE TOPICS DISCUSSED INCLUDE THE CHOICE OF CROPS TO BE GROWN FOR CONVERSION (IN CANADA: SUGAR BEETS, POTATOES, AND THE JERUSALEM ARTICHOKE), THE COST AND SET-UP OF DISTILLERIES (INCLUDING PORTABLE ON-SITE DISTILLERIES), PROBLEMS OF ENGINE MODIFICATION TO ALLOW FOR COLD STARTING, ENGINE LUBRICATION (PLANT OILS COULD BE USED), FUEL ADDITIVES WHICH DO AWAY WITH ENGINE CORROSION DUE TO ACETIC ACID FORMATION (AND AMMONIA) AND DIESEL ENGINE MODIFICATIONS.
• DATE: 780500

ABSTRACT 1809

• TITLE: THE POSSIBILITIES OF ALCOHOL USE AS AN ALTERNATE FUEL IN FARM MACHINERY
• AUTHOR: KIRIK M.
• SOURCE: PREPARED FOR THE NORTHEASTERN ONTARIO AGR CONF, NEW Liskeard, ONTARIO, 28 FEB 1978, 9 PP.
• KEYWORDS: ORGANIC, ALCOHOL.
• DATE: 790228

ABSTRACT 1810

• TITLE: AN ECONOMIC ANALYSIS OF FUEL GAS PRODUCTION FROM SOLID WASTE
• AUTHOR: KISPERT R G, SADEN S & WISE D L.
• SOURCE: RESOURCE RECOVERY AND CONSERVATION, 1/75-189, ELSEVIER SCI PUBLISHING CO, AMSTERDAM, 1975.
• KEYWORDS: ORGANIC, MUNICIPAL WASTE, ECONOMICS.
• NOTES: FILED.
• DATE: 741011

ABSTRACT 1811

• TITLE: AN EVALUATION OF METHANE PRODUCTION FROM SOLID WASTE
• AUTHOR: KISPERT R G, SADEN S & WISE D L.
• KEYWORDS: ORGANIC, MUNICIPAL WASTE, METHANE, TECHNOLOGY ASSESSMENT.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 1812

• TITLE: FUEL GAS FROM ORGANIC WASTES
• AUTHOR: KLASS D L & GHOSH S.
• KEYWORDS: ORGANIC, MUNICIPAL WASTE, PYROLYSIS, ANAEROBIC FERMENTATION, ENERGY SOURCES, CONVERSION, STATISTICS, SNG.
• NOTES: FILED.
• DATE: 731100

ABSTRACT 1813

• TITLE: BIOMASS AND WASTE PRODUCTION AS ENERGY RESOURCES - UPDATE
• AUTHOR: KLAAS D L.
• KEYWORDS: ORGANIC, WOOD, CONVERSION, EFFICIENCY.
• NOTES: SOLID WASTE CONVERSION IS THE BASIC TOPIC OF THIS RESEARCH.
• DATE: 770000
ABSTRACT 1814

TITLE: A LONG-RANGE APPROACH TO THE NATURAL GAS SHORTAGE UTILIZING NON-FOSSIL RENEWABLE CARBON.

AUTHOR: KLASS D L.


KEYWORDS: ORGANIC, PHOTOSYNTHESIS, SNG, NATURAL GAS.

NOTES: THE ONLY LONG-TERM SOLUTION TO SUSTAINING A NATURAL GAS ECONOMY IS TO CONVERT A MAJOR SOURCE OF RENEWABLE NONFOSSIL CARBON TO SNG. THE MOST PROMISING SOURCE OF THE CARBON IS LAND-AND WATER-BASED BIOMASS PRODUCED FROM SOLAR ENERGY BY PHOTOSYNTHESIS. THIS CONCEPT IS ASSESSED AND MAJOR TECHNOLOGICAL PROBLEMS ARE REVIEWED.

DATE: 770300

ABSTRACT 1815

TITLE: WASTE AND BIOMASS AS ENERGY RESOURCES - AN OVERVIEW.

AUTHOR: KLEIS R A.


KEYWORDS: ORGANIC, WASTES.

NOTES: THE NATIONAL ECONOMY CAN BE MAINTAINED ON ORGANIC FUELS BY CONVERTING MAJOR SOURCES OF CONTINUOUSLY RENEWABLE NONFOSSIL CARBON TO SYNFUELS THAT ARE INTERCHANGEABLE WITH, OR CAN BE SUBSTITUTED FOR, NATURAL GAS AND PETROLEUM DERIVED FUELS. PROMISING SOURCES OF THIS CARBON ARE WASTE MATERIALS SUCH AS URBAN REFUSE AND BIOMASS PRODUCED FROM SOLAR ENERGY BY PHOTOSYNTHESIS. THE OVERVIEW OF THE DEVELOPMENT OF THIS CONCEPT PRESENTED IN THIS PAPER POINTS OUT THE BROAD SCOPE OF THE TECHNOLOGY AND ITS POTENTIAL IMPACT ON US ENERGY SUPPLIES.

DATE: 760300

ABSTRACT 1816

TITLE: LIVESTOCK WASTE MANAGEMENT WITH POLLUTION CONTROL.

AUTHOR: KLIS R A.

SOURCE: NORTH CENTRAL REGIONAL RESEARCH PUBLICATION 222, JUNE 1975, 89 PP.

KEYWORDS: ORGANIC, ANIMAL WASTE.

NOTES: FILED.

DATE: 750600

ABSTRACT 1817

TITLE: PRODUCTION AND USE OF GRAIN ALCOHOL AS A MOTOR FUEL - AN EVALUATION.

AUTHOR: KLOSTERMAN M J, BANASIK O J, BUCHANAN M L, TAYLOR F R, HARROLD II, L.


KEYWORDS: ORGANIC, ALCOHOL, AUTOMOBILE.

NOTES: FILED.

DATE: 771110

ABSTRACT 1818

TITLE: PYROLYTIC CONVERSION OF AGRICULTURAL WASTES TO FUELS.

AUTHOR: KNIGHT J R, TATOM J W, BOWEN R D, COLCORD A R, ELSTON L W.

SOURCE: ASAE PAPER 74-5017, 1974, 25 PP.

KEYWORDS: ORGANIC, WASTES, PYROLYSIS, DESIGN, ECONOMICS, GEORGIA.

NOTES: FILED. AGRICULTURAL WASTES REPRESENT A SIGNIFICANT POTENTIAL SOURCE OF ENERGY. THE STEADY FLOW, LOW TEMPERATURE PYROLYSIS PROCESS DEVELOPED AT THE GEORGIA TECH ENGINEERING EXPERIMENT STATION IS A SYSTEM THAT IS CAPABLE OF CONVERTING THESE WASTES INTO CLEAN-BURNING FUELS. THE PROCESS HAS BEEN DEVELOPED TO A 50 DRY TONS/DAY DEMONSTRATION FACILITY. BACKGROUND INFORMATION ON THE PYROLYSIS PROCESS AND EXPERIMENTAL PROCEDURES ARE COVERED.

DATE: 740000

ABSTRACT 1819

TITLE: CROP RESIDUES IN CALIFORNIA - SOME FACTORS AFFECTING UTILIZATION.

AUTHOR: KNUTSON J E, MILLER G E, OSTERLII V P.

SOURCE: LEAFLET 2872, DIVISION OF AGR SCI, UNIV OF CALIF, DAVIS, FEB 1976, 22 PP.

KEYWORDS: ORGANIC, CALIFORNIA, WASTES.

NOTES: FILED.

DATE: 760220
ABSTRACT 1820

- **TITLE**: COLD WEATHER ENERGY RECOVERY FROM ANAEROBIC DIGESTION OF SWINE MANURE.
- **AUTHOR**: KROEKER E., ET AL.
- **SOURCE**: PRESENTED AT SEVENTH NATIONAL AGR WASTE MANAGEMENT CONFERENCE, AGR AND WASTE MANAGEMENT, SYRACUSE, NY, 16-18 APRIL 1975, 20 PP.
- **KEYWORDS**: ORGANIC, ANIMAL WASTE, ANAEROBIC FERMENTATION, EFFICIENCY, FERTILIZER, ENVIRONMENT.
- **NOTES/FILED**: THE PURPOSE OF THIS REPORT IS TO COMpare EXPERIMENTAL RESULTS WITH A THEORETICAL ENERGY BALANCE FOR THE PILOT-SCALE DIGESTERS. DISCUSSION CENTERS ON ENERGY CONSUMPTION AND PRODUCTION DATA AND THE IMPLICATIONS OF THESE RESULTS FOR LARGE-SCALE ANAEROBIC DIGESTION FOR ENERGY RECOVERY.
- **DATE**: 750416

ABSTRACT 1821

- **TITLE**: METHANE GAS PRODUCTION FROM ANIMAL WASTES.
- **AUTHOR**: LAPP H., SCHULTE D., BUCHANAN L. C.
- **SOURCE**: PUBLICATION 1528, INFORMATION DIV., CANADA DEPT OF AGR, OTTAWA, 1974, 98 PP.
- **KEYWORDS**: ORGANIC, METHANE.
- **NOTES/FILED**: N.A.
- **DATE**: 740000

ABSTRACT 1822

- **TITLE**: START-UP OF PILOT SCALE SWINE MANURE DIGESTERS FOR METHANE PRODUCTION.
- **AUTHOR**: LAPP H., SCHULTE D., KROEKER E., SPARLING A., TOPNIX B. H.
- **SOURCE**: PRESENTED AT THIRD INTERNATIONAL SYMPOSIUM ON LIVESTOCK WASTES, 21-25 APRIL 1975, CHAMPAGNE-URBANA, ILL, 21 PP.
- **KEYWORDS**: ORGANIC, MANURE, METHANE, ANAEROBIC FERMENTATION, HEAT, CANADA.
- **NOTES/FILED**: N.A.
- **DATE**: 750421

ABSTRACT 1823

- **TITLE**: TRAVEL REPORT ON A STUDY OF METHANE PRODUCTION FROM ANIMAL WASTES BY ANAEROBIC PROCESSES IN SCOTLAND, ENGLAND, GERMANY, NORWAY AND DENMARK.
- **AUTHOR**: LAPP H.
- **SOURCE**: PERSONAL CORRESPONDENCE, M. M. LAPP, DEPT OF AGR ENGR, UNIV OF MANITOBA, WINNIPEG, SEPT 1975, 48 PP.
- **KEYWORDS**: ORGANIC, METHANE, PRODUCTION, ANIMAL WASTE, ANAEROBIC FERMENTATION, SCOTLAND, RENEWABLE ENERGY, WORLD WIDE, HEAT, GERMANY, NORWAY, DENMARK, UNITED KINGDOM.
- **NOTES/FILED**: N.A.
- **DATE**: 750900

ABSTRACT 1824

- **TITLE**: METHANE PRODUCTION FROM ANIMAL WASTES-FUNDAMENTAL CONSIDERATIONS.
- **AUTHOR**: LAPP H., SPARLING A., SCHULTE D., BUCHANAN L. C.
- **SOURCE**: ASAE PAPER 74-213, 24 PP.
- **KEYWORDS**: ORGANIC, METHANE, PRODUCTION, ANIMAL WASTE, CANADA, ANAEROBIC FERMENTATION, ENERGY CONSUMPTION.
- **NOTES/FILED**: N.A.
- **DATE**: 740000

ABSTRACT 1825

- **TITLE**: FUEL FROM ANIMAL WASTE.
- **AUTHOR**: LAPP H.
- **SOURCE**: ASAE PAPER 77-5531, 1977, 14 PP.
- **KEYWORDS**: ORGANIC, MANURE, Biogas, HEAT, Biogas.
- **NOTES/FILED**: N.A.
- **DATE**: 770000

ABSTRACT 1826

- **TITLE**: Biogas production from animal manure.
- **AUTHOR**: LAPP H., ET AL.
- **SOURCE**: BIO Mass ENERGY INST INC, 304-670 CAMBRIDGE ST, WINNIPEG, MANITOBA, CANADA, MARCH 1978, 21 PP.
- **KEYWORDS**: ORGANIC, Biogas, Manure.
- **NOTES/FILED**: N.A.
- **DATE**: 780300
ABSTRACT 1827

• TITLE: CROP RESIDUE - AN IMPORTANT NATIONAL RESOURCE.
• AUTHOR: LARSON W. C.
• SOURCE: 261-492/ARS-239, US GOVT PRINTING OFFICE, WASHINGTON DC, 1977, 4 PP.
• KEYWORDS: ORGANIC, CROP RESIDUES.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 1828

• TITLE: INCREASED PRODUCTION OF BIOGAS FROM COMPOST BY ADDING OTHER AGRICULTURAL WASTE MATERIALS.
• AUTHOR: LAURA R. D., IDNANI M.
• KEYWORDS: ORGANIC, BIOGAS, INDIA.
• NOTES: NAS.
• DATE: 710400

ABSTRACT 1829

• TITLE: GASOLINE-ALCOHOL BLENDS IN INTERNAL-COMBUSTION ENGINES.
• AUTHOR: LICHTY L C., PMELPS C W.
• KEYWORDS: ORGANIC, ENGINE, ALCOHOL.
• NOTES: NAS.
• DATE: 380000

ABSTRACT 1830

• TITLE: METHANOL AND OTHER WAYS AROUND THE GAS PUMP.
• AUTHOR: LINCOLN J W.
• SOURCE: GARDEN WAY PUBLISHING, CHARLOTTE, VERMONT 05445, NOV 1975, 134 PP.
• KEYWORDS: ORGANIC, METHANOL, ALTERNATIVES.
• NOTES: FILED.
• DATE: 751100

ABSTRACT 1831

• TITLE: ALCOHOL POWER - CAN IT HELP YOU MEET THE SOARING COST OF GASOLINE.
• AUTHOR: LINDSLEY E F.
• SOURCE: POPULAR SCI., APRIL 1975, PP 68-72.
• KEYWORDS: ORGANIC, ALCOHOL, METHANOL, ENERGY SOURCES, AUTOMOBILE, MUNICIPAL WASTE.
• NOTES: FILED.
• DATE: 750428

ABSTRACT 1832

• TITLE: BYRON MCDONALD - COWPOWER HELPS RUN HIS FARM.
• AUTHOR: LINDSLEY E F.
• KEYWORDS: ORGANIC, ANIMAL WASTE, CONVERSION, METHANE.
• NOTES: FILED.
• DATE: 750500

ABSTRACT 1833

• TITLE: CONSTRUCTION MATERIALS, PAPER AND PAPERBOARD FROM AGRICULTURAL RESIDUES.
• AUTHOR: LINIU.
• SOURCE: UNEP, FAO, ROME, ITALY, 18-21 JAN 1977, 8 PP.
• KEYWORDS: ORGANIC.
• NOTES: FILED.
• DATE: 770118
ABSTRACT 1834

*TITLE* FIELD CROPS AS A FUTURE SOURCE OF FUELS AND CHEMICAL FEEDSTOCKS.
*AUTHOR* LIPINSKY E. S.
*KEYWORDS* ORGANIC, ETHANOL, METHANOL, CONVERSION, ECONOMICS.
*NOTES* SUCH FIELD CROPS AS SUGAR CANE, SORGHUMS, SUGAR BEETS, WHEAT AND CORN ARE UNDER INVESTIGATION AS SOURCES OF FUELS AND COMMODITY CHEMICALS. ETHANOL AND METHANOL APPEAR ATTRACTIVE FOR INDUSTRIAL USE. THERMOCHEMICAL PRODUCTION OF FERTILIZER AMMONIA SEEMS ESPECIALLY INTERESTING. OPPORTUNITIES FOR USING FIELD CROPS FOR FUEL SOURCES AND CHEMICAL FEEDSTOCKS ARE REVIEWED.
*DATE* 760815

ABSTRACT 1835

*TITLE* FUELS FROM BIOMASS - INTEGRATION WITH FOOD AND MATERIALS SYSTEMS.
*AUTHOR* LIPINSKY E. S.
*KEYWORDS* ORGANIC, ENERGY CROPS, AGRICULTURE.
*NOTES* FILED. THE DEVELOPMENT OF FUELS FROM BIOMASS CAN LEAD TO DISPERSED FACILITIES THAT INCORPORATE FOOD OR MATERIALS PRODUCTION OR BOTH WITH FUEL PRODUCTION FORMING ADAPTIVE SYSTEMS THAT CAN BE MODIFIED TO MEET EVOLVING NEEDS AND CONSTRAINTS. SOME POSSIBLE SYSTEMS ANALYZED ARE BASED ON SUGAR CANE, CORN AND GUAYULE. THE TECHNOLOGY THAT IS APPROPRIATE TO EACH SYSTEM NEEDS TO BE WORKED OUT; TAKING INTO ACCOUNT ASSOCIATED FOOD AND MATERIALS OPPORTUNITIES.
*DATE* 760210

ABSTRACT 1836

*TITLE* SUGAR CANE VS CORN VS ETHYLENE AS SOURCES OF ETHANOL FOR MOTOR FUEL AND CHEMICALS.
*AUTHOR* LIPINSKY E. S.
*SOURCE, PRESENTED AT THE ASSOC MEETING, FORT WALTON BEACH, FL
23 JUNE 1977, 24 PP.
*KEYWORDS* ORGANIC, ETHANOL, TECHNOLOGY ASSESSMENT.
*NOTES* FILED. THIS PAPER COVERS THE IDEA TO USE SUGAR CANE JUICE OR MOLASSES AS THE RAW MATERIAL TO MANUFACTURE ETHANOL WHICH IS PRESENTLY MADE FROM ETHYLENE. ETHYLENE NOW IS MADE EITHER FROM NATURAL GAS LIQUIDS OR FROM PETROLEUM PRODUCTS. FERMENTATION ETHANOL CAN BE USED EITHER AS AN INDUSTRIAL CHEMICAL OR AS A MOTOR FUEL, DEPENDING ON ECONOMIC AND INSTITUTIONAL CONSIDERATIONS. THE INITIAL RESEARCH INDICATES THAT ATTAINMENT OF LOW COST ETHANOL IS FACILITATED BY THE PRESENCE OF BAGASSE THAT CAN BE USED AS THE FUEL DISTILL ETHANOL. THUS, THE ETHANOL CONCEPT HAS THE POTENTIAL FOR ENERGY SELF-SUFFICIENCY. FURTHERMORE, ALL SALE OF STILLAGE, CANE FIBER OR ELECTRICITY COULD PROVIDE BYPRODUCT CREDITS TO KEEP THE COST OF ETHANOL DOWN.
*DATE* 770623

ABSTRACT 1837

*TITLE* ECONOMICS OF GASOHOL.
*AUTHOR* LITTERMAN M. ET AL.
*SOURCE, ECON REPORT ER 78-10, DEPT OF AGR AND APPLIED ECON, UNIV OF MINN, ST PAUL, MN, 55101, DEC 1978, 77 PP.
*KEYWORDS* ORGANIC, CORN, WHEAT, ETHANOL, ECONOMICS.
*NOTES* FILED.
*DATE* 781200

ABSTRACT 1838

*TITLE* WOOD ENERGY.
*AUTHOR* LLOYD S. ET AL.
*SOURCE, REPORT OF THE GOVERNORS TASK FORCE ON WOOD AS A SOURCE OF ENERGY, COMMITTEE ON NATURAL RESOURCES, MONTPELIER, VERMONT, 14 AUG 1975, 73 PP.
*KEYWORDS* ORGANIC, VERMONT, ENVIRONMENT, ECONOMICS.
*NOTES* FILED.
*DATE* 750814

ABSTRACT 1839

*TITLE* AN OVERVIEW-UTILIZATION OF RESIDUES FROM AGRICULTURE AND AGRO-INDUSTRIES.
*AUTHOR* LOEB R. C.
*SOURCE, UNEP/FAO/ISS/4/02, ROME, ITALY, 18-21 JAN 1977, 93 PP.
*KEYWORDS* ORGANIC, WASTES, CONVERSION.
*NOTES* FILED.
*DATE* 771118
ABSTRACT 1840

•TITLE: MANURE PRODUCTION AND CHARACTERISTICS PER 1000 LB BODY WEIGHT.
•AUTHOR: LOUDON T.
•SOURCE: AGR ENGR FACTS NO 4, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, DEC 1973, 1 PP.
•KEYWORDS: ORGANIC, ANIMAL WASTE.
•NOTES: FILED.
•DATE: 751200

ABSTRACT 1841

•TITLE: TREE POWER — AN ASSESSMENT OF THE ENERGY POTENTIAL OF FOREST BIOMASS IN CANADA.
•AUTHOR: LOVE P., DEXENDE R.
•SOURCE: REPORT ER 78-1, RENEWABLE ENERGY RESOURCES CANADA, RENEWABLE ENERGY RESOURCES BRANCH, 1978, 35 PP.
•KEYWORDS: ORGANIC, WOOD, CANADA.
•NOTES: FILED.
•DATE: 780200

ABSTRACT 1842

•TITLE: TREE POWER: AN ASSESSMENT OF THE ENERGY POTENTIAL OF FOREST BIOMASS IN CANADA.
•AUTHOR: LOVE P.
•SOURCE: REPORT ER 78-1, RENEWABLE ENERGY RESOURCES BRANCH, DEPT OF ENERGY, MINES AND RESOURCES, CANADA, 1978, 35 PP.
•KEYWORDS: ORGANIC, WOOD, CANADA.
•NOTES: FILED. THE PURPOSE OF THIS DOCUMENT IS TO PRESENT A FIRST ROUND APPROXIMATION OF THE POTENTIAL CONTRIBUTION OF FORESTRY BIOMASS TO CANADA'S ENERGY REQUIREMENTS TO THE YEAR 2035, WITH DISCUSSION OF THE ECONOMICS, TECHNICAL, SOCIAL, ENVIRONMENTAL, AND INSTITUTIONAL ISSUES THAT MAY AFFECT IMPLEMENTATION. THE PRINCIPAL OBJECTIVE IS TO EXPLORE THE COMMERCIAL ATTRACTIVENESS OF ENERGY RECOVERY FROM FORESTRY BIOMASS BETWEEN NOW AND 2025, INCLUDING A CALENDAR OF THE IMPORTANT STAGES AND COMPONENTS. THE REPORT CONCLUDES WITH A RECOMMENDATION TO INITIATE A MAJOR RESOURCE ASSESSMENT OF THE FOREST BIOMASS AS THE HIGHEST PRIORITY TOWARDS REALIZING THIS RENEWABLE ENERGY SOURCE.
•DATE: 780200

ABSTRACT 1843

•TITLE: ALCOHOL COMES BACK TO POWER YOUR CAR.
•AUTHOR: LUDVIGSEN K.
•KEYWORDS: ORGANIC, ALCOHOL, AUTOMOBILE, ETHANOL, METHANOL.
•NOTES: FILED.
•DATE: 780100

ABSTRACT 1844

•TITLE: ASPECTS ECONOMIQUES DE LA RECUPERATION DES PAILLES.
•AUTHOR: MARSAI R.
•SOURCE: RAPPORT DE SYNTHESE, INSTITUTE NATIONAL DE LA RECHERCHE AGRONOMIQUE, APRIL 1976, 33 PP.
•KEYWORDS: ORGANIC, FRANCE, ENERGY SOURCES, ECONOMICS, FERTILIZER.
•NOTES: FILED.
•DATE: 760400

ABSTRACT 1845

•TITLE: ENERGY RECOVERY FROM MANURE USING PLUG-FLOW DIGESTERS.
•AUTHOR: MARTIN J. H.
•SOURCE: ASA AC PAPER 78-4568, 1978, 7 PP.
•KEYWORDS: ORGANIC, BOVINE MANURE, ANAEROBIC FERMENTATION.
•NOTES: FILED. TWO ANAEROBIC DIGESTERS HAVE BEEN TREATING COW MANURE IN MICHIGAN AND WISCONSIN FOR A FEW YEARS. BOTH OF THEM EMPLOY PLUG-FLOW, CONTRASTED WITH STIRRED-PBT, MANAGEMENT OF THE MANURE AND OPERATE AT MESOPHILIC TEMPERATURES. THEY EXHIBIT VERY HIGH STABILITY AND GOOD METHANE YIELDS AT FEEDING RATES IN EXCESS OF 10 KG OF VOLATILE SOLIDS PER DAY PER CUBIC METER OF DIGESTER VOLUME. (0.8 MCF CUBIC FT/DAY). PERFORMANCE AND OPERATIONS ARE DESCRIBED.
•DATE: 780800
ABSTRACT 1846

**TITLE:** UTILIZATION OF CEREAL STRAW - A SCENARIO EVALUATION.

**AUTHOR:** McCan D J, Saddler H D W.


**KEYWORDS:** ORGANIC, BIOMASS, AUSTRALIA.

**NOTES:** FILED. CEREAL STRAW AS A SOURCE OF ENERGY.

**DATE:** 760300

ABSTRACT 1847

**TITLE:** PHOTOBIOLOGICAL ENERGY CONVERSION IN AUSTRALIA.

**AUTHOR:** McCan D J, Saddler H D W.

**SOURCE:** SEARCH. 7/1-21/7-23. JAN 1976.

**KEYWORDS:** ORGANIC, PHOTOSYNTHESIS, ENERGY SOURCES, AUSTRALIA.

**NOTES:** FILED. ARTICLE DISCUSSES POSSIBLE SOURCES OF PHOTOSYNTHETIC MATERIAL AND PROCESSES FOR ENERGY CONVERSION, AND EXAMINES THE TECHNICAL, ECONOMIC AND SOCIAL IMPLICATIONS OF UTILISING SOLAR ENERGY IN THIS MANNER.

**DATE:** 760100

ABSTRACT 1848

**TITLE:** THE EFFICIENT PROCESSING OF PHOTOBIOLOGICAL MATERIAL.

**AUTHOR:** McCan D J, Saddler H D W; Prince R G W.

**SOURCE:** PAPER PRESENTED AT A TECH CONF OF THE INSTITUTION OF ENGINEERS, AUSTRALIA. PP 11-15. UNDATED.

**KEYWORDS:** ORGANIC, BIOMASS, PYROLYSIS, AUSTRALIA; ECONOMICS.

**NOTES:** FILED. PAPER DISCUSSES WAYS OF UTILISING PHOTOBIOLOGICAL MATERIAL AND EXAMINES TECH AND ECON IMPLICATIONS OF UTILISING THIS SOURCE OF SOLAR ENERGY IN THE MOST EFFICIENT MANNER.

**DATE:**

ABSTRACT 1849

**TITLE:** ENERGY -- NEW CROP SOURCES.

**AUTHOR:** McClure T A, Scanlan, D A.

**SOURCE:** AGR ENG., SEPT 1977. PP 17-22.

**KEYWORDS:** ORGANIC, ENERGY CROPS, ALCOHOL.

**NOTES:** FILED. THE IMPLICATIONS AND POTENTIAL OF CONVERTING BIOMASS TO ENERGY ARE DISCUSSED. CORN AND SUGAR CROPS ARE EMPHASIZED. BATTLES COLUMBUS LABORATORIES AS PART OF DOES, FUELS FROM BIOMASS PROGRAM, UNDERTOOK A STUDY OF POTENTIAL FUEL APPLICATIONS OF SUGARCANE, SWEET SORGHUM, SUGAR BEETS, AND CORN. SOME OF THE MAJOR FINDINGS OF THIS STUDY ARE SUMMARIZED BRIEFLY IN A SERIES OF QUESTIONS AND ANSWERS.

**DATE:** 770900

ABSTRACT 1850

**TITLE:** THE CALORIFIC PROJECT.

**AUTHOR:** Meckert G W.

**SOURCE:** THERMOETJIC, INC. OKLAHOMA CITY, OK. 5 PP.

**KEYWORDS:** ORGANIC, WASTES, ANAEROBIC FERMENTATION.

**NOTES:** FILED.

**DATE:**

ABSTRACT 1851

**TITLE:** METHANE - PLANNING A DIGESTOR.

**AUTHOR:** Meynell P J.

**SOURCE:** NEW YORK, NY/SCHECHEN BOOKS 1978. 150 PP.

**KEYWORDS:** ORGANIC, METHANE, DESIGN.

**NOTES:** FILED.

**DATE:** 780000

ABSTRACT 1852

**TITLE:** PHI KAPPA PHI JOURNAL.

**AUTHOR:** MICHIGAN STATE UNIVERSITY.

**SOURCE:** PHI KAPPA PHI J. 55(1)/1-64. WINTER 1975, MICH STATE UNIV. EAST LANSING, MI 48824. 1975.

**KEYWORDS:** ORGANIC, RESOURCES, SOCIAL IMPLICATIONS, JOURNAL, RENEWABLE ENERGY, PRODUCTION.

**NOTES:** FILED. ENTIRE ISSUE DEVOTED TO ENERGY AND AGRICULTURE.

**DATE:** 750000
ABSTRACT 1853

• TITLE: MICHIGAN MAY GROW POTATOES FOR FUEL.
• AUTHOR: MICHIGAN FARMER.
• SOURCE: MICHIGAN FARMER; NOV. 1978; PP46.
• KEYWORDS: ORGANIC, POTATO, ETHANOL, MICHIGAN.
• NOTES: FILED. RENATE L DEZACHS CONCLUDES THAT POTATOES AND SUGAR BEETS WILL BECOME IMPORTANT CROPS AS THE CRISIS IN LIQUID FOSSIL FUEL ENERGY WORSENS. COMPARISONS BETWEEN POTATOES AND CORN AS A SOURCE OF ETHYL ALCOHOL.
• DATE: 781104

ABSTRACT 1854

• TITLE: BIOMASS - A CASH CROP FOR THE FUTURE.
• AUTHOR: MIDWEST RESEARCH INSTITUTE.
• SOURCE: CONF ON THE PRODUCTION OF BIOMASS FROM GRAINS, CROP RESIDUES, FORAGES AND GRASSES FOR CONVERSION TO FUELS AND CHEMICALS; KANSAS CITY, MO; 2-3 MARCH 1977; 394 PP.
• KEYWORDS: ORGANIC, BIOMASS.
• NOTES: FILED.
• DATE: 770302

ABSTRACT 1855

• TITLE: REPORT ON THE FIRST WORLD STRAW CONFERENCE.
• AUTHOR: MILES T R.
• SOURCE: 77MILES CONSULTING ENGINEER; PO BOX 216; BEAVERTON, OREGON 97006; MAY 1975; 77 PP.
• KEYWORDS: ORGANIC, AGRICULTURE.
• NOTES: FILED.
• DATE: 750530

ABSTRACT 1856

• TITLE: ENERGIES FROM THE FIELD - USA.
• AUTHOR: MILES T R.
• SOURCE: PRESENTED AT FOREST AND FIELD FUELS SYMPOSIUM; WINNIPEG, CANADA; 11-13 OCT 1977; 15 PP.
• KEYWORDS: ORGANIC, WASTES, USA, ECONOMICS.
• NOTES: BIOMASS IS DISCUSSED AS A CONTRIBUTING FACTOR TO US ENERGY NEEDS. AVAILABLE SOURCES AND BOTH LONG AND SHORT-TERM FEASIBILITY OF USE ARE EXAMINED.
• DATE: 771011

ABSTRACT 1857

• TITLE: INDUSTRIAL ALCOHOL FROM WHEAT.
• AUTHOR: MILLER E S.
• SOURCE: AMER MILLER; JUNE 1943.
• KEYWORDS: ORGANIC.
• NOTES: FILED.
• DATE: 430600

ABSTRACT 1858

• TITLE: ANNUAL CROPS - A RENEWABLE SOURCE FOR CELLULOSE.
• AUTHOR: MILLER D L.
• SOURCE: APPLIED POLYMER SYMPOSIUM; 28/31-312; 1975.
• KEYWORDS: ORGANIC, SOLAR, CONVERSION.
• NOTES: FILED.
• DATE: 750800

ABSTRACT 1859

• TITLE: FERMENTATION ETHYL ALCOHOL.
• AUTHOR: MILLER D L.
• SOURCE: BIOTECH AND BIOENG SYMP; 6307-312; 1976.
• KEYWORDS: ORGANIC, ETHANOL, ALCOHOL.
• NOTES: FILED.
• DATE: 760200

ABSTRACT 1860

• TITLE: ANNUAL CROPS - A RESOURCE FROM SOLAR ENERGY.
• AUTHOR: MILLER D L.
• SOURCE: NORTHERN REGIONAL RESEARCH LABORATORY, AGRICULTURAL RESEARCH SERVICE, USDA, PEORIA, ILL.
• KEYWORDS: ORGANIC, SOLAR, CONVERSION.
• NOTES: FILED.
• DATE:
**ABSTRACT 1861**

**TITLE:** ENERGY CONSUMPTION IN WASTEWATER TREATMENT

**AUTHOR:** MILLS R A, TCHOBANGLOUS E.

**SOURCE:** IN THE BOOK ENERGY, AGRICULTURE AND WASTE MANAGEMENT, W J JEWELL; ANN ARBOR; MI/ANN ARBOR SCI PUBL INC 1975, PP 151-186.

**KEYWORDS:** ORGANIC, ENERGY CONSUMPTION, FUEL CONSUMPTION.

**DATE:** 750000

**ABSTRACT 1862**

**TITLE:** ECONOMIC FEASIBILITY OF METHANE GENERATION AND LIVESTOCK AND CROP WASTE RECYCLING FOR A TYPICAL IOWA FAMILY FARM

**AUTHOR:** MIRANOUSKJ J M, PIDGEON E R, PETERSON D V.

**SOURCE:** PRINTED AT THE CONFERENCE ON ENERGY AND AGRICULTURE, ST LOUIS, MISSOURI, 17 JUNE 1976, 13 PP.

**KEYWORDS:** ORGANIC, ECONOMICS, WASTES, METHANE, IOWA.

**DATE:** 760617

**ABSTRACT 1863**

**TITLE:** HARVEST SCHEDULING OF CROPS FOR OPTIMUM BIOMASS PRODUCTION

**AUTHOR:** MISHOE J W, JONES J W, GASCHO G J.

**SOURCE:** ASAE PAPER 78-3032, 1978, 21 PP.

**KEYWORDS:** ORGANIC, HARVESTING, MODELS.

**NOTES:** A MODEL OF SUGARCANE BIOMASS WAS DEVELOPED USING PHYSIOLOGICAL PARAMETERS. THE GROWTH MODEL WAS COUPLED TO A DECISION MODEL WHICH OPTIMIZED HARVEST SCHEDULING. AN EXAMPLE MANAGEMENT PROBLEM WAS PRESENTED AND RESULTS FROM THE EXAMPLE PROBLEM INDICATE THAT TWO HARVESTS PER YEAR MAXIMIZED BIOMASS. HOWEVER, NO CONSIDERATION WAS ALLOWED FOR HARVEST COST.

**DATE:** 780000

**ABSTRACT 1864**

**TITLE:** COOKS WITH 810-643.

**AUTHOR:** MORAN E.

**SOURCE:** POPULAR SCI, DEC 1975, PP 95, 109.

**KEYWORDS:** ORGANIC, MANURE, ANAEROBIC FERMENTATION, DESIGN, OPERATING PROCEDURE.

**NOTES:**

**DATE:** 751200

**ABSTRACT 1865**

**TITLE:** ALTERNATIVE ANIMAL WASTE ANAEROBIC FERMENTATION DESIGNS AND THEIR COSTS

**AUTHOR:** MORRIS G A, JEWELL M J, CASLER G L.

**SOURCE:** IN THE BOOK ENERGY, AGRICULTURE AND WASTE MANAGEMENT, W J JEWELL; ANN ARBOR, MI/ANN ARBOR SCI PUBL INC 1975, PP 317-336.

**KEYWORDS:** ORGANIC MANURE, ANAEROBIC FERMENTATION, DESIGN, ECONOMICS.

**NOTES:** THE RESULTS OF THIS REPORT ARE A REVIEW OF THE STATUS OF THE AVAILABLE ANAEROBIC FERMENTATION TECHNOLOGY AND ITS APPLICATION TO ANIMAL WASTES, THE APPLICATION OF THIS TECHNOLOGY TO DEVELOP TECHNICALLY FEASIBLE SYSTEM ALTERNATIVES WHICH ARE COMPATIBLE WITH CURRENT MANAGEMENT PRACTICES AND THE ASSESSMENT OF THE ECONOMIC FEASIBILITY OF INCORPORATING THE ANAEROBIC FERMENTATION SYSTEMS INTO THE FARM BOTH AS AN ALTERNATIVE ENERGY SOURCE AND A WASTE MANAGEMENT PRACTICE.

**DATE:** 750000

**ABSTRACT 1866**

**TITLE:** ALCOHOL AS A FUEL - ENERGY AND ECONOMICS

**AUTHOR:** MYERS C A, STOUT B A.

**SOURCE:** AEIS 381, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JULY 1978.

**KEYWORDS:** ORGANIC, ALCOHOL, ETHANOL, ECONOMICS.

**NOTES:** A MODEL OF SUGARCANE BIOMASS WAS DEVELOPED USING PHYSIOLOGICAL PARAMETERS. THE GROWTH MODEL WAS COUPLED TO A DECISION MODEL WHICH OPTIMIZED HARVEST SCHEDULING. AN EXAMPLE MANAGEMENT PROBLEM WAS PRESENTED AND RESULTS FROM THE EXAMPLE PROBLEM INDICATE THAT TWO HARVESTS PER YEAR MAXIMIZED BIOMASS. HOWEVER, NO CONSIDERATION WAS ALLOWED FOR HARVEST COST.

**DATE:** 780600
ABSTRACT 1867

TITLE: ALL INDIA COORDINATED PROJECT ON BIOGAS TECHNOLOGY AND UTILIZATION - PROJECT OUTLINE.
AUTHOR: NATIONAL COMMITTEE ON SCIENCE AND TECHNOLOGY.
SOURCE: GOVT OF INDIA, NEW DELHI, INDIA, 1976, 32PP.
KEYWORDS: ORGANIC, INDIA, BIOGAS.
NOTES: FILED.
DATE: 760500

ABSTRACT 1868

TITLE: SYNTHETIC FUELS FROM MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL WASTES.
AUTHOR: NATIONAL TECHNICAL INFORMATION SERVICE.
SOURCE: NTIS/PS-78/0499; NTIS, SPRINGFIELD, VA 22161, 1978, 116 PP.
KEYWORDS: ORGANIC, AGRO-INUSTRIAL WASTES, MUNICIPAL WASTE.
NOTES: FILED.
DATE: 780300

ABSTRACT 1869

TITLE: CONSERVATION OF THE ENERGY AND MINERAL RESOURCES IN WASTE MATERIALS THROUGH PYROLYSIS.
AUTHOR: CULSON D M, LOEMR R C.
KEYWORDS: ORGANIC, PYROLYSIS, ANIMAL WASTE, DISTILLATION, ENERGY ACCOUNTING.
NOTES: FILED.
DATE: 750000

ABSTRACT 1870

TITLE: PRETREATMENT OF CELLULOSE WASTES TO INCREASE ENZYME REACTIVITY.
AUTHOR: NESSE M, WALlick J H, HARPER J M.
KEYWORDS: ORGANIC, ALCOHOLIC FERMENTATION.
NOTES: FILED.
DATE: 770000

ABSTRACT 1871

TITLE: PLANT CROPS AS A SOURCE OF FUEL AND HYDROCARBON-LIKE MATERIALS.
AUTHOR: NILSSEN P E, NISHIMURA M, OTVOS J M, CALVIN M.
KEYWORDS: ORGANIC, ENERGY CROPS.
NOTES: FILED.
DATE: 771232

ABSTRACT 1872

TITLE: ALCOHOL-ITS NATURE AND POTENTIAL FOR TRACTOR OR AUTOMOBILE FUEL.
AUTHOR: OFOLI R Y, STOUT B A.
SOURCE: AEIS 374, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JAN 1978, 5 PP.
KEYWORDS: ORGANIC, ALCOHOL, AUTOMOBILE.
NOTES: FILED.
DATE: 780100

ABSTRACT 1873

TITLE: ALCOHOL-ITS NATURE AND POTENTIAL FOR TRACTOR OR AUTOMOBILE FUEL.
AUTHOR: OFOLI R Y, STOUT B A.
SOURCE: AEIS 374, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JAN 1978, 5 PP.
KEYWORDS: ORGANIC, ALCOHOL, AUTOMOBILE, TRACTOR.
NOTES: FILED.
DATE: 780100

In this report the suitability along with some modification are mentioned. Both for an engine to run on 100 percent alcohol and to run on a mix of 9 to 1 gasoline and alcohol. The characteristics of alcohol, the fuel qualities along with the advantages and potential benefits are discussed. Also the economics and future of alcohol production are included. It is concluded that in spite of the unfavorable economics at present times that alcohol may flow out of the gas nozzle sooner than we think, due to petroleum embargos, unrest in the mid-east or the possibility of gasoline rationing. Also some economic and environmental factors are considered producing alcohol is much less expensive than extracting oil from shales or liquefying coal.
ABSTRACT 1874

**TITLE:** WOOD FUELS: THE DEVELOPING WORLD.

**AUTHOR:** OPENSHAW K.

**source:** NEW SCIENTIST, 31 JAN 1974, PP 271-272.

**keywords:** ORGANIC, WOOD, DEVELOPING COUNTRIES.

**notes:** FILED.

**date:** 740131

ABSTRACT 1875

**TITLE:** ECONOMIC ANALYSIS OF DAIRY-MATURE BIO-GAS SYSTEMS.

**AUTHOR:** OPPENLANDER J C, CASSELL E A, DOWNER R N.

**source:** ASAE PAPER 75-4545, 32 PP.

**keywords:** ORGANIC, ECONOMICS, ANIMAL WASTE, ANAEROBIC FERMENTATION, DESIGN, VERMONT.

**notes:** FILED.

**date:** 750120

ABSTRACT 1876

**TITLE:** ENERGY POTENTIAL OF TEXAS CROPS AND AGRICULTURAL RESIDUES: A SURVEY OF AVAILABLE RESOURCES AND PRELIMINARY ECONOMIC FEASIBILITY STUDY.

**AUTHOR:** OURSBOURN C D, LEPOPI M A, LACEWELL R D, LAM K Y, SCHACHT O B.

**source:** MP-1361, TEXAS AGR EXPT STA, TEXAS A AND M UNIV, FEB 1978, 82 PP.

**keywords:** ORGANIC, ENERGY CROPS, TEXAS, ECONOMICS.

**notes:** FILED.

**date:** 780200

ABSTRACT 1877

**TITLE:** ALTERNATIVE SOURCES OF ENERGY/WIND, SUN AND AGRICULTURAL WASTE.

**AUTHOR:** PAK S.

**source:** IBDRO, UNPUBLISHED PAPER, 30 MAY 1974, 16 PP.

**keywords:** ORGANIC, ALTERNATIVES, WIND, SOLAR, METHANE, Gobar gas.

**notes:** FILED.

**date:** 740330

ABSTRACT 1878

**TITLE:** METHANE PRODUCTION FROM SWINE WASTE WITH A MESOPHILIC SOLAR AND THERMOPHILIC REACTOR.

**AUTHOR:** PARKER R, HUMENIK F J, HOLMES R G, OVERCASH R.

**source:** ASAE PAPER 74-3033, 8PP.

**keywords:** ORGANIC, ANIMAL WASTE, METHANE, HEAT, SOLAR, PRODUCTION.

**notes:** FILED.

**date:** 740800

ABSTRACT 1879

**TITLE:** MANITOBA CROPS AS AN ENERGY SOURCE.

**AUTHOR:** PARTRIDGE J R D.

**source:** PRESENTED AT FOREST AND FIELD FUELS SYMPOSIUM, WINNIPEG, CANADA.

**date:** 771011

ABSTRACT 1880

**TITLE:** AN APPROACH TO WASTE UTILIZATION IN RURAL INDIA.

**AUTHOR:** PATEL J J.

**source:** UNR/FAO SEMINAR ON RESIDUES UTILIZATION-MANAGEMENT OF AGR AND AGRO-INDUSTRIAL WASTES, FAO, ROME, 16-21 JAN 1977, 16 PP.

**keywords:** ORGANIC, INDIA, WASTES.

**notes:** FILED.

**date:** 770412
ABSTRACT 1881

*TITLE*, FUELS FROM BIOMASS SYMPOSIUM.
*AUTHOR*, PFEFFER J T, STUDEL J J.
*SOURCE*, NTIS, US DEPT OF COMMERCE, SPRINGFIELD, VA 22161. 18-19 APRIL 1977, 213 PP.
*KEYWORDS*, ORGANIC.
*NOTES*, FILED.
*DATE*, 770418.

ABSTRACT 1882

*TITLE*, COMMERCIAL SIZE ANAEROBIC DIGESTER PERFORMANCE WITH DAIRY MANURE.
*AUTHOR*, PIGG D L.
*SOURCE*, ASAE PAPER 77-4055, 1977, 19PP.
*KEYWORDS*, ORGANIC, ANAEROBIC FERMENTATION, DAIRY, MANURE, TECHNOLOGY ASSESSMENT.
*NOTES*, FILED. RESULTS OF 18 MONTHS OPERATION OF A MIXED AND HEATED EXPERIMENTAL DIGESTER.
*DATE*, 778000.

ABSTRACT 1883

*TITLE*, SOLAR ENERGY CONVERSION BY LIVING SYSTEMS AND THE ENERGY ECONOMY.
*AUTHOR*, PIMENTEL D, ET AL.
*SOURCE*, DEPT OF ENTOMOLOGY, COLLEGE OF AGR AND LIFE SCI, CORNELL UNIV, ITHACA, NY 14853. 27 APRIL 1977, 23 PP.
*KEYWORDS*, ORGANIC, SOLAR, ENERGY CONSUMPTION, BIOMASS, CONVERSION.
*NOTES*, FILED.
*DATE*, 770427.

ABSTRACT 1884

*TITLE*, METHANE FROM MANURE - IS IT WORTH THE CORROSIVE ACIDS, DANGER OF EXPLOSIONS, HIGH INITIAL COST, WASTE DISPOSAL PROBLEMS
*AUTHOR*, POLLARD B.
*SOURCE*, MICHIGAN FARMER, 2 MARCH 1974, P 36.
*KEYWORDS*, ORGANIC, MANURE, METHANE, ECONOMICS.
*NOTES*, FILED.
*DATE*, 740302.

ABSTRACT 1885

*TITLE*, FLOWER POWER - PROSPECTS FOR PHOTOSYNTHETIC ENERGY.
*AUTHOR*, POOL R, W J, WILLIAMS A M.
*KEYWORDS*, ORGANIC, PHOTOSYNTHESIS, BIOMASS, WASTES.
*NOTES*, FILED.
*DATE*, 765250.

ABSTRACT 1886

*TITLE*, ENERGY BY THE BUSHEL.
*AUTHOR*, PORTER J.
*KEYWORDS*, ORGANIC, ENERGY CROPS.
*NOTES*, FILED.
*DATE*, 780400.

ABSTRACT 1887

*TITLE*, ALTERNATE USES OF ANIMAL MANURE.
*AUTHOR*, POS J.
*SOURCE*, TECH REPORT 126-44, SCHOOL OF ENGR, UNIV OF GUELPH, ONTARIO, CANADA, 1978, 15 PP.
*KEYWORDS*, ORGANIC, WASTES, MANURE, ANAEROBIC FERMENTATION.
*NOTES*, FILED. AS AN ALTERNATIVE SOURCE OF ENERGY, A BRIEF OUTLINE OF THE VALUE OF POTENTIAL ENERGY AVAILABLE FROM THE TOTAL LIVESTOCK POPULATION IN ONTARIO. THREE BASIC USES, MANURE, MANURE, MANURE, MANURE, MANURE, MANURE, MANURE, MANURE, MANURE.
*DATE*, 780400.

ABSTRACT 1888

*TITLE*, COMPOSTING.
*AUTHOR*, POS J.
*SOURCE*, TECH REPORT 126-37, SCHOOL OF ENGR, UNIV OF GUELPH, ONTARIO, CANADA, 1977, 9PP.
*KEYWORDS*, ORGANIC.
*NOTES*, FILED.
*DATE*, 779900.
ABSTRACT 1889

**TITLE**: BIO-GAS PLANTS—PROJECTS, PROBLEMS, TASKS.
**AUTHOR**: PRASAD C R, PRASAD K A, REDDY A V.
**SOURCE**: ECONOMIC AND POLITICAL WEEKLY, BOMBAY, INDIA, 9(32-34), AUG 1974.
**KEYWORDS**: ORGANIC, BIOMASS, INDIA, ECONOMICS.
**NOTES**: FILED. AUTHORS FROM INDIAN INST OF SCI, BANGALORE.
**DATE**: 740800

ABSTRACT 1890

**TITLE**: THAT MANURE PIT—IS IT A GOLDMINE.
**AUTHOR**: PRATT M.
**KEYWORDS**: ORGANIC, MANURE, ENERGY ACCOUNTING, FERTILIZER, METHANE, PRODUCTION, ECONOMICS.
**NOTES**: FILED.
**DATE**: 750600

ABSTRACT 1891

**TITLE**: METHANE—PROCEEDINGS OF A ONE DAY SEMINAR.
**AUTHOR**: PYLE L, FRAENKEL P L.
**SOURCE**: LONDON/INTERMEDIATE TECHNOLOGY PUBLICATIONS LTD, 1975, 51 PP.
**KEYWORDS**: ORGANIC, METHANE, ANAEROBIC FERMENTATION, DESIGN, MARKETING, DEVELOPING COUNTRIES, INDIA, UNITED KINGDOM, ECONOMICS, HEAT.
**NOTES**: FILED.
**DATE**: 990800

ABSTRACT 1892

**TITLE**: BIOLOGICAL CONVERSION OF ORGANIC REFUSE TO METHANE.
**AUTHOR**: QUINN G E, ET AL.
**SOURCE**: DEPT OF CIVIL ENGR, UNIV OF ILL, URBANA, IL 61801, NOV 1976, 107 PP.
**KEYWORDS**: ORGANIC, METHANE, ANAEROBIC FERMENTATION.
**NOTES**: FILED. URBAN SOLID WASTES CONTAIN SIGNIFICANT QUANTITIES OF ENERGY THAT CAN BE RECLAIMED. BIOCONVERSION OF THE ORGANIC REFUSE TO METHANE BY ANAEROBIC FERMENTATION IS ONE MECHANISM BY WHICH THIS ENERGY CAN BE RECLAIMED. THIS REPORT CONTAINS THE RESULTS OF AN INVESTIGATION OF REFUSE FERMENTATION AT A THERMOPHILIC OPERATING TEMPERATURE OF 60 DEGREES C. RESULTS OF DewaterING OF THE FERMENTOR RESIDUE BY VACUUM FILTRATION IS PRESENTED. RESULTS OF PRETREATMENT OF THE REFUSE BY A HOT-CAUSTIC PROCESS ARE PRESENTED. TREATMENT REQUIREMENTS FOR THE CENTRATE FILTRATE REQUIREMENTS FOR THE CENTRATE FILTRATE WERE DETERMINED. A MATHEMATICAL SIMULATOR OF THE FERMENTATION PROCESS, VACUUM FILTRATION PROCESS, VACUUM FILTRATION PROCESS AND RESIDUE DISPOSAL PROCESSES HAS BEEN CONSTRUCTED. RESULTS FROM THE SIMULATION RUNS ARE PRESENTED.
**DATE**: 761100

ABSTRACT 1893

**TITLE**: LIQUID FUELS.
**AUTHOR**: REED T.
**SOURCE**: PRESENTED AT WASHINGTON CENTER FOR METROPOLITAN STUDIES CONF ON BIOCONVERSION, WASHINGTON DC, 10-12 MARCH 1976, PP 366-390.
**KEYWORDS**: ORGANIC, WOOD, PYROLYSIS, CONVERSION, NATURAL GAS, METHANOL.
**NOTES**: THE FUELS THAT CAN BE PRODUCED FROM BIOMASS ARE EVALUATED AS POTENTIAL NATURAL GAS SUBSTITUTES. IN PARTICULAR, WOOD GAS, METHANOL, AND PYROLYSIS OILS ARE AVAILABLE IN SUFFICIENT QUANTITIES TO FULFILL MOST OF THE NEEDS PRESENTLY BEING MET BY NATURAL GAS AND OIL.
**DATE**: 760310
ABSTRACT 1894

**Title**: Economics and Energy Requirements of Ethanol Production.

**Author**: Reilly P.


**Keywords**: Organic, Ethanol, Economics.

**Notes**:Filed. This paper examines the energy requirements and economics, both present and future, of the process to produce and use ethanol as a 10 percent mixture with gasoline (gasohol). It is assumed throughout that the lowest priced grain—corn—is used as a feedstock and that the lowest priced fuel—coal—is used as an energy source. No consideration is given to the merits of gasohol as a fuel other than the effect on the energy requirements and economics of the process, nor is there any discussion of the potential use of gasohol in other countries where economic conditions may be quite different from those here.

**Date**: 786100

ABSTRACT 1895

**Title**: Energy from Solid Waste.

**Author**: Reindl J.

**Source**: Univ of Wisc Extension 62776, Dec 1975, 4 pp.

**Keywords**: Organic, Municipal Waste.

**Notes**: Filed.

**Date**: 751200

ABSTRACT 1896

**Title**: Energy - It can be a lot of garbage.

**Author**: Renstad G. M.

**Source**: Factory Magazine, Dec 1974, pp 41-42.

**Keywords**: Organic, Industry, Municipal Waste, Energy Sources, Economics.

**Notes**: Filed.

**Date**: 741200

ABSTRACT 1897

**Title**: Energy from Biodigestion of Waste Materials.

**Author**: De Renzo D. J.


**Keywords**: Organic, Conversion, Wastes.

**Notes**: Pollutant Technology Review 35.

**Date**: 771000

ABSTRACT 1898

**Title**: The Generation of Methane from Waste Materials.

**Author**: Reynolds G. F.

**Source**: Appropriate Tech, 2121/11-12, Aug 1975.

**Keywords**: Organic, Methane, Wastes, Developing Countries, India, Anaerobic Fermentation, Pakistan.

**Notes**: Filed.

**Date**: 750800

ABSTRACT 1899

**Title**: Microbial Population of Feedlot Waste and Associated Sites.

**Author**: Rhodes R A, Hrubant G R.

**Source**: Applied Microbiology, 24(3)/369-377, Sept 1972.

**Keywords**: Organic, Manure.

**Notes**: Filed.

**Date**: 721000

ABSTRACT 1900

**Title**: Solid Substrate Fermentation of Feedlot Waste Combined with Feed Grains.

**Author**: Rhodes R A, Orton W L.

**Source**: Transactions of the ASAE, 18(4)/728-733, 1975.

**Keywords**: Organic, Manure, Nitrogen.

**Notes**: Filed.

**Date**: 750800
ABSTRACT 1901
• TITLE: THE FEASIBILITY OF GENERATING ELECTRICITY IN THE STATE OF VERMONT USING WOOD AS A FUEL - A STUDY.
• AUTHOR: RICH J. P. BAUER
• SOURCE: JPR ASSOCIATES, INC. REGISTERED LAND SURVEYORS AND CONSULTING FORESTERS PO BOX 1195, STOWE. VERMONT. AUG 1975. 127 PP.
• KEYWORDS: ORGANIC, WOOD, ELECTRICAL, ENVIRONMENT, ECONOMICS.
• NOTES: FILED.
• DATE: 750800.

ABSTRACT 1902
• TITLE: DEVELOPMENT OF A SMALL INSTITUTIONAL HEATING PLANT TO UTILIZE FOREST RESIDUE FUELS.
• AUTHOR: RILEY J. G.
• KEYWORDS: ORGANIC, WOOD, WASTE, HEAT.
• NOTES: FILED.
• DATE: 760000.

ABSTRACT 1903
• TITLE: SOLAR ENERGY UTILIZATION BY PHOTOSYNTHETIC PRODUCTION OF SOLID FUEL.
• AUTHOR: RILEY J. G., SMITH M.
• KEYWORDS: ORGANIC, WOOD, CONVERSION, ALTERNATIVE FUELS, ECONOMICS.
• NOTES: FILED.
• DATE: 770000.

ABSTRACT 1904
• TITLE: BIOCONVERSION FUELS FROM BIOMASS.
• AUTHOR: ROBERTSON E E.
• SOURCE: PHILADELPHIA, PA/Franklin Inst Press, 1977, 72 PP.
• KEYWORDS: ORGANIC, BIOMASS.
• NOTES: FILED.
• DATE: 770000.

ABSTRACT 1905
• TITLE: SHOULD CANADA PLAN TO HARNESS MORE RENEWABLE BIOMASS ENERGY.
• AUTHOR: ROBERTSON E E.
• SOURCE: PRESENTED AT THE FOURTH ANNUAL MEETING OF THE SOLAR ENERGY SOC OF CANADA, UNIV OF WESTERN ONTARIO, LONDON, ONTARIO, CANADA, 20-24 AUG 1978, 10 PP.
• KEYWORDS: ORGANIC, SOLAR, CANADA.
• NOTES: FILED.
• DATE: 780820.

ABSTRACT 1906
• TITLE: BIOCONVERSION FUELS FROM BIOMASS.
• AUTHOR: ROBERTSON E E.
• SOURCE: PHILADELPHIA, PA/Franklin Inst Press, 1977, 72 PP.
• KEYWORDS: ORGANIC, CONVERSION, ECONOMICS.
• NOTES: FILED.
• IT IS CONCLUDED THAT THERE IS GROWING STATISTICAL EVIDENCE OF THE SUCCESSFUL ECONOMIC USE OF RENEWABLE BIOMASS ENERGY. HOWEVER, IT IS POINTED OUT THAT THIS SUBJECT HAS RAMIFICATIONS FOR MANY OF THE SCIENTIFIC AND TECHNOLOGICAL FIELDS, NOT TO MENTION ITS ENVIRONMENTAL, ECOLOGICAL, SOCIAL AND ECONOMIC IMPLICATIONS. AMONG OTHER THINGS, GRASP EXPLANATIONS OF OXYGEN/CARBON DIOXIDE CYCLE, SIGNIFICANCE OF BIOTA ENERGY SYSTEM, METABOLISM ANABOLISM AND CATABOLISM, THE ORIGINS OF BIOMASS, THE HISTORICAL USE OF BIOMASS AS AN ENERGY SOURCE, BIOCONVERSION ENERGY ELEMENTS AND PROCESSES SUCH AS DNA, THE DOUBLE HELIX AND ITS OFFSPRINGs, CARBON AND CARBON DIOXIDE, NITROGEN AND A LOOK AT THE FUTURE PROSPECTS FOR ECONOMICAL AND ENVIRONMENTAL ACCEPTABLE USES FOR FUELS FROM BIOMASS ARE COVERED. ALSO AN ATTEMPT IS MADE TO POINT OUT AREAS IN NEED OF FURTHER ATTENTION IF A SATISFACTORY RATE OF COMMERCIALIZATION IS TO TAKE PLACE.
• DATE: 770000.
ABSTRACT 1907
*TITLE*, PERPETUALLY RENEWABLE BIOMASS PROSPECTS - A COMPARISON OF US AND CANADIAN ECOSYSTEM CARRYING CAPACITIES VS NEEDS.
*AUTHOR*, ROBERTSON E E.
*KEYWORDS*, ORGANIC REQUIREMENTS, USA, CANADA.
*NOTES*, SOLAR, CLIMATIC, AND OTHER PERPETUALLY RENEWABLE ECOSYSTEM PREREQUISITES FOR BIOMASS FORMATION ARE DISCUSSED. GEOGRAPHICAL AREAS IN THE US AND CANADA SATISFY THE PREREQUISITES.
*DATE*, 760515

ABSTRACT 1908
*TITLE*, A 1900 CUBIC METER DIGESTER FOR LAYING-HEM MANURE, IOWA.
*AUTHOR*, ROCEY D A.
*KEYWORDS*, ORGANIC POULTRY, ANAEROBIC FERMENTATION, ECONOMICS.
*NOTES*, FILED, DESCRIPTION AND OPERATING EXPERIENCES OF THE SUNNY TIME ANAEROBIC DIGESTER IS PRESENTED, ALONG WITH PERFORMANCE DATA AND AN ECONOMICAL ANALYSIS.
*DATE*, 780100

ABSTRACT 1909
*TITLE*, GROWN ORGANIC MATTER AS A FUEL RAW MATERIAL RESOURCE.
*AUTHOR*, ROLLER W L ET AL.
*SOURCE*, DARDC, IIOOSTER OH 44691, OCT 1975.
*KEYWORDS*, ORGANIC FOOD PRODUCTION.
*DATE*, 751000

ABSTRACT 1910
*TITLE*, ENERGY FROM BIOMASS - AN OVERVIEW OF ENVIRONMENTAL ASPECTS.
*AUTHOR*, ROOP R D.
*SOURCE*, TECH FOR ENERGY CONSERVATION, ALBUQUERQUE NM, 23 JAN 1978, 15 PP.
*KEYWORDS*, FUELS, CONVERSION, ENVIRONMENT.
*NOTES*, FILED, RECENT LITERATURE REGARDING ENERGY FROM BIOMASS IS REVIEWED IN ORDER TO DELINEATE ENVIRONMENTAL ISSUES AND SUGGEST RESEARCH NEEDED FOR ASSESSMENT OF THIS ENERGY OPTION. POTENTIAL SOURCES OF BIOMASS FOR CONVERSION TO ENERGY INCLUDE AGRICULTURAL AND FORESTRY RESIDUES, MUNICIPAL AND INDUSTRIAL WASTES, BIOMASS PLANTATIONS, AND FRESHWATER AND MARINE-GROWN PLANT MATERIAL. THE IMPACTS OF USING WASTES AND OF GROWING BIOMASS FOR FUEL ARE SUMMARIZED.
*DATE*, 780123

ABSTRACT 1911
*TITLE*, METHANE PRODUCTION FROM FARM WASTES AS A SOURCE OF TRACTOR FUEL.
*AUTHOR*, ROSENBERG G.
*SOURCE*, AGRICULTURE, 58(9)/487-494, DEC 1951.
*KEYWORDS*, ORGANIC, METHANE, FERTILIZER.
*NOTES*, FILED.
*DATE*, 511200

ABSTRACT 1912
*TITLE*, PHOTOSYNTHETIC MATERIALS FOR ENERGY CONVERSION - AN AUSTRALIAN STUDY.
*AUTHOR*, SADDLER H D W.
*SOURCE*, PRESENTED AT EUROPEAN SEMINAR ON BIOLOGICAL SOLAR ENERGY CONVERSION SYSTEMS, GRENOBLE - AUTRANS, 9-12 MAY 1977, 15PP.
*KEYWORDS*, ORGANIC, BIOMASS, AUSTRALIA.
*NOTES*, FILED, TECHNICAL AND ECONOMIC FEASIBILITY OF BIOLOGICAL ENERGY CONVERSION IN AUSTRALIA.
*DATE*, 770509
ABSTRACT 1913

 TITLE: AN ASSESSMENT OF CROP PRODUCTION FOR ENERGY IN AUSTRALIA.
 AUTHOR: SADDLER H D V, MCCANN D J, PITMAN R G.
 NOTES: FILED. THE ECONOMIC AND TECHNICAL FEASIBILITY OF PRODUCING ENERGY FROM PLANTS, AND THE UTILISATION OF SUCH WASTES AS SAWMILL FEED AND URBAN REFUSE, IS CONSIDERED. VARIOUS MEANS OF CONVERTING CROP MATERIAL TO SYNTHETIC LIQUIDS OR GASEOUS FUELS ARE DESCRIBED.
 DATE: 750000

ABSTRACT 1914

 TITLE: ORGANIC WASTES AND ENERGY CROPS AS POTENTIAL SOURCES OF FUEL IN AUSTRALIA.
 AUTHOR: SADDLER H D V.
 SOURCE: ENERGY RESEARCH CENTRE, SCHOOL OF BIOLOGICAL SCI., UNIV OF SYDNEY, SYDNEY, AUSTRALIA NSW 2006, 1975, 30PP.
 KEYWORDS: ORGANIC, BIOMASS, WASTES, AUSTRALIA.
 NOTES: FILED. ESTIMATES ARE GIVEN ON THE PRODUCTION OF CARBON BY PLANTS AND THE QUANTITIES OF DIFFERENT TYPES OF ORGANIC WASTES PRODUCED EACH YEAR. THE COSTS OF GROWING AND CONVERTING SOME SELECTED PLANTS FOLLOWS.
 DATE: 750000

ABSTRACT 1915

 TITLE: BIO-GAS ACHIEVEMENTS AND CHALLENGES.
 AUTHOR: SATHIYANATHAN M A.
 SOURCE: ASSOC OF VOLUNTARY AGENCIES FOR RURAL DEV., NEW DELHI.
 DATE: 750600

ABSTRACT 1916

 TITLE: ANALYSIS OF COTTON GIN WASTE FOR ENERGY.
 AUTHOR: SCHACHT O B.
 KEYWORDS: ORGANIC, COTTON, WASTES.
 NOTES: FILED. CHEMICAL AND OTHER ANALYSIS WERE CONDUCTED ON COTTON GIN WASTE COLLECTED FROM 3 TEXAS GINS.
 DATE: 78000

ABSTRACT 1917

 TITLE: EFFICIENCY OF PHOTOSYNTHESIS AS A SOLAR ENERGY CONVERTER.
 AUTHOR: SCHNEIDER T R.
 KEYWORDS: ORGANIC, SOLAR, PHOTOSYNTHESIS, ANAEROBIC FERMENTATION.
 NOTES: FILED.
 DATE: 730000

ABSTRACT 1918

 TITLE: SOCIO-ECONOMIC ASPECTS OF AGRICULTURAL AND AGRO-INDUSTRIAL RESIDUE UTILIZATION.
 AUTHOR: SCZCEPANIK E.
 SOURCE: UNEP, FAO, ROME, ITALY, 18-21 JAN 1977, 10 PP.
 KEYWORDS: ORGANIC, WASTES.
 DATE: 770118
ABSTRACT 1919

**Title**: Wood Heating Handbook.  
**Author**: SELF C.  
**Keywords**: Organic, Wood, Heat, Design, Operating Procedure.  
**Notes**: Filed.  
**Date**: 770300

ABSTRACT 1920

**Title**: The Anaerobic Digestion of Livestock Wastes to Produce Methane 1946 - June 1975, A Bibliography with Abstracts.  
**Author**: SHADDUCK G.  
**Source**: AGR ENGR DEPT, UNIV OF MINN, ST PAUL, 1975, 103 pp.  
**Keywords**: Organic, Methane, Bibliography, Manure.  
**Notes**: Filed.  
**Date**: 750000

**Title**: The Woodburners Encyclopedia.  
**Author**: SHELTON J., SHAPIRO A B.  
**Source**: VERMONT CROSSROADS PRESS, BOX 333, WAITSFIELD, VERMONT 05673, 1977, 155 pp.  
**Keywords**: Organic, Wood, Heat, Design, Storage.  
**Notes**: Filed.  
**Date**: 770000

**Title**: Methane Production from Anaerobic Fermentation of Beef Manure.  
**Author**: SHIELDS F D, TRAGITT & No.  
**Keywords**: Organic, Methane, Manure, Anaerobic Fermentation.  
**Notes**: Filed.  
**Date**: 780000

**Title**: Engineering and Economic Aspects of Farm Digesters.  
**Author**: SIEVERS D M, FISCHER J R, MEADOR M F, FULHAGE C D, SHANKLIN M D.  
**Source**: ASAE PAPER 75-4541, 15-16 DEC 1975, 12 pp.  
**Keywords**: Organic, Manure, Design.  
**Notes**: Filed.  
**Date**: 751215

**Title**: Energy Balance for Ethyl Alcohol Production from Crops.  
**Author**: DA SILVA J G, SERRA G E.  
**Source**: SCIENCE, 201/903-906, 8 Sept 1978.  
**Keywords**: Organic, Ethanol, Accounting.  
**Notes**: Filed.  
**Date**: 780908

**Title**: Building a Bio-Gas Plant.  
**Author**: SINGH R B.  
**Source**: COMPOST SCIENCE, MARCH-APRIL 1972, PP 12-14.  
**Keywords**: Organic, Anaerobic Fermentation, India, Operating Procedure, Biogas, Manure, Conversion.  
**Notes**: Filed.  
**Date**: 720300
ABSTRACT 1926

**TITLE:** TECHNICAL REPORT ON BIO-GAS PLANT.
**AUTHOR:** SINGH R B.
**SOURCE:** GOBAR GAS RESEARCH STA; AJITMAL, ETAWAM, INDIA.
**KEYWORDS:** ORGANIC, BIOGAS, ECONOMICS, TECHNOLOGY ASSESSMENT, INDIA.
**NOTES:** FILED.
**DATE:** 753003

ABSTRACT 1927

**TITLE:** SOLAR ENERGY COLLECTION BY BIOCONVERSION.
**AUTHOR:** SITTON O G; GADDY J.
**SOURCE:** REPORT 769017, SOC OF AUTOMOTIVE ENGR, 12-17 SEPT 1976, 7 PP.
**KEYWORDS:** ORGANIC, PHOTOSYNTHESIS, CONVERSION, METHANE, ECONOMICS, TECHNOLOGY ASSESSMENT.
**NOTES:** PHOTOSYNTHETIC EFFICIENCIES OF DIFFERENT CROPS FOR SOLAR ENERGY COLLECTION BY BIOCONVERSION ARE COMPARED. AVAILABILITY OF LAND IN THE US FOR BIOMASS PRODUCTION IS ANALYZED. USE OF WASTES FROM PRESENT AGRICULTURAL CROPS WHICH REQUIRE NO ADDITIONAL LAND IS DISCUSSED. A PROCESS DESIGN AND THE ECONOMICS OF METHANE PRODUCTION BY BIOCONVERSION FOR DIFFERENT CROP MATERIALS ARE PRESENTED.
**DATE:** 76912

ABSTRACT 1928

**TITLE:** AN ECONOMIC ANALYSIS OF METHANE GENERATION - INTERNAL COSTS AND EXTERNAL BENEFITS.
**AUTHOR:** SLANE T C; CHRISTENSEN R L; WILLIS C E; LIGHT R G.
**SOURCE:** BULLETIN 618, MASS AGR EXPT STA; COLLEGE OF FOOD AND NATURAL RESOURC; UNIV OF MASS, AMHERST, JAN 1975, 30 PP.
**KEYWORDS:** ORGANIC, METHANE, ECONOMICS, MANURE.
**NOTES:** FILED.
**DATE:** 750100

ABSTRACT 1929

**TITLE:** PROCESSING ANIMAL WASTES FOR FEED AND INDUSTRIAL PRODUCTS.
**AUTHOR:** SLONEKER J H ET AL.
**SOURCE:** FROM SYMPOSIUM - PROCESSING AGRICULTURAL AND MUNICIPAL WASTES, AVI PUBL CO, BOX 831, WESTPORT, CONN, 1973, 15 PP.
**KEYWORDS:** ORGANIC, ANIMAL WASTE, ANAEROBIC FERMENTATION.
**NOTES:** FILED.
**DATE:** 730000

ABSTRACT 1930

**TITLE:** TWO-PHASE ANAEROBIC DIGESTION OF POULTRY WASTE.
**AUTHOR:** SMITH R E; REED M J; KIKER J T.
**SOURCE:** ASAE PAPER 75-4544, 23 PP.
**KEYWORDS:** ORGANIC, ANIMAL WASTE, ANAEROBIC FERMENTATION, DESIGN, OPERATING PROCEDURE.
**NOTES:** FILED.
**DATE:** 750000

ABSTRACT 1931

**TITLE:** METHANE GENERATION.
**AUTHOR:** SMITH R J; FEH R L; MIRANDOWSKI J A; PIDGEON E R; PERSSON S; BARTLETT M D; REGAN R W.
**SOURCE:** PRESENTED AT CORNELL UNIV AGR WASTE MANAGEMENT CONF, ITHACA, NY, 1977, PP 341-347.
**KEYWORDS:** ORGANIC, WASTES, ANAEROBIC FERMENTATION, METHANE, IOWA.
**NOTES:** THE PERFORMANCE OF AN ANAEROBIC DIGESTER ON A CENTRAL IOWAN FARM IS EVALUATED. THE PENNSYLVANIA STATE UNIVERSITY BIOGAS GENERATOR AND OTHER SYSTEMS ARE DISCUSSED.
**DATE:** 770000

ABSTRACT 1932

**TITLE:** ENERGY RECOVERY AND RESOURCE RECYCLING.
**AUTHOR:** SNYDER W W.
**SOURCE:** CHEM ENGR DESKBOOK ISSUE, 21 OCT 1974, PP 65-72.
**KEYWORDS:** ORGANIC, MUNICIPAL WASTE, ENERGY SOURCES, RECYCLING, CONVERSION, ECONOMICS.
**NOTES:** FILED.
**DATE:** 741921
ABSTRACT 1933

- TITLE: ENZYMATIC HYDROLYSIS OF CELLULOSIC WASTES TO GLUCOSE.
- AUTHOR: SPAOLO L A, PEDEIROS J, BANDELM R.
- KEYWORDS: ORGANIC WASTES, CONVERSION.
- NOTES: PRODUCTION AND MODE OF ACTION OF THE CELLULASE COMPLEX PRODUCED DURING THE GROWTH OF THE FUNGUS TRICHODERMA VIRIDE, AND THE APPLICATION OF SUCH ENZYMES FOR THE CONVERSION OF VARIOUS MUNICIPAL, AGRICULTURAL, AND INDUSTRIAL CELLULOSIC WASTES TO GLUCOSE SUGAR ARE DISCUSSED. PROCESS VARIABLES ARE DESCRIBED AS THEY AFFECT PROCESS CONVERSION RATES.
- DATE: 760400

ABSTRACT 1934

- TITLE: BIO - GAS (GOBRA GAS) AND MANURE FROM THE WASTE OF FARM ANIMALS.
- AUTHOR: SRINASAN M R.
- SOURCE: UNEP/FAO SEMINAR ON RESIDUES UTILIZATION-MANAGEMENT OF AGR AND AERO-INDUSTRIAL WASTES, FAO, ROME, 18-21 JAN 1977, 13 PP.
- KEYWORDS: ORGANIC, BIOGAS, WASTES, HISTORICAL, DESIGN, INDIA.
- NOTES: FILED.
- DATE: 770121

ABSTRACT 1935

- TITLE: AN EVALUATION OF THE USE OF AGRICULTURAL RESIDUES AS AN ENERGY FEEDSTOCK - VOLUME II.
- AUTHOR: STANFORD RESEARCH INSTITUTE.
- SOURCE: SRI PROJECT 5093; SRI, MENLO PARK, CA 94025; JULY 1976, 608 PP.
- KEYWORDS: ORGANIC, WASTES, USA.
- NOTES: FILED.
- DATE: 760700

ABSTRACT 1936

- TITLE: CROP, FORESTRY AND MANURE RESIDUE INVENTORY - CONTINENTAL UNITED STATES - VOLUME II - EAST-NORTH CENTRAL.
- AUTHOR: STANFORD RESEARCH INSTITUTE.
- SOURCE: SRI PROJECT 5093; SRI, MENLO PARK, CA 94025; JUNE 1976, 253 PP.
- KEYWORDS: ORGANIC, WASTES, ILLINOIS, INDIANA, MICHIGAN, OHIO, WISCONSIN.
- NOTES: FILED.
- DATE: 760620

ABSTRACT 1937

- TITLE: SHORT-ROTATION FORESTRY AS A SOLAR ENERGY TRANSDUCER AND STORAGE SYSTEM.
- AUTHOR: STANFORD E.
- SOURCE: GREEN HILLS CENTER AND EXPT STA, CEDAR HILL, TEXAS, JUNE 1976, 35 PP.
- KEYWORDS: ORGANIC, BIOMASS, ENERGY BUDGET.
- NOTES: FILED.
- DATE: 760700

ABSTRACT 1938

- TITLE: AN EVALUATION OF THE USE OF AGRICULTURAL RESIDUES AS AN ENERGY FEEDSTOCK - VOLUME I.
- AUTHOR: STANFORD RESEARCH INSTITUTE.
- SOURCE: PAPER SUBMITTED TO NSF ADVANCED ENERGY RESEARCH AND TECH BY SRI.
- KEYWORDS: ORGANIC, CROP RESIDUES, TECHNOLOGY ASSESS.
- NOTES: FILED.
- DATE: 760700

- NOTES: ABOUT 75 PERCENT IS RETURNED TO THE SOIL. THERE IS CONTROVERSY OVER WHAT FRACTION OF THIS CAN BE REMOVED FOR ENERGY CONVERSION WITHOUT ADVERSE AFFECTS ON NUTRIENT LEVELS. CONVERSION OF BIOMASS TO SNG IS ECONOMIC ONLY FOR A LARGE INSTALLATION BUT NOT FOR SMALL SYSTEMS. BIOMASS IS A LONG-TERM ENERGY OPTION WITH IMPACT IN THE YEAR 2000 AND BEYOND. CONSIDERATIONS OTHER THAN ECONOMICS ARE THE AFFECT ON SOIL EROSION, FERTILIZER REQUIREMENTS, AND THE AFFECT ON SOIL TILTH.
ABSTRACT 1939

*TITLE: REPORT ON STRAW UTILIZATION CONFERENCE.*
*AUTHOR: STANIFORTH A R.*
*SOURCE: AGR DEV AND ADVISORY SERVICE OF THE MINISTRY OF AGR, FISHERIES AND FOOD, OXFORD, ENGLAND, 23 JAN 1976, 69 PP.*
*KEYWORDS: ORGANIC, AGRICULTURE, UNITED KINGDOM.*
*NOTES: FILED.*
*DATE: 760123*

ABSTRACT 1940

*TITLE: SURVEY OF AGRICULTURAL AND AGRO-INDUSTRIAL RESIDUES IN SELECTED COUNTRIES IN AFRICA.*
*AUTHOR: STANTON W R.*
*SOURCE: UNEP/FAO/ISS,&/07, ROME, FAO, ROME, ITALY, 18-21 JAN 1977, 29 PP.*
*KEYWORDS: ORGANIC, AGRO-INDUSTRIAL WASTES, AFRICA.*
*NOTES: FILED.*
*DATE: 770118*

ABSTRACT 1941

*TITLE: MICROBIOLOGICAL CONVERSION OF WASTES WITH SPECIAL REFERENCE TO THE APPLICATION TO DEVELOPING COUNTRIES.*
*AUTHOR: STANTON W R.*
*SOURCE: UNEP/FAO/ISS,4/16, ROME, ITALY, 18-21 JAN 1977, 29 PP.*
*KEYWORDS: ORGANIC, WASTES, CONVERSION, DEVELOPING COUNTRIES.*
*NOTES: FILED.*
*DATE: 770118*

ABSTRACT 1942

*TITLE: NUCLEAR POWER FOR THE PRODUCTION OF SYNTHETIC FUELS AND FEEDSTOCKS.*
*AUTHOR: STEINBERG M.*
*SOURCE: REPORT 769189, SOC OF AUTOMOTIVE ENGR, 12-17 SEPT 1976, 9 PP.*
*KEYWORDS: ORGANIC, NUCLEAR, METHANOL, WASTES, ECONOMICS, EFFICIENCY.*
*NOTES: THIS REPORT PRESENTS A PROCESS WHERE NUCLEAR POWER CAN SUPPLY PREMIUM SYNTHETIC CARBONACEOUS FUELS AND FEEDSTOCKS. THE PROCESS CONSISTS OF GENERATING HYDROGEN AND OXYGEN BY ELECTROLYTIC DECOMPOSITION OF WATER, PRODUCTION COSTS FOR SYNTHETIC FUELS AND FEEDSTOCKS AND CAPITAL OUTLAYS ARE INCLUDED.*
*DATE: 760912*

ABSTRACT 1943

*TITLE: ORGANIC ENERGY RESOURCES.*
*AUTHOR: STOUT B A.*
*SOURCE: PHI KAPPA PHI JOURNAL, 15(1)9-14, WINTER 1975.*
*KEYWORDS: ORGANIC, ENERGY SOURCES, RENEWABLE ENERGY, CONSERVATION, ECONOMICS, SOCIAL IMPLICATIONS, ANIMAL WASTE, MUNICIPAL WASTE, SNG.*
*NOTES: FILED.*
*DATE: 750000*

ABSTRACT 1944

*TITLE: ENERGY FROM ORGANIC RESIDUES.*
*AUTHOR: STOUT B A & LOUODN T L.*
*SOURCE: AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, 1976, 51 PP. (UNFAO)*
*KEYWORDS: ORGANIC, AGRO-INDUSTRIAL WASTES, CONVERSION, ALTERNATIVE FUELS.*
*NOTES: FILED. THIS PAPER EXPLORES THE USE OF ORGANIC RESIDUES AS ALTERNATIVE FUEL SOURCES. BOTH WET AND DRY CONVERSION PROCESSES ARE CONSIDERED INCLUDING ANAEROBIC FERMENTATION, COMBUSTION IN EXCESS AIR OR IN A CONTROLLED ATMOSPHERE, PYROLYSIS, HYDROGASIFICATION AND HYDROGENATION. AGRICULTURAL ENERGY NEEDS, ENERGY SOURCES AND THE AVAILABILITY OF ORGANIC RESIDUES ARE DISCUSSED AS IS AN ASSESSMENT OF THE FEASIBILITY OF EACH PROCESS AND THE TECHNOLOGIES AVAILABLE FOR CONVERSION OF ORGANIC RESIDUES TO MORE USEFUL SOLID, LIQUID OR GASEOUS FORMS.*
*DATE: 760901*
ABSTRACT 1945

TITLE: DIESEL OIL AND ETHANOL MIXTURES FOR DIESEL-POWERED FARM TRACTORS.

AUTHOR: STRAIT J. ET AL.

SOURCE: AG ENGR DEPT, UNIV OF MINN, ST PAUL MN 55108, DEC 29, 1978, 40 PP.

KEYWORDS: ORGANIC, ETHANOL, DIESEL, TECHNOLOGY ASSESSMENT.

NOTES: FILED. ABSOLUTE ETHANOL CAN BE MIXED WITH NO. 1 DIESEL NORMALLY ENCOUNTERED DURING THE CROPPING SEASON. WHEN ENGINES WERE OPERATED ON FUELS CONTAINING ETHANOL, THE MAXIMUM HORSEPOWER OUTPUT WAS REDUCED. FUEL CONSUMPTION INCREASED ENGINE NOISE INCREASED AND DELAY PERIOD EXTENDED. THESE CHARACTERISTICS INCREASED IN MAGNITUDE AS THE PROPORTION OF ETHANOL IN THE FUEL INCREASED. THESE IS RISK OF POSSIBLE ACCELERATED WEAR OF THE ENGINE CYLINDERS SURFACE AND FUEL INJECTION SYSTEM COMPONENTS.

DATE: 781229

ABSTRACT 1946

TITLE: HEALTH ASPECTS OF AGRICULTURAL RESIDUE UTILIZATION.

AUTHOR: STRAUCH D.

SOURCE: UNEP/FAO/ISS 4/04, ROME, ITALY, 18-21 JAN 1977, 13 PP.

KEYWORDS: ORGANIC, WASTES, SOCIAL IMPLICATIONS.

NOTES: FILED.

DATE: 770118

ABSTRACT 1947

TITLE: FEASIBILITY OF ETHANOL FROM GRAIN IN MONTANA.

AUTHOR: SROUP R, MILLER T.

SOURCE: REPORT 118, MONTANA AGR EXPT STA, MONTANA STATE UNIV, BOZEMAN MT, JAN 1978, 25 PP.

KEYWORDS: ORGANIC, ETHANOL, MONTANA.

NOTES: FILED.

DATE: 780100

ABSTRACT 1948

TITLE: FIBER, FUEL AND FOOD FROM WHOLE-TREE CHIPS.

AUTHOR: STUROS J A, DICKSON R E.

SOURCE: ASAE PAPER 77-1578, 1977, 7 PP.

KEYWORDS: ORGANIC, WOOD, ECONOMICS.

NOTES: FILED.

DATE: 770200

ABSTRACT 1949

TITLE: ENERGY FROM FEEDLOT MANURE.

AUTHOR: SWEETEN J M.

SOURCE: AGR EXTENSION SERVICE, AGR ENGR DEPT, TEXAS A AND M UNIV, COLLEGE STATION, 21 OCT 1974, 4 PP.

KEYWORDS: ORGANIC, ENERGY SOURCES, MANURE, TEXAS, FERTILIZER.

NOTES: FILED.

DATE: 751021

ABSTRACT 1950

TITLE: ENERGY FORESTS AND FUEL PLANTATIONS.

AUTHOR: SIEGO G C, KEMP C C.


KEYWORDS: ORGANIC, ENERGY SOURCES, NUCLEAR, FOSSIL FUELS, ECONOMICS, AGRICULTURE.

NOTES: FILED.

DATE: 730500

ABSTRACT 1951

TITLE: IRRIGATED FUELWOOD PLANTATIONS.

AUTHOR: TAINSH A.


KEYWORDS: ORGANIC.

NOTES: FILED.

DATE: 691100
ABSTRACT 1952

• TITLE: RESEARCH ON GAS ENGINE WHICH RUNS ON AGRICULTURAL WASTE.
• AUTHOR: TAKEDA S.
• SOURCE: UNPUBLISHED, FARM POWER AND MACHINERY LAB, DEPT OF AGR MACHINERY, MIE UNIV, JAPAN.
• KEYWORDS: ORGANIC.
• NOTES: FILED.
• DATE: 76

ABSTRACT 1953

• TITLE: RESEARCH ON GAS ENGINE DRIVEN BY AGRICULTURAL WASTE.
• AUTHOR: TAKEDA S, SAKAI J.
• KEYWORDS: ORGANIC, WASTES, TECHNOLOGY ASSESSMENT, DESIGN, JAPAN, ENGINE.
• NOTES: FILED.
• DATE: 1976

ABSTRACT 1954

• TITLE: A MOBILE PYROLYTIC SYSTEM FOR CONVERSION OF AGRICULTURAL AND FORESTRY WASTES INTO CLEAN FUELS.
• AUTHOR: TATOM J W ET AL.
• KEYWORDS: ORGANIC WASTES, PYROLYSIS, DESIGN, ECONOMICS.
• NOTES: FILED, A PROMISING CONCEPT IS PRESENTED IN THIS REPORT THAT MAY OVERCOME MANY OF THE PROBLEMS ASSOCIATED WITH THE USE OF AGRICULTURAL AND FORESTRY WASTES. A MOBILE PYROLYTIC CONVERTER WHICH COULD BE BROUGHT TO THE SOURCE OF THE WASTES AND THERE CONVERT THESE BULKY, WET, LOW-ENERGY MATERIALS INTO DENSE, DRY, HIGH ENERGY CHARCOAL FUEL, SIMILAR TO POWDERED COAL, WHICH CAN BE ECONOMICALLY TRANSPORTED AND BURNED CLEANLY AND EFFICIENTLY IN EXISTING SUSPENSION OR STOKER FIRED COAL SYSTEMS. A LOW TEMPERATURE, STEADY FLOW, PARTIAL OXIDATION PYROLYSIS SYSTEM HAS BEEN DEVELOPED AND IS READILY SUITTED FOR THE MOBILE CONCEPT DESCRIBED. A FINAL PAPER WILL FULLY DESCRIBE THIS SYSTEM AND THE RESULTS OF AN INVESTIGATION CONDUCTED FOR THE EPA.
• DATE: 75

ABSTRACT 1955

• TITLE: MOBILE PYROLYTIC SYSTEM FOR CONVERSION OF AGRICULTURAL AND FORESTRY WASTES TO ALTERNATE ENERGY SOURCES IN INDONESIA.
• AUTHOR: TATOM J W ET AL.
• SOURCE: PREPARED BY THE ECON DEV LAB, ENGR EXPT STA, GEORGIA INST OF TECH, FOR AID, OFFICE OF SCI AND TECH, WASHINGTON DC 20555, FEB 1977, 45 PP.
• KEYWORDS: ORGANIC WASTES, PYROLYSIS, INDONESIA.
• DATE: 77
ABSTRACT 1958

**TITLE**: WOOD BURNING STOVES

**AUTHOR**: THOMPSON J. F.

**SOURCE**: ENGR NOTEBOOK, DEPT OF AGR ENGR, UNIV OF CALIF., BERKELEY, CA 94720, DEC 1977, 5 PP.

**KEYWORDS**: ORGANIC WOOD

**NOTES**: FILED. STOVE CONSTRUCTION, TYPES, AND EFFICIENCIES ARE PRESENTED ALONG WITH AVAILABLE PUBLICATIONS.

**DATE**: 771200

ABSTRACT 1959

**TITLE**: AN ASSESSMENT OF ANEROBIC DIGESTION IN US AGRICULTURE

**AUTHOR**: THORNTON T.

**SOURCE**: NTIS, US DEPT OF COMMERCE, 5285 PORT ROYAL RD, SPRINGFIELD, VA 22161, MARCH 1978, 40 PP.

**KEYWORDS**: ORGANIC WASTES, ANAEROBIC FERMENTATION, TECHNOLOGY ASSESSMENT, ECONOMICS

**NOTES**: FILED. THOUGH ANAEROBIC DIGESTION HAS BEEN ADVOCATED AS A SOURCE OF FUEL, FEED, AND FERTILIZER, ITS WIDESPREAD ADOPTION IN AMERICAN AGRICULTURE IS DOUBTFUL. THE COST AND COMPLEXITY OF MOST DIGESTIVE SYSTEMS MAKE THEM DIFFICULT TO INCORPORATE IN AGRICULTURAL OPERATIONS. ALTHOUGH SITE SPECIFIC APPLICATIONS MAY BE FEASIBLE, THESE WILL NOT HAVE A MAJOR IMPACT ON THE AGRICULTURAL SECTOR AS A SOURCE OF ENERGY. THERE IS LITTLE POSSIBILITY OF ANAEROBIC DIGESTION PROVIDING EVEN A SMALL PERCENTAGE OF THE NATIONAL ENERGY REQUIREMENTS.

**DATE**: 780330

ABSTRACT 1960

**TITLE**: FROM BIODUNG TO BIOGAS - HISTORICAL REVIEW OF EUROPEAN EXPERIENCE

**AUTHOR**: TIETJEN C.


**KEYWORDS**: ORGANIC HISTORICAL WASTES, ENERGY SOURCES, CONVERSION, FRANCE, GERMANY, INDIA, UNITED KINGDOM

**NOTES**: FILED.

**DATE**: 790800

ABSTRACT 1961

**TITLE**: ALCOHOL PRODUCTION FROM AGRICULTURAL PRODUCTS - FACTS AND ISSUES

**AUTHOR**: TIERN W.E., ÖKÖS M.A.

**SOURCE**: CES PAPER 29, PURDUE UNIV, WEST LAFAYETTE, IN 47907, Jan 1976, 15 PP.

**KEYWORDS**: ORGANIC ALCOHOL

**NOTES**: FILED. THE INTENTION OF THIS PAPER IS NOT TO TAKE SIDES IN THE CONTROVERSY OF ALCOHOL PRODUCTION NOR TO PROVIDE DEFINITIVE ANSWERS TO ALL THE IMPORTANT QUESTIONS. RATHER THE GOALS ARE TO COMMUNICATE SOME BASIC FACTS, DEFINITIONS, AND CONVERSION RATIOS THAT ARE CENTRAL TO UNDERSTANDING THE ISSUES; AND FURTHER, TO RAISE IMPORTANT QUESTIONS AND IDENTIFY IMPORTANT ISSUES ON WHICH FURTHER RESEARCH IS NEEDED. THIS PAPER MEETS ITS GOALS.

**DATE**: 780310

ABSTRACT 1962

**TITLE**: WOOD AS A SOURCE OF ENERGY

**AUTHOR**: UN-ECONOMIC AND SOCIAL COUNCIL

**SOURCE**: SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976, ECONOMIC COMMISSION FOR AFRICA, UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL, 3 PP.

**KEYWORDS**: ORGANIC AFRICA WOOD

**NOTES**: FILED.

**DATE**: 760301
**ABSTRACT 1963**

- **TITLE**: BIOGAS TECHNOLOGY AND UTILIZATION
- **AUTHOR**: UN-ECONOMIC AND SOCIAL COMMISSION FOR ASIA, AND THE PACIFIC
- **SOURCE**: ESCAP, 18 OCT 1975, 146 PP.
- **KEYWORDS**: ORGANIC, BIOGAS, DESIGN, ECONOMICS, BIBLIOGRAPHY, THAILAND, INDIA, JAPAN, KOREA, PAKISTAN, PHILIPPINES.
- **NOTES**: FILED.
- **DATE**: 751018

**ABSTRACT 1964**

- **TITLE**: ORGANIC MATERIALS AS FERTILIZERS
- **AUTHOR**: UN-FOOD AND AGRICULTURE ORGANIZATION.
- **KEYWORDS**: ORGANIC, FERTILIZER.
- **NOTES**: FILED.
- **DATE**: 741202

**ABSTRACT 1965**

- **TITLE**: WASTE AND ORGANIC MATERIALS AS FERTILIZERS
- **AUTHOR**: UN-FOOD AND AGRICULTURE ORGANIZATION.
- **SOURCE**: UNEP/FAO/ISS.4/11, ROME, ITALY, 16-21 JAN 1977, 5P.
- **KEYWORDS**: ORGANIC, WASTES, FERTILIZER.
- **NOTES**: FILED.
- **DATE**: 770118

**ABSTRACT 1966**

- **TITLE**: LEGAL ASPECTS OF AGRICULTURAL AND AGRO-INDUSTRIAL WASTE MANAGEMENT
- **AUTHOR**: UN-FOOD AND AGRICULTURE ORGANIZATION.
- **SOURCE**: UNEP/FAO/ISS.4/05, ROME, ITALY, 16-21 JAN 1977, 47 PP.
- **KEYWORDS**: ORGANIC, WASTES.
- **NOTES**: FILED.
- **DATE**: 770118

**ABSTRACT 1967**

- **TITLE**: DRAFT FINAL REPORT OF UNEP/FAO SEMINAR ON RESIDUE UTILIZATION - MANAGEMENT OF AGRICULTURAL AND AGRO-INDUSTRIAL WASTES
- **AUTHOR**: UN-FOOD AND AGRICULTURE ORGANIZATION.
- **SOURCE**: FAO, ROME, ITALY, 18-21 JAN 1977, 37 PP.
- **KEYWORDS**: ORGANIC, WASTES.
- **NOTES**: FILED. THE MAJOR OBJECTIVES OF THE SEMINAR WERE TO 1 PROVIDE A SURVEY OF THE MAIN PROBLEMS AS WELL AS THE OCCURRENCE OF WASTES AND RESIDUES ASSOCIATED WITH AGRICULTURE, FISHERIES, FORESTRY AND AGRICULTURAL INDUSTRIES; 2 REVIEW THE AVAILABLE EXPERIENCE AND TECHNOLOGY FOR SOLVING THESE PROBLEMS; 3 DISCUSS ECONOMIC, SOCIAL AND POLITICAL SITUATIONS THAT ARE COMPATIBLE WITH AND CONDUCIVE TO ENVIRONMENTALLY SOUND RESIDUE UTILIZATION; 4 IDENTIFY EXISTING GAPS AND POSSIBLE ACTION PROGRAMS TO FILL SUCH GAPS; 5 TO ASSESS THE RELATIVE IMPORTANCE AND PRIORITIES OF SUCH ACTION PROGRAMS; TAKING INTO ACCOUNT THE PARTICULAR INTERESTS AND REQUIREMENTS OF DEVELOPING COUNTRIES; 6 OUTLINE A LIST OF RECOMMENDATIONS AND SUMMARIES OF THE PRESENTATIONS AND DISCUSSIONS.
- **DATE**: 770118

**ABSTRACT 1968**

- **TITLE**: 50 COW BIO-GAS PRODUCTION UNIT
- **AUTHOR**: UNIVERSITY OF WISCONSIN.
- **SOURCE**: COOPERATIVE EXTENSION SERVICE/UNIV OF WISC, MADISON, WI, JULY 1974, 2 PP.
- **KEYWORDS**: ORGANIC, ANAEROBIC FERMENTATION, OPERATING PROCEDURE.
- **NOTES**: FILED.
- **DATE**: 740700

**ABSTRACT 1969**

- **TITLE**: RECOVERY OF ENERGY FROM FARM SOLID WASTES AND TIMBER PRODUCTION RESIDUES
- **AUTHOR**: UNIVERSITY OF MINNESOTA.
- **KEYWORDS**: ORGANIC, WOOD, WASTES.
- **NOTES**: AID, DOCUMENT ABOUT 1 INCH THICK.
- **DATE**: 751200
ABSTRACT 1970

• TITLE: FUELS FROM BIOMASS PROGRAM.
• AUTHOR: US-DEPARTMENT OF ENERGY.
• SOURCE: DOE/ET-0022/1, US DEPT OF ENERGY, DIV OF SOLAR TECH, WASHINGTON DC 20545; JAN 1978; 98 PP.
• KEYWORDS: ORGANIC.
• NOTES: FILED. PROGRAM SUMMARY.
• DATE: 780100

ABSTRACT 1971

• TITLE: GASOHOL FROM GRAIN - THE ECONOMIC ISSUES.
• AUTHOR: US-DEPARTMENT OF AGRICULTURE.
• SOURCE: ECOS 11: ECON. STATISTICS AND COOPERATIVE SERVICE, USDA, WASHINGTON DC; 19 JAN 1978; 18 PP.
• KEYWORDS: ORGANIC, ALCOHOL, ECONOMIC.
• NOTES: FILED.
• DATE: 780119

ABSTRACT 1972

• TITLE: FUELS FROM BIOMASS PROGRAM.
• AUTHOR: US-DEPARTMENT OF ENERGY.
• SOURCE: US DEPT OF ENERGY, DIV OF SOLAR TECH, WASHINGTON DC 20545; JAN 1978; 98 PP.
• KEYWORDS: ORGANIC, CONVERSION, ALTERNATIVE FUELS.
• NOTES: FILED. THE OVER-ALL OBJECTIVE OF THE FUELS FROM BIOMASS PROGRAM IS TO DEVELOP THE CAPABILITY FOR CONVERTING RENEWABLE BIOMASS RESOURCES INTO CLEAN FUELS, PETROCHEMICAL SUBSTITUTES, AND OTHER ENERGY-INTENSIVE PRODUCTS THAT CAN SUPPLEMENT SIMILAR PRODUCTS MADE FROM CONVENTIONAL FOSSIL FUELS. THE FUELS FROM BIOMASS PROGRAM CONCENTRATES ON PLANT MATERIALS GROWN ON LAND (TERRESTRIAL) AND IN WATER (AQUATIC). THESE MATERIALS INCLUDE FOREST AND CROP RESIDUES, CROPS GROWN ON ENERGY FARMS FOR THEIR ENERGY CONTENT, AND ANIMAL MANURES. THE PROGRAM DOES NOT INCLUDE CONVERSION OF MUNICIPAL SOLID WASTES OR INDUSTRIAL WASTES. THIS PUBLICATION IS A LIST OF CURRENT PROJECTS AND SUMMARIES. WITH TWO MAIN AREAS OF CONCENTRATION AND THEIR COMPONENTS - 1) PRODUCTION AND COLLECTION OF BIOMASS, ARRISIDE PRODUCTION, BISILVICULTURE PRODUCTION, C) AGRICULTURAL PRODUCTION, DIACUTIC PRODUCTION, 2) CONVERSION OF BIOMASS, ANAEROBIC DIGESTION, BIFERMENTATION, CHIOPHOTOLYSIS, D) THERMOCHENICAL CONVERSIONS, EPHTOPHOTOLYSIS.
• DATE: 780100

ABSTRACT 1973

• TITLE: FUELS FROM BIOMASS PROGRAM - PROGRAM AND PROJECT STATUS.
• AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
• SOURCE: ERDA, DIV OF SOLAR ENERGY, WASHINGTON DC; NOV 1976; 41 PP.
• KEYWORDS: ORGANIC.
• NOTES: FILED.
• DATE: 761130

ABSTRACT 1974

• TITLE: BIOCONVERSION.
• AUTHOR: US-HOUSE.
• SOURCE: HEARING BEFORE THE SUBCOMMITTEE ON ENERGY OF THE COMMITTEE ON SCI AND ASTRONOMY, US HOUSE OF REP, 13 JUNE 1974; 425 PP.
• KEYWORDS: ORGANIC, PHOTOSYNTHESIS, ALTERNATIVE FUELS.
• NOTES: FILED. THIS MATERIAL CONTAINS CONTRIBUTIONS FROM SEVERAL AUTHORITIES IN THE FIELD OF BIOMASS. TOPICS COVERED INCLUDE: BIOLOGICAL PROCESS FOR THE CONVERSION OF SOLID ORGANIC MATERIAL TO FUEL GAS, MARKETS AND TECHNOLOGY FOR RECOVERY OF ENERGY FROM SOLID WASTES, MUNICIPALITIES INVOLVED IN CONVERSION OF SOLID WASTE TO ENERGY, A SYSTEM FOR METHANE RECOVERY AND FERTILIZER PRODUCTION FROM GARBAGE AND SEWAGE, BIOCONVERSION OF SOLAR ENERGY FOR USEFUL PURPOSES, SOLAR ENERGY UTILIZATION BY CONVERSION, CONSIDERABLE MATERIAL ON EFFECTIVE UTILIZATION OF SOLAR ENERGY TO PRODUCE CLEAN FUEL, ECONOMICS OF PRODUCTION AND UTILIZATION. A VERY USEFUL REFERENCE.
• DATE: 740613

ABSTRACT 1975

• TITLE: HIGHER PRODUCTIVITY THROUGH ENERGY PLANTATIONS.
• AUTHOR: NAVY, L C W, FRASER, J H, F.T.
• SOURCE: ASAE PAPER 75-7502, 6 PP.
• KEYWORDS: ORGANIC, ENERGY SOURCES, RENEWABLE ENERGY, LAND USE, PRODUCTION.
• NOTES: FILED.
• DATE: 750500
ABSTRACT 1976

• TITLE: THE GAS FARM.
• AUTHOR: WALTERS S.
• SOURCE: MECHANICAL ENGR SEPT 1975 PP 44-45.
• KEYWORDS: ORGANIC, COAL GASIFICATION, ENERGY SOURCES, SNUG WASTES, CONVERSION, AGRICULTURE, ANAEROBIC FERMENTATION.
• NOTES: FILED.
• DATE: 750900

ABSTRACT 1977

• TITLE: FUEL AND ENERGY PRODUCTION BY BIOCONVERSION OF BOTH MUNICIPAL AND AGRICULTURAL WASTE MATERIALS OF THE ARt.
• AUTHOR: WARE S A.
• SOURCE: ENVIR PROTECTION TECH SERIES EPA-2 600/ 2-76-148, AUG 1976 64 PP.
• KEYWORDS: ORGANIC, AGRO-INDUSTRIAL WASTES, CONVERSION.
• NOTES.
• DATE: 760800

ABSTRACT 1978

• TITLE: FUEL AND ENERGY PRODUCTION BY BIOCONVERSION OF WASTE MATERIALS.
• AUTHOR: WARE S A.
• SOURCE: ENVIR PROTECTION TECH SERIES EPA 600/ 2-76-148, 1976 65 PP.
• KEYWORDS: ORGANIC, WASTES, CONVERSION.
• NOTES.
• DATE: 760900

ABSTRACT 1979

• TITLE: BIOMASS AS A LONG RANGE SOURCE OF HYDROCARBONS.
• AUTHOR: WATERMAN W, KLAAS D L.
• KEYWORDS: ORGANIC, WASTES, FOSSIL FUELS, SUPPLY DEMAND.
• NOTES: POSSIBLE LONG-TERM SOURCES OF LIQUID AND GASEOUS HYDROCARBONS AND AGNISHED, US FOSSIL FUEL RESOURCES AND DEMANDS ARE REVIEWED. TECHNOLOGY APPLICABLE TO BIOMASS AND ORGANIC WASTES OFFERS THE POTENTIAL OF SUPPLYING ALL OR MOST CURRENT NON-FUEL NEEDS FOR CARBONACEOUS MATERIALS AT A LARGE PORTION OF SYNTHEtic FUEL REQUIREMENTS IN THE FUTURE.
• DATE: 770125

ABSTRACT 1980

• TITLE: ETHANOL FOR MOTOR FUEL FROM BIOMASS.
• AUTHOR: WATRIN H.
• SOURCE: PRESENTED AT FOREST AND FIELD FUELS SYMPOSIUM, WINNIPEG, MANITOBA, CANADA 11-13 OCT 1977 13 PP.
• KEYWORDS: ORGANIC, WOOD, ETHANOL, ECONOMICS.
• NOTES: THIS REPORT DISCUSSES THE ADVANTAGES OF USING ETHANOL FROM BIOMASS IN CANADA. AS A SOURCE OF BIOMASS THE UNDERUTILIZED WOOD SPECIES IN CANADIAN FORESTS ARE CONSIDERED. THE ECONOMICS OF ETHANOL ARE ALSO DISCUSSED.
• DATE: 771011

ABSTRACT 1981

• TITLE: FERMENTATION OF FEEDLOT WASTE FILTRATE BY FUNGI AND STREPTOMYCETES.
• AUTHOR: WEINER D A, RHODES R A.
• KEYWORDS: ORGANIC, MANURE, ANAEROBIC FERMENTATION.
• NOTES: FILED.
• DATE: 741100

ABSTRACT 1982

• TITLE: GROWTH OF INDIGENOUS ORGANISMS IN AERATED FILTRATE OF FEEDLOT WASTE.
• AUTHOR: WEINER D A, RHODES R A.
• KEYWORDS: ORGANIC, MANURE.
• NOTES: FILED.
• DATE: 740900
ABSTRACT 1983

TITLE: ESCUE AND COASTAL BERMUDAGRASS NUTRIENT RECOVERY FROM SWINE ANAEROBIC LAGOON EFFLUENTS.
AUTHOR: WESTERMAN P V. ET AL.
KEYWORDS: ORGANIC, SWINE, WASTES, AGRICULTURE, IRRIGATION.
NOTES: FILED.
DATE: 780000

ABSTRACT 1984

TITLE: METHANOL AS A GASOLINE EXTENDER — A CRITIQUE.
AUTHOR: VIGG E E.
KEYWORDS: ORGANIC, METHANOL, COAL, ENGINE, AUTOMOBILE, ECONOMICS.
NOTES: FILED.
DATE: 741129

ABSTRACT 1985

TITLE: PILOT STUDIES ON THE BIOCONVERSION OF CELLULOSE AND PRODUCTION OF ETHANOL.
AUTHOR: VILKE C R.
SOURCE: LAWRENCE BERKELEY LABORATORY, UNIV OF CALIF, BERKELEY CA, JUNE 30, 1977, 36 PP.
KEYWORDS: ORGANIC, ETHANOL, TECHNOLOGY ASSESSMENT, ECONOMICS.
NOTES: FILED. THIS REPORT SUMMARIZES BRIEFLY THE PROGRESS OVER THE PERIOD OF JANUARY 31 TO JUNE 30, 1977, ON THOSE PORTIONS OF THE PROGRAM PRIMARILY UNDER SOLAR ENERGY DIVISION SPONSORSHIP. THESE INCLUDE: AN ANALYSIS AND EVALUATION OF POTENTIAL RAW MATERIALS AND ECONOMIC STUDIES AND PILOT PLANT PROCESS DEVELOPMENT AND DESIGN STUDIES.
DATE: 770630

ABSTRACT 1986

TITLE: GENERATION OF LOW-BTU FUEL GAS FROM AGRICULTURAL RESIDUES EXPERIMENTS WITH A LABORATORY-SCALE GAS PRODUCER.
AUTHOR: WILLIAMS R O, MORSFIELD B.
KEYWORDS: ORGANIC, PRODUCER GAS GENERATION, TECHNOLOGY ASSESSMENT.
NOTES: FILED.
DATE: 770000

ABSTRACT 1987

TITLE: UTILIZATION OF BIOGAS FOR FARM PRODUCTION ENERGY.
AUTHOR: WILLIAMS D W, ET AL.
SOURCE: INST FOR MAN AND ENVIR, STATE UNIV OF NEW YORK, PLATTSBURG, NY 14863, 1975, 26 PP.
KEYWORDS: ORGANIC, BIOGAS, TECHNOLOGY ASSESSMENT.
NOTES: FILED. THE DIRECT INPUTS ON BEEF AND DAIRY FARMS WERE DETERMINED AND COMPARED WITH THE POTENTIAL BIOGAS PRODUCTION FROM THE ANAEROBIC DIGESTION OF THE ANIMAL MANURES. THE EQUIPMENT REQUIRED FOR UTILIZING THE BIOGAS AS REPLACEMENT FOR CONVENTIONAL ENERGY FORMS WAS REVIEWED. AN ASSESSMENT OF TECHNICAL AND ECONOMIC FEASIBILITY WAS MADE.
DATE: 750000

ABSTRACT 1988

TITLE: GENERATION OF LOW-BTU FUEL GAS FROM AGRICULTURAL RESIDUES EXPERIMENTS WITH A LABORATORY-SCALE GAS PRODUCER.
AUTHOR: WILLIAMS R O, MORSFIELD B.
SOURCE: DEPT OF AGR ENGR, UNIV OF CALIF, DAVIS, CA 95616, APRIL 1977, 26 PP.
KEYWORDS: ORGANIC, GAS PRODUCER, DESIGN.
NOTES: FILED. TWO SUCCESSIVE LABORATORY-SCALE DOWNDRAFT GAS PRODUCERS WERE CONSTRUCTED AT THE UNIV OF CALIF, DAVIS. APPARATUS AND EXPERIMENTAL PROCEDURES ARE DESCRIBED. THE GAS PRODUCER WAS TESTED WITH DIFFERENT GRATE ARRANGEMENTS, VARIOUS FIREBOX CONFIGURATIONS, AND DIFFERENT TYPES OF FUELS. THE GRATE/FIREBOX CONFIGURATION IS OF EXTREME IMPORTANCE IN PROVIDING FOR THE CONTINUOUS SUPPLY OF GOOD QUALITY GAS. CONVERSION EFFICIENCIES IN EXCESS OF 70 PERCENT CAN BE READILY ACHIEVED AND 80 PERCENT IS POSSIBLE WITH IDEALLY SIZED MATERIALS.
DATE: 770400
ABSTRACT 1989

•TITLE: MEETING ON FARM ENERGY DEMAND THROUGH BIOMASS CONVERSION
•AUTHOR: WILLIAMS, D. W., RAN美好生活 R. J., LARSON, D. L.
•SOURCE: DEPT. OF SOIL, WATER AND ENGR., UNIV. OF ARIZONA, TUCSON, AZ.
•DATE: 85721, 23-25 JAN 1979, 14 PP.
•KEYWORDS: ORGANIC, AGRICULTURE, ENERGY CROPS.
•NOTES: PRESENTED AT THE 3RD NATIONAL CONF. AND EXHIBITION ON TECH FOR ENERGY CONSERVATION.

ABSTRACT 1990

•TITLE: MEASUREMENT OF EXTERNAL LEARNING BENEFITS FROM METHANE GENERATION ON COMMERCIAL POULTRY FARMS.
•AUTHOR: WILLIS C. E., CHRISTENSEN, R. L.
•SOURCE: MASS AGR. EXPT. STA., UNIV. OF MASS., AMHERST, 17 JUNE 1976, 21 PP.
•KEYWORDS: ORGANIC, METHANE, ECONOMICS.
•NOTES: FILED.
•DATE: 760617

ABSTRACT 1991

•TITLE: SCOPE FOR STRAW.
•AUTHOR: WILTON B.
•SOURCE: SPAN, 18(11)/32-34, 1975.
•KEYWORDS: ORGANIC, USA, UNITED KINGDOM, ACCOUNTING.
•NOTES: FILED.
•DATE: 750925

ABSTRACT 1992

•TITLE: WOOD BURNING.
•AUTHOR: WINKELMANN, H.
•SOURCE: FAO FORESTRY OCCASIONAL PAPER NO 1, ROME, DEC 1958, 64 PP.
•KEYWORDS: ORGANIC, WOOD, ENERGY SOURCES, SWITZERLAND, FRANCE, SWEDEN.
•NOTES: FILED.
•DATE: 580900

ABSTRACT 1993

•TITLE: FUEL GAS PRODUCTION FROM SOLID WASTE.
•KEYWORDS: ORGANIC, MUNICIPAL WASTE, PYROLYSIS, Biogas.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 1994

•TITLE: DRY ANAEROBIC DIGESTION.
•AUTHOR: WONG, CHUNG C. M.
•KEYWORDS: ORGANIC, ANAEROBIC FERMENTATION, TECHNOLOGY ASSESSMENT, MANURE, MUNICIPAL WASTE.
•NOTES: FILED.
•DATE: 750000

ABSTRACT 1995

•TITLE: STEAM GASIFICATION OF BIOMASS - PROGRESS REPORT.
•AUTHOR: WRIGHT-MALTA INC.
•SOURCE: WRIGHT-MALTA INC., BALLSTON SPA, NY, 11 MARCH 1977, 7 PP.
•KEYWORDS: ORGANIC, GASIFICATION.
•NOTES: NTIS: COO/4124-1.
•DATE: 770311
ABSTRACT 1996

**TITLE:** STEAM GASIFICATION OF BIOMASS
**AUTHOR:** WRIGHT-MALTA INC.
**SOURCE:** WRIGHT-MALTA INC., BALLSTON SPA, NY, 20 JULY 1977, 6 PP.
**KEYWORDS:** ORGANIC, GASIFICATION.
**NOTES:** NTIS, C00/4124-3.
**DATE:** 770720

ABSTRACT 1997

**TITLE:** A STUDY OF THE NUTRITIVE VALUE OF OREGON GRASS STRAWS
**AUTHOR:** YOUNGBERG H, VOUGH L.
**SOURCE:** AGRONOMIC CROP SCI REPORT, RESEARCH EXT, OREGON STATE UNIV., JULY 1976, 12 PP.
**KEYWORDS:** ORGANIC, FOOD ENERGY.
**NOTES:** FILED.
**DATE:** 760730

PETROLEUM 1998 -- 2031

ABSTRACT 1998

**TITLE:** IMPORTATION OF PETROLEUM.
**AUTHOR:** ASELSON P H.
**SOURCE:** SCIENCE, 180(4091)/15 JUNE 1973.
**KEYWORDS:** PETROLEUM.
**NOTES:** FILED.
**DATE:** 730615

ABSTRACT 1999

**TITLE:** THE WORLD PETROLEUM MARKET.
**AUTHOR:** ADELMAN M A.
**SOURCE:** BALTIMORE, MD/JOHN HOPKINS UNIV PRESS, 1972.
**KEYWORDS:** PETROLEUM, HISTORICAL, MARKETING, ECONOMICS.
**NOTES:** FILED.
**DATE:** 720600

ABSTRACT 2000

**TITLE:** THE ENERGY GAP.
**AUTHOR:** AMERICAN PETROLEUM INSTITUTE.
**SOURCE:** AMER PETROLEUM INST, 1801 K ST N W, WASHINGTON D.C., 14 PP.
**KEYWORDS:** PETROLEUM, SUPPLY DEMAND.
**NOTES:** FILED.
**DATE:**

ABSTRACT 2001

**TITLE:** FACTS ABOUT OIL.
**AUTHOR:** AMERICAN PETROLEUM INSTITUTE.
**SOURCE:** AMER PETROLEUM INST, 1801 K ST N W, WASHINGTON D.C., 46 PP.
**KEYWORDS:** PETROLEUM, PRODUCTION, TRANSPORTATION, MARKETING.
**NOTES:** FILED.
**DATE:**

ABSTRACT 2002

**TITLE:** MIDEST OIL STOPS FLOWING - AND US FEELS FIRST PINCH.
**AUTHOR:** ANON.
**KEYWORDS:** PETROLEUM, USA, MIDDLE EAST, SOCIAL IMPLICATIONS.
**NOTES:** FILED.
**DATE:** 731111
ABSTRACT 2003

TITLE: CASE HISTORIES OF OIL AND GAS FIELDS IN ASIA AND THE FAR EAST.
AUTHOR: ANON.
SOURCE: U N MINERAL RESOURCES DEV SERIES NO 37, 1969, 90 PP.
KEYWORDS: PETROLEUM.
NOTES: NAS.
DATE: 690000

ABSTRACT 2004

TITLE: OIL AND THE POOR COUNTRIES.
AUTHOR: ANON.
SOURCE: ENVIRONMENT, 16(21)/10-14, MARCH 1974.
KEYWORDS: PETROLEUM, DEVELOPING COUNTRIES, INDIA.
NOTES: FILED.
DATE: 740300

ABSTRACT 2005

TITLE: WHAT ABOUT OIL SHALE.
AUTHOR: BATTELLE MEMORIAL INSTITUTE.
SOURCE: ENERGY PERSPECTIVES 11, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, JUNE 1974, 6 PP.
KEYWORDS: PETROLEUM.
NOTES: FILED.
DATE: 740500

ABSTRACT 2006

TITLE: TAR SAND.
AUTHOR: BATTELLE MEMORIAL INSTITUTE.
SOURCE: ENERGY PERSPECTIVES 19, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, OCT 1974, 6 PP.
KEYWORDS: PETROLEUM.
NOTES: FILED.
DATE: 741200

ABSTRACT 2007

TITLE: UNDERSTANDING THE OIL SITUATION.
AUTHOR: BATTELLE MEMORIAL INSTITUTE.
SOURCE: ENERGY PERSPECTIVES 5, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, DEC 1973, 6 PP.
KEYWORDS: PETROLEUM.
NOTES: FILED.
DATE: 731200

ABSTRACT 2008

TITLE: RELUCTANT RESERVOIRS - THE OIL-RECOVERY PROBLEM.
AUTHOR: BATTELLE MEMORIAL INSTITUTE.
SOURCE: ENERGY PERSPECTIVES 20-21, BATTELLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, MARCH-APRIL 1975, 6 PP.
KEYWORDS: PETROLEUM.
NOTES: FILED.
DATE: 750300

ABSTRACT 2009

AUTHOR: BRITISH PETROLEUM CO LTD.
SOURCE: RAD INGLIS, PUBLIC AFFAIRS AND INFO DEPT, BRITISH PETROLEUM CO LTD, BRITANNIC HOUSE, MOOR LANE, LONDON EC2Y 9BU, 1976, 32 PP.
KEYWORDS: PETROLEUM, INDUSTRY, ENERGY CONSUMPTION, STATISTICS.
NOTES: FILED.
DATE: 760000

ABSTRACT 2010

TITLE: THE STORY OF OIL.
AUTHOR: BURTON R J.
SOURCE: AMER PETROLEUM INST, 1271 AVE OF THE AMERICAS, N Y.
KEYWORDS: PETROLEUM, TRANSPORTATION.
NOTES: FILED.
DATE: 
ABSTRACT 2011

**Title**: Oil Shale and the Energy Crisis.
**Authors**: Dinneen J. & Cook G. L.
**Source**: Technology Review, Jan 1974, pp 26-33.
**Keywords**: Petroleum, Conversion.
**Notes**: Different techniques for the mining and processing of oil shale are discussed along with the potential of oil shale to fuel conversion.
**Date**: 740100

ABSTRACT 2012

**Title**: World Oil Production.
**Authors**: Flower A. & Re.
**Source**: Scientific American, 238(5)/42-49, March 1978.
**Keywords**: Petroleum, World Wide, International.
**Notes**: Filed.
**Date**: 780500

ABSTRACT 2013

**Title**: Shale Oil - How Soon.
**Authors**: Gannon R. & Re.
**Keywords**: Petroleum.
**Notes**: Filed.
**Date**: 740900

ABSTRACT 2014

**Title**: Coping with the Energy Shortage.
**Authors**: Granville M. F.
**Source**: Address to the Rotary Club of Atlanta, Atlanta, Georgia, 26 Nov 1973.
**Keywords**: Petroleum.
**Notes**: Filed.
**Date**: 731126

ABSTRACT 2015

**Title**: Energy Policy Statement.
**Authors**: Gulf Oil Corp.
**Source**: Gulf Oil Corp, Gulf Bldg, Pittsburgh, PA, 19 PP.
**Keywords**: Petroleum, Policy.
**Notes**: Filed.
**Date**: 

ABSTRACT 2016

**Authors**: McLean J. G. & Davis V. B.
**Source**: Presented to National Petroleum Council, 11 Dec 1972.
**Keywords**: Petroleum, Supply Demand, Policy.
**Notes**: Filed.
**Date**: 721211

ABSTRACT 2017

**Title**: Oil Shale - A Huge Resource of Low-Grade Fuel.
**Authors**: Metz V. D.
**Source**: Science, 184/1271-1273, 21 June 1974.
**Keywords**: Petroleum, Production, Environment.
**Notes**: Filed.
**Date**: 740621
ABSTRACT 2018

*TITLE* IMPACT OF OIL TECHNOLOGY ON IRAN - 1901-1951.
*AUTHOR* MOGHARI M.
*SOURCE* COMMITTEE ON TECH AND SOCIAL CHANGE IN FOREIGN CULTURES, IOWA STATE
UNIV ANES, FEB 1975, 169 PP.
*KEYWORDS* PETROLEUM, IRAN.
*NOTES* FILED.
*DATE* 750200

ABSTRACT 2019

*TITLE* WORLD ENERGY OUTLOOK AND OPEC PRICES.
*AUTHOR* OSHEA T.
*SOURCE* ENERGY REPORT FROM CHASE, ENERGY ECON DIV OF THE CHASE MANHATTAN BANK NA, NEW YORK, NY 10013, JAN 1977, 4 PP.
*KEYWORDS* PETROLEUM, MIDDLE EAST, POLICY.
*NOTES* FILED.
*DATE* 770100

ABSTRACT 2020

*TITLE* LUBRICATION - A TECHNICAL PUBLICATION DEVOTED TO THE SELECTION AND USE OF LUBRICANTS, PETROLEUM ENERGY.
*AUTHOR* PETERSON F S.
*SOURCE* TEXACO INC, 135 E 42ND ST, N Y, OCT-DEC 1975, VOL 61, PP 57-72.
*KEYWORDS* PETROLEUM, LUBRICATION, CONSERVATION.
*NOTES* FILED.
*DATE* 751000

ABSTRACT 2021

*TITLE* ENHANCED RECOVERY.
*AUTHOR* SHELL OIL CO.
*SOURCE* SHELL REPORTS, SHELL OIL CO, PO BOX 2463, HOUSTON, TX, JULY 1975, 6 PP.
*KEYWORDS* PETROLEUM.
*NOTES* FILED.
*DATE* 750700

ABSTRACT 2022

*TITLE* OFFSHORE OIL.
*AUTHOR* SHELL OIL CO.
*SOURCE* SHELL REPORTS, SHELL OIL CO, PO BOX 2463, HOUSTON, TX, JULY 1975, 7 PP.
*KEYWORDS* PETROLEUM, ECONOMICS.
*NOTES* FILED.
*DATE* 750700

ABSTRACT 2023

*TITLE* CURRENT ENERGY OUTLOOK.
*AUTHOR* SHELL OIL CO.
*SOURCE* SHELL REPORTS, SHELL OIL CO, PO BOX 2463, HOUSTON, TX, JULY 1975, 4 PP.
*KEYWORDS* PETROLEUM.
*NOTES* FILED.
*DATE* 750700

ABSTRACT 2024

*TITLE* INTERNATIONAL PETROLEUM ANNUAL 1974.
*AUTHOR* SOUTHARD L G.
*SOURCE* DIV OF PETROLEUM AND NATURAL GAS, BUREAU OF MINES, WASHINGTON, D C 20241, MARCH 1976, 36 PP.
*KEYWORDS* PETROLEUM, INTERNATIONAL, HISTORICAL, STATISTICS.
*NOTES* FILED.
*DATE* 760300

ABSTRACT 2025

*TITLE* ENERGY AND THE NEED FOR TAX INCENTIVES.
*AUTHOR* TEXACO INC.
*SOURCE* PUBLIC RELATIONS DIV, TEXACO INC, 135 E 42ND ST, NEW YORK, NY, 15 PP.
*KEYWORDS* PETROLEUM, ECONOMICS.
*NOTES* FILED.
*DATE*
ABSTRACT 2026

*TITLE: TEXACO INC - ANNUAL REPORT 1972*
*AUTHOR: TEXACO INC*
*SOURCE: TEXACO INC, 135 E 42ND ST, NEW YORK, NY, 1972, 32 PP*
*KEYWORDS: PETROLEUM, WORLD WIDE*
*NOTES, FILED*
*DATE: 720000*

ABSTRACT 2027

*TITLE: DEVELOPMENT OF PETROLEUM REFINERIES IN AFRICA*
*AUTHOR: UN-ECONOMIC AND SOCIAL COUNCIL*
*SOURCE: UNITED NATIONS ECON AND SOCIAL COUNCIL, ECON COMMISSION FOR AFRICA*
*SECOND AFRICAN MEETING ON ENERGY, ACCRA, GHANA, 1-12 MARCH 1976, 31 PP*
*KEYWORDS: PETROLEUM, AFRICA*
*NOTES, FILLED*
*DATE: 760301*

ABSTRACT 2028

*TITLE: PROPOSED STANDBY GASOLINE RATIONING PLAN*
*AUTHOR: US-DEPARTMENT OF ENERGY*
*SOURCE: US DEPT OF ENERGY, ECON REGULATORY ADMINISTRATION, OFFICE OF REGULATIONS AND EMERGENCY PLANNING, WASHINGTON DC 20461, JUNE 1976, 103 PP*
*KEYWORDS: PETROLEUM, POLICY*
*NOTES, FILED*
*DATE: 760600*

ABSTRACT 2029

*TITLE: OIL SHALE*
*AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION*
*SOURCE: USERDA, OFFICE OF PUBLIC AFFAIRS, WASHINGTON D C, 1975, 8 PP*
*KEYWORDS: PETROLEUM*
*NOTES, FILED*
*DATE: 750000*

ABSTRACT 2030

*TITLE: RECOMMENDATION ON THE OIL CRISIS AND DEVELOPMENT COOPERATION*
*AUTHOR: VAN OOSTYEVEN J H*
*SOURCE: NATIONAL ADV COUNCIL FOR ASST TO DEV CO, PLEIN 23, THE HAGUE, NETHERLANDS, 45 PP*
*KEYWORDS: PETROLEUM*
*NOTES*
*DATE*

ABSTRACT 2031

*TITLE: ENERGY AND NATIONAL SECURITY*
*AUTHOR: ZARD F G*
*SOURCE: FEDERAL ENERGY NEWS, FEDERAL ENERGY ADMINISTRATION, WASHINGTON D C, 19 NOV 1975, 6 PP*
*KEYWORDS: PETROLEUM, GENERAL*
*NOTES, FILED*
*DATE: 751111*

POLICY 2032 — 2061
Abstract 2033

*Author*: American Association for the Advancement of Science.
*Keywords*: Policy, USA.
*Notes*: Filed.
*Date*: 770300

Abstract 2034

*Author*: Anon.
*Source*: Conference sponsored by the ENGR Foundation and the ASAE at ASILIMOR Conference Grounds, PACIFIC GROVE, CALIF., 6-11 FEB 1977, 26 pp.
*Keywords*: Policy, Conservation, Alternatives, Agriculture.
*Notes*: Filed.
*Date*: 770211

Abstract 2035

*Title*: Japan's New Energy Policy.
*Author*: Anon.
*Keywords*: Policy, Japan, Economics, Conservation, Supply Demand.
*Notes*: Filed.
*Date*: 760300

Abstract 2036

*Title*: My Case for National Planning.
*Author*: Bradshaw T.
*Source*: FORTUNE, FEB 1977, PP 100-104.
*Keywords*: Policy, Fossil Fuels.
*Notes*: Filed.
*Date*: 770200

Abstract 2037

*Author*: Commoner B.
*Keywords*: Policy, Conservation, Economics, Environment.
*Date*: 770200

Abstract 2038

*Title*: Agricultural Policy Implications of Changing Energy Prices and Supplies.
*Author*: Connor L J.
*Keywords*: Policy.
*Notes*: Filed.
*Date*: 760616

Abstract 2039

*Title*: The Politics of Energy.
*Author*: Coughlin S H.
*Source*: Printed from National Voter, Summer 1977.
*Keywords*: Policy.
*Notes*: Filed. The energy situation is discussed in accordance with President Carter's energy proposals.
*Date*: 770200

Abstract 2040

*Title*: Energy Resource Decisions.
*Author*: Deering O C.
*Keywords*: Policy, USA.
*Notes*: Filed.
*Date*: 790210


**ABSTRACT 2041**

*TITLE:* US ENERGY POLICY - WHICH DIRECTION.
*AUTHOR:* POWLER J H, KRYBER K C, CAREY M N.
*SOURCE:* US DEPT OF ENERGY, TECHNICAL INFO OFFICE, PQ BOX 62, OAK RIDGE, TN 37830, JAN 1978, 89 PP.
*KEYWORDS:* POLICY.

**ABSTRACT 2042**

*TITLE:* ENERGY POLICY AND RESEARCH IN AGRICULTURE.
*AUTHOR:* GAYETT E E.
*SOURCE:* US DEPT OF AG, ECON RESEARCH SERVICE, 1977, 11 PP, UNPUBLISHED.
*KEYWORDS:* POLICY, AGRICULTURE.

**ABSTRACT 2043**

*TITLE:* USING LAND TO SAVE ENERGY.
*AUTHOR:* HARWOOD C C.
*SOURCE:* CAMBRIDGE, MA/BALLINGER PUBLISHING CO, 1977, 333PP.
*KEYWORDS:* POLICY, BUILDINGS, CONSERVATION, EFFICIENCY, LEGISLATION.

**ABSTRACT 2044**

*TITLE:* THE ENERGY (NON) CRISIS.
*AUTHOR:* MILL R C.
*SOURCE:* ASAE PAPER, PRESENTED AT UNIV OF MAINE, ORONO, 19-21 AUG 1973, 6 PP.
*KEYWORDS:* POLICY, SOCIAL IMPLICATIONS.

**ABSTRACT 2045**

*TITLE:* THE ENERGY CRISIS AND US FOREIGN POLICY.
*AUTHOR:* HUNTER R E.
*SOURCE:* DEV PAPER 14, OVERSEAS DEV COUNCIL, AUG 1973, 60 PP.
*KEYWORDS:* POLICY, INTERNATIONAL, SUPPLY DEMAND, SOVIET UNION.

**ABSTRACT 2046**

*TITLE:* ENERGY OPTIONS - EXAMINING SOURCES AND DEFINING GOVERNMENTS ROLE.
*AUTHOR:* LEAGUE OF WOMEN VOTERS.
*SOURCE:* PUB 626, LEAGUE OF WOMEN VOTERS, 1750 M ST NW, WASHINGTON DC 20036, 1977, 54 PP.
*KEYWORDS:* POLICY, ENERGY SOURCES.

**ABSTRACT 2047**

*TITLE:* THE ENERGY SYNDROME
*AUTHOR:* LINDBERG L N, ED.
*SOURCE:* LEXINGTON, MA/JOHN C MEATH AND CO, 1977, 382PP.
*KEYWORDS:* POLICY, UNITED KINGDOM, CANADA, FRANCE, HUNGARY, INDIA, SWEDEN.

**KEYWORDS:** POLICY, UNITED KINGDOM, CANADA, FRANCE, HUNGARY, INDIA, SWEDEN.

**NOTES:** FILED.

**NOTES:** ENERGY POLICIES OF NUMEROUS UNIQUE NATIONS ARE PRESENTED AND COMPARED. ENERGY POLICY IMPLICATIONS AND CONSTRAINTS ARE ALSO INCLUDED.

**DATE:** 780000
ABSTRACT 2048

**Title:** 1978 Forum on the Future of Virginia Agriculture - Papers on Energy Policy

**Author:** MARSHALL, J.P. ET AL.

**Source:** VA 24061, MAY 1978, 90 PP.

**Keywords:** Policy, Agriculture, Fossil Fuels, Economics, Virginia

**Notes:** Filed.

**Date:** 780500

ABSTRACT 2049

**Title:** Toward a National Energy Policy

**Author:** McCracken M.

**Source:** MECHANICAL ENGR, 97(5)/16-19, MAY 1975.

**Keywords:** Policy, Industry, USA

**Notes:** Filed.

**Date:** 750500

ABSTRACT 2050

**Title:** The Real Challenge - Increasing Energy Supply

**Author:** MOBIL OIL Corp.

**Source:** MOBIL OIL Corp., 150 E 42ND ST, NEW YORK, NY, 1975, 12 PP.

**Keywords:** Policy, Social Implications

**Notes:** Filed. An Oil Company's View on What the US Energy Policy Should Be. Current Energy Policy is Criticized.

**Date:** 751119

ABSTRACT 2051

**Title:** Nixon's Blueprint for Meeting the Energy Crisis

**Author:** NIXON R.

**Source:** US NEWS AND WORLD REPORT, 19 NOV 1973, PP 116-118.

**Keywords:** Policy, USA

**Notes:** Filed.

**Date:** 731119

ABSTRACT 2052

**Title:** 1977 Energy Policy Illustrations

**Author:** Rask M.

**Source:** ESS-558, DEPT OF AGR Econ and Rural Sociology, OHIO STATE UNIV, COLUMBUS, OH 43210, MARCH 1977, 57 PP.

**Keywords:** Policy

**Notes:** Filed. Script for Slide Tape.

**Date:** 770300

ABSTRACT 2053

**Title:** Energy Use Policies in Agriculture - Federal and State

**Author:** Robel R.

**Source:** PRESENTED AT THE ENGINEERING FOUNDATIONS CONFERENCE ON ENERGY'S ROLE IN FOOD PRODUCTION, PACIFIC GROVE, CALIF, 9 FEB 1977, 17 PP.

**Keywords:** Policy, Petroleum, Natural Gas, Coal, Nuclear.

**Notes:** Filed.

**Date:** 770209
ABSTRACT 2056

• TITLE: THE PRESIDENTS ENERGY PROPOSAL - IS IT ENOUGH.
• AUTHOR: TYNER W E, DOEING O C.
• SOURCE: CES PAPER NO 26, AGR ECON DEPT, PURDUE UNIV, WEST LAFAYETTE, IN, MAY 1977, 16 PP.
• KEYWORDS: POLICY.
• NOTES: FILED. SUMMARIZED ARE THE MAJOR COMPONENTS OF PRESIDENT CARTERS ENERGY PROGRAM AND THE LIKELY IMPACTS OF THE SET OF PROPOSALS.
• DATE: 770500

ABSTRACT 2057

• TITLE: CTAB RECOMMENDATIONS FOR A NATIONAL ENERGY PROGRAM.
• AUTHOR: US-DEPARTMENT OF COMMERCE.
• SOURCE: US DEPT OF COMMERCE, COMMERCE TECH ADVISORY BOARD, MARCH 1975, 73 PP.
• KEYWORDS: POLICY, SUPPLY DEMAND, ENERGY SOURCES, USA.
• NOTES: FILED.
• DATE: 760300

ABSTRACT 2058

• TITLE: ENERGY POLICY IN PERSPECTIVE.
• AUTHOR: VOGELT W A.
• SOURCE: PROFESSOR OF MINERAL ECON, PENN STATE UNIV, UNIV PARK, PA 16802, 1976, 15 PP.
• KEYWORDS: POLICY, HISTORICAL, USA, FOSSIL FUELS.
• NOTES: FILED.
• DATE: 761019

ABSTRACT 2059

• TITLE: REFLECTIONS ON THE ENERGY WAR.
• AUTHOR: WEINBERG A M.
• KEYWORDS: POLICY, SOLAR, NUCLEAR.
• NOTES: FILED.
• DATE: 780300

ABSTRACT 2060

• TITLE: ENERGY AND U S FOREIGN POLICY.
• AUTHOR: YAGER J A, STEINBERG E B.
• SOURCE: CAMBRIDGE, MASS/BALLINGER PUB CO, 1975, 473 PP.
• KEYWORDS: POLICY, INTERNATIONAL, USA, PETROLEUM.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 2061

• TITLE: ACCEPTABILITY OF ENERGY POLICIES TO MID-MICHIGAN FAMILIES.
• AUTHOR: ZUICHES J J.
• SOURCE: RESEARCH REPORT 298, DEV AND PUBLIC AFFAIRS, AGR EXPT STA, MICH STATE UNIV, EAST LANSING, MARCH 1976, 7 PP.
• KEYWORDS: POLICY, MICHIGAN, SOCIAL IMPLICATIONS.
• NOTES: FILED.
• DATE: 760300

PUMPS 2062 -- 2071

ABSTRACT 2062

• TITLE: COMPARING PUMPING ENERGY COSTS.
• AUTHOR: ABERNATHY G M, HONN C M.
• SOURCE: WESTERN REGIONAL AGR ENGR SERVICE, WINTER 1975, P 19.
• KEYWORDS: PUMPS, ECONOMICS.
• NOTES: FILED.
• DATE: 751000
ABSTRACT 2063

*TITLE: THE BELLows PUMP.*
*AUTHOR: ANON.*
*SOURCE: APPROPRIATE TECH, 213/8, NOV 1975.*
*KEYWORDS: PUMPS, DEVELOPING COUNTRIES.*
*NOTES: FILED.*
*DATE: 751100*

ABSTRACT 2064

*TITLE: THE MUMPHREY PUMP.*
*AUTHOR: DUNN P D.*
*SOURCE: APPROPRIATE TECH, 211/20-21, MAY 1975.*
*KEYWORDS: PUMPS, DEVELOPING COUNTRIES.*
*NOTES: FILED.*
*DATE: 750500*

ABSTRACT 2065

*TITLE: HYDRAULIC RAM.*
*AUTHOR: FAIRBANK W C.*
*SOURCE: IDEA SHEET 56, AGR ENGR DEPT, CORNELL UNIV, ITHACA, NY 14853, FEB 1979, 2 PP.*
*KEYWORDS: PUMPS.*
*NOTES: FILED.*
*DATE: 790200*

ABSTRACT 2066

*TITLE: FIELD RESEARCH AND TESTING OF A WATER HAND PUMP FOR USE IN DEVELOPING COUNTRIES.*
*AUTHOR: FANNON R D.*
*SOURCE: Battelle Columbus Lab, 905 King Ave, Columbus, Ohio, 31 Jan 1975, 21 PP.*
*KEYWORDS: PUMPS, INTERNATIONAL, DESIGN, DEVELOPING COUNTRIES.*
*NOTES: FILED.*
*DATE: 750131*

ABSTRACT 2067

*TITLE: CONSIDERATIONS IN USING SOLAR ENERGY TO DRIVE IRRIGATION PUMPS.*
*AUTHOR: LARSON D L, SANDS C D.*
*KEYWORDS: PUMPS, SOLAR, IRRIGATION.*
*NOTES: FILED.*
*DATE: 771024*

ABSTRACT 2068

*TITLE: FEASIBILITY OF USING SOLAR ENERGY TO DRIVE IRRIGATION PUMPS.*
*AUTHOR: LARSON D L, SANDS C D, TOWLE C JR.*
*SOURCE: ASAE PAPER 76-2531, 1976, 18 PP.*
*KEYWORDS: PUMPS, SOLAR, IRRIGATION, ECONOMICS.*
*NOTES: FILED.*
*DATE: 760800*

ABSTRACT 2069

*TITLE: SOLAR WATER PUMP FOR LIFT IRRIGATION.*
*AUTHOR: RAO D P, RAO R S.*
*SOURCE: DEPT OF CHEM ENGR, ISIRLA INST OF TECH AND SCI, PULANI (RAJASTHAN), INDIA 332031, 1976, 10 PP.*
*KEYWORDS: PUMPS, SOLAR, IRRIGATION, DESIGN, INDIA.*
*NOTES: FILED.*
*DATE: 760800*
ABSTRACT 2070

*TITLE* THE DESIGN AND CONSTRUCTION OF LOW-COST WIND POWERED WATER PUMPING SYSTEMS.

*AUTHOR* SHERMAN P R.

*SOURCE* ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC, EXPERT WORKING GROUP ON THE USE OF SOLAR AND WIND ENERGY, BANGKOK, 2-9 MARCH 1976. 36 PP.

*KEYWORDS* PUMPS, WIND, DESIGN, TECHNOLOGY ASSESSMENT, ASIA.

*NOTES* FILED.

*DATE* 760509

ABSTRACT 2071

*TITLE* A HANDBOOK ON THE HYDRAULIC RAM FOR PUMPING WATER.

*AUTHOR* WATT S B.

*SOURCE* INTERMEDIATE TECH PUB LTD 9 KING ST, LONDON WC2E 8HN, ENGLAND,

*DATE* 750500

ABSTRACT 2072

*TITLE* FUEL REQUIRED FOR FIELD OPERATIONS.

*AUTHOR* AYRES G E.

*SOURCE* A 1079, COOPERATIVE EXTENSION SERVICE, IOWA STATE UNIV, AMES, MARCH 1974. 2 PP.

*KEYWORDS* REQUIREMENTS.

*NOTES* FILED.

*DATE* 740300

ABSTRACT 2073

*TITLE* HOW MUCH FUEL DO YOU USE ON THE FARM.

*AUTHOR* BERGE O I.

*SOURCE* FACT SHEET, COOPERATIVE EXTENSION PROGRAM, UNIV OF WISC, MADISON,

*DATE* 740500

ABSTRACT 2074

*TITLE* ENERGY REQUIREMENTS FOR FRUIT PRODUCTION IN CALIFORNIA.

*AUTHOR* CERVINKA V.


*KEYWORDS* REQUIREMENTS, FRUITS AND VEGETABLES, PRODUCTION.

*NOTES* FILED.

*DATE* 771024

ABSTRACT 2075

*TITLE* ENERGY REQUIREMENTS FOR TILLAGE ON COASTAL PLAINS SOILS.

*AUTHOR* COLLINS N E, KEMBLE L J, WILLIAMS T M, HANUN M E.

*SOURCE* ASAE PAPER 78-1517, 1978. 52 PP.

*KEYWORDS* REQUIREMENTS, CORN, SOYBEANS, TILLAGE.

*NOTES* FILED. THIS PAPER COMPARES TILLAGE SYSTEMS FOR CORN AND SOYBEANS, AND SPECIFIC FOR MINIMIZING DRAFT HAVE BEEN DETERMINED.

*DATE* 780000

REQUIREMENTS 2072 — 2093
ABSTRACT 2076

• TITLE: AVERAGE AMOUNTS OF FUEL CONSUMED FOR VARIOUS FARMING OPERATIONS.
• AUTHOR: CROWELL, R. P.
• SOURCE: EXTENSION INFO SHEET 104, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, NOV 1973, 2 PP.
• KEYWORDS: REQUIREMENTS.
• NOTES: FILED.
• DATE: 731100

ABSTRACT 2077

• TITLE: ESTIMATES OF FUEL CONSUMPTION FOR FARMING AND RANCHING OPERATIONS UNDER TYPICAL NORTH DAKOTA CONDITIONS.
• AUTHOR: PRUSIN, R. P.; PRAMSNER, W. J.
• SOURCE: BULLETIN 495, AGR ENGR DEPT, AGR EXPT STA, NORTH DAKOTA STATE UNIV, FARGO, 1972, 10 PP.
• KEYWORDS: REQUIREMENTS, NORTH DAKOTA.
• NOTES: FILED.
• DATE: 720000

ABSTRACT 2078

• TITLE: AN ANALYSIS OF ENERGY AND MATERIAL REQUIREMENTS AND PRODUCTION COSTS OF ALTERNATIVE LIVESTOCK PRODUCTION SYSTEMS.
• AUTHOR: WALTERS, J. B.; CONDON, L. J.
• KEYWORDS: REQUIREMENTS, ANIMAL PRODUCTION.
• NOTES: FILED.
• DATE: 771029

ABSTRACT 2079

• TITLE: ENERGY CONSUMPTION FOR SEVERAL CORN PRODUCTION METHODS.
• AUTHOR: HULL, D. G.
• SOURCE: A E 1883, COOPERATIVE EXTENSION SERVICE, IOWA STATE UNIV, AMES, DEC 1974, 4 PP.
• KEYWORDS: REQUIREMENTS.
• NOTES: FILED.
• DATE: 741200

ABSTRACT 2080

• TITLE: ESTIMATING FARM FUEL REQUIREMENTS FOR CROP PRODUCTION AND LIVESTOCK OPERATIONS.
• AUTHOR: HULL, D. G.; HIRNING, M. J.
• SOURCE: PM-587, COOPERATIVE EXTENSION SERVICE, IOWA STATE UNIV, AMES, FEB 1974, 4 PP.
• KEYWORDS: REQUIREMENTS, AGRICULTURE.
• NOTES: FILED.
• DATE: 740220

ABSTRACT 2081

• TITLE: TRACTOR INSTRUMENTATION FOR MEASURING FUEL AND ENERGY REQUIREMENTS.
• AUTHOR: KOERNER, R. G.; BASHFORD, L. L.; LANE, D. C.
• KEYWORDS: REQUIREMENTS, TRACTOR, FUEL CONSUMPTION.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 2082

• TITLE: ENERGY REQUIREMENTS OF KANSAS - NEBRASKA PRODUCTION AGRICULTURE.
• AUTHOR: KRAMER, J. A.; SCHROCK, R. D.; SHELTON, D. P.
• SOURCE: ASAE PAPER 78-1518, 1978, 31 PP.
• KEYWORDS: REQUIREMENTS, FUEL CONSUMPTION, TILLAGE, KANSAS, NEBRASKA.
• NOTES: FILED.
• THIS PAPER SUMMARIZES BY OPERATION, CROP, AND LOCATION RECORDS FROM OVER 200,000 HA OF OPERATIONS CONSUMING ABOUT 2,500,000 L OF FUEL. THIS SUMMARY CAN BE USED TO PREDICT FUEL USAGE OF FIELD OPERATIONS AND AS A GUIDE TO DETERMINE THE CONSERVATION POTENTIAL OF CULTURAL PRACTICE CHANGES.
• DATE: 780630
ABSTRACT 2083

•TITLE• ENERGY REQUIREMENTS FOR IRRIGATED CROP PRODUCTION.
•AUTHOR• LARSON D L, FANGMEIER D D.
•SOURCE• IN THE BOOK PROC OF THE INTERNATIONAL CONF ON ENERGY USE MANAGEMENT VOL 1, FAZZOLARE R A, SMITH C B, EDITORS, ELMSFORD, NY 10526/PERGAMON PRESS INC. 24-28 OCT 1977; PP 743-750.
•KEYWORDS• REQUIREMENTS, IRRIGATION.
•DATE• 771024

ABSTRACT 2084

•TITLE• EVALUATING ENERGY REQUIREMENTS OF MACHINES IN THE FIELD.
•AUTHOR• LUTH H J, FLOYD V G, HEISE R P.
•SOURCE• ASAE PAPER 78-1586, 1978; 16 PP.
•KEYWORDS• REQUIREMENTS, TRACTOR, FIELD.
•DATE• 780000

ABSTRACT 2085

•TITLE• EVALUATING ENERGY REQUIREMENTS OF MACHINES IN THE FIELD.
•AUTHOR• LUTH H J, FLOYD V G, HEISE R P.
•SOURCE• ASAE PAPER 78-1586, 1978; 16 PP.
•KEYWORDS• REQUIREMENTS.
•NOTES• FILED. ENERGY TESTS OF MOLDBOARD PLOWS AND FORAGE HARVESTERS ILLUSTRATE THE USE OF A MOBILE TELEMETRY-COMPUTER SYSTEM.
•DATE• 780000

ABSTRACT 2086

•TITLE• ESTIMATED FUEL REQUIREMENTS FOR FARM PRODUCTION IN ILLINOIS, 1972-1974.
•AUTHOR• SCHWART R B, STEIMENS J C, MILL L D.
•SOURCE• A E 4347, AGER ONC DEPT, UNIV OF ILLINOIS, URBANA-CHAMPAIGN, 11 MARCH 1974; 4 PP.
•KEYWORDS• REQUIREMENTS.
•DATE• 740311

ABSTRACT 2087

•TITLE• ENERGY CONSERVATION BY RECREPPING PLASTIC MULCH COVERED TOMATO BEDS.
•AUTHOR• SHAW L N, FLUCK R C, BRYAN M M.
•SOURCE• ASAE PAPER 78-1599, 1978; 10 PP.
•KEYWORDS• REQUIREMENTS, FRUIT AND VEGETABLE, ENERGY ACCOUNTING, ECONOMICS.
•NOTES• FILED. AN ENERGY ANALYSIS COMPARING THE PRODUCTION OF SINGLE TOMATO AND SQUASH CROPS BY CONVENTIONAL METHODS TO DOUBLE CROPPING OF BEDS WITH SQUASH FOLLOWING TOMATOES.
•DATE• 780000

ABSTRACT 2088

•TITLE• FUEL USE ESTIMATES FOR FLORIDA AGRICULTURAL PRODUCTION.
•AUTHOR• SMERDON E T, ET AL.
•SOURCE• AGR-GROWTH IN AN INDUSTRIAL AGE, INST OF FOOD AND AGR SCI, UNIV OF FLORIDA, GAINESVILLE, 47 PP, UNDATED.
•KEYWORDS• REQUIREMENTS, FLORIDA, AGRICULTURE, STATISTICS.
•NOTES• FILED.
•DATE•

ABSTRACT 2089

•TITLE• ENERGY REQUIREMENTS OF SELECTED DRYLAND WHEAT CROPPING SYSTEMS.
•AUTHOR• SMITH J A, FORNSTROM K J.
•SOURCE• ASAE PAPER 78-1516, 1978; 13 PP.
•KEYWORDS• REQUIREMENTS, TILLAGE, FIELD.
•NOTES• FILED. ENERGY REQUIREMENTS FOR NO-TILL AND CONVENTIONAL TILLAGE DRYLAND WHEAT CROPPING METHODS WERE COMPARED.
•DATE• 780000

ABSTRACT 2090

•TITLE• ENERGY TO KEEP AGRICULTURE GOING.
•AUTHOR• US-DEPARTMENT OF AGRICULTURE.
•SOURCE• ENERGY LETTER, USDA, OFFICE OF COMMUNICATION, DEC 1973; 7 PP.
•KEYWORDS• REQUIREMENTS, STATISTICS, USA, CANADA, JAPAN.
•NOTES• FILED.
•DATE• 731200
ABSTRACT 2091

*TITLE: ENERGY REQUIREMENTS FOR CORN PRODUCTION USING VARIOUS TILLAGE PRACTICES AND UNDER-ROW RIPPING.
*AUTHOR: VAUGHAN D M, SMITH E S, BRANN D E.
*SOURCE: ASAE PAPER 78-1519, 1978; 8 PP.
*KEYWORDS: REQUIREMENTS, TILLAGE, CORN, ENERGY ACCOUNTING, VIRGINIA.
*NOTES: FILED. AN ANALYSIS IS PRESENTED OF THE ENERGY REQUIREMENTS OF VARIOUS PRIMARY TILLAGE PRACTICES WITH AND WITHOUT UNDER-ROW RIPPING FOR CORN PRODUCTION IN VIRGINIA. INPUTS INCLUDE FUEL FOR FIELD MACHINERY OPERATIONS AND ENERGY REQUIREMENTS FOR THE MANUFACTURE OF AGRICULTURAL CHEMICALS AND MACHINERY AND REPAIR PARTS.
*DATE: 780000

ABSTRACT 2092

*TITLE: FUEL REQUIREMENTS FOR SELECTED FARMING OPERATIONS.
*AUTHOR: WHITE R G.
*SOURCE: ACIS 285, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, DEC 1973; 5 PP.
*KEYWORDS: REQUIREMENTS.
*NOTES: FILED.
*DATE: 731200

ABSTRACT 2093

*TITLE: SIMULATION OF CROP RESPONSE TO ENERGY INPUTS.
*AUTHOR: WILLIAMS D W, CHANCELLOR V J.
*KEYWORDS: REQUIREMENTS, MODELS, FOSSIL FUELS, CALIFORNIA.
*NOTES: FILED.
*DATE: 750000

SOCIAL IMPLICATIONS 2094 — 2105

ABSTRACT 2094

*TITLE: TECHNOLOGY AS A DETERRENT TO DEHUMANIZATION.
*AUTHOR: DAVIS R.
*KEYWORDS: SOCIAL IMPLICATIONS.
*NOTES: FILED.
*DATE: 740830

ABSTRACT 2095

*TITLE: EMPLOYMENT IMPACTS OF ENERGY POLICY.
*AUTHOR: EDENS T C, KLONSKY K.
*SOURCE: PRESENTED AT THE MICHIGAN HOUSE-SENATE ENERGY COMMITTEE FUTURE ENERGY TECH TRANSFERS IN MICH- A LEGISLATIVE SYMPOSIUM, 8-9 JUNE 1977, 27 PP.
*KEYWORDS: SOCIAL IMPLICATIONS, LABOR, ECONOMICS, SUPPLY DEMAND, MICHIGAN.
*NOTES: FILED.
*DATE: 770608

ABSTRACT 2096

*TITLE: JOBS AND ENERGY.
*AUTHOR: GROSSMAN R, DANEKER G.
*SOURCE: ENWIR FOR FULL EMPLOYMENT, SPRING 1977, 21 PP.
*KEYWORDS: SOCIAL IMPLICATIONS, LABOR, POLICY, EFFICIENCY.
*NOTES: FILED.
*DATE: 770600
ABSTRACT 2097

TITLE: THE SOCIOLOGICAL IMPACT OF AN ENERGY-SHORT SOCIETY.

AUTHOR: MACKERES.

SOURCE: PRESENTED AT ENERGY AND LIFE SYMPOSIUM, MICH STATE UNIV., 1 MARCH 1975, 12 PP.

KEYWORDS: SOCIAL IMPLICATIONS.

NOTE: FILED.

DATE: 75010

ABSTRACT 2098

TITLE: ENERGY, ECOLOGY AND ECONOMICS.

AUTHOR: KOENIG A.

SOURCE: PRESENTED AT ENERGY AND LIFE SYMPOSIUM, MICH STATE UNIV., 1 MARCH 1975, 12 PP.

KEYWORDS: SOCIAL IMPLICATIONS, ECONOMICS.

NOTE: FILED.

DATE: 74030

ABSTRACT 2099

TITLE: SOME ECONOMIC AND SOCIAL IMPACTS OF THE ENERGY DILEMMA ON THE RURAL COMMUNITY AND AGRICULTURAL PRODUCTION.

AUTHOR: MCKENZIE B.

SOURCE: AGRI ENGR DEPT., PURDUE UNIV., WEST LAFAYETTE, IN, 31 JAN 1974, 4 PP.

KEYWORDS: SOCIAL IMPPLICATIONS, ECONOMICS, AGRICULTURE, PRODUCTION.

NOTE: FILED.

DATE: 74010

ABSTRACT 2100

TITLE: ENERGY AND THE POOR.

AUTHOR: MORRISON D.

SOURCE: DEPT OF SOCIOLOGY, MICH STATE UNIV., EAST LANSING, MICH 48824, APRIL 1977, 3 PP.

KEYWORDS: SOCIAL IMPPLICATIONS, CONSERVATION, HOME, ECONOMICS.

NOTE: FILED.

DATE: 77030

ABSTRACT 2101

TITLE: GROWTH, ENVIRONMENT, EQUITY AND SCARCITY.

AUTHOR: MORRISON D.


KEYWORDS: SOCIAL IMPPLICATIONS, ENVIRONMENT, ECONOMICS.

NOTE: FILED.

DATE: 76090

ABSTRACT 2102

TITLE: EQUITY IMPACTS OF SOME MAJOR ENERGY ALTERNATIVES.

AUTHOR: MORRISON D.

SOURCE: DEPT OF SOCIOLOGY, MICH STATE UNIV., EAST LANSING, MI 48824, MAY 1977, 26 PP.

KEYWORDS: SOCIAL IMPPLICATIONS, ALTERNATIVES, CONSERVATION, NUCLEAR, COAL.

NOTE: FILED. PREPARED FOR PUBLICATION IN THE CONAES RISK/IMPACT PANEL REPORT.

DATE: 77050

ABSTRACT 2103

TITLE: ENERGY AND SOCIAL CHANGE.

AUTHOR: OTOOLE J.

SOURCE: CAMBRIDGE, MA/MIT PRESS, 1978, 184 PP.

KEYWORDS: SOCIAL IMPLICATIONS.

NOTE: FILED.

DATE: 78000
ABSTRACT 2105

*TITLE: THE SOCIAL IMPLICATIONS OF THE ENERGY CRISIS.
*AUTHOR: TAYLOR J F A.
*SOURCE: PHI KAPPA PHI JOURNAL, 15(11)/32-34.
*DATE: WINTER 1975.
*KEYWORDS: SOCIAL IMPLICATIONS.
*NOTE: FILED.

ABSTRACT 2106

*TITLE: A SOLAR SYSTEM FOR SWINE HOUSE HEATING, COOLING.
*AUTHOR: AGRICULTURAL ENGINEERING.
*SOURCE: AGR ENGR, 59(3)/24-25, MARCH 1978.
*KEYWORDS: SOLAR, ANIMAL, COOLING, SWINE, BUILDINGS.
*NOTE: FILED.

ABSTRACT 2107

*TITLE: SOLAR ENERGY FOR POULTRY AND LIVESTOCK PRODUCTION.
*AUTHOR: ALABAMA POULTRY AND EGG ASSOCIATION.
*SOURCE: PROC OF SYMPOSIUM ON USE OF SOLAR ENERGY FOR POULTRY AND LIVESTOCK PRODUCTION, ERDA, ASAE, USDA, ALABAMA POULTRY AND EGG ASSOC, SOUTHEASTERN POULTRY AND EGG ASSOC, AUBURN, AL. 9-10 NOV 1976, 220 PP.
*KEYWORDS: SOLAR, POULTRY, LIVESTOCK, BUILDINGS.

ABSTRACT 2108

*TITLE: PROCEEDINGS OF THE SOLAR HEATING AND COOLING FOR BUILDINGS WORKSHOP.
*AUTHOR: ALLEN R.
*KEYWORDS: SOLAR, HEAT, CONSERVATION, COOLING.

ABSTRACT 2109

*TITLE: SOLAR ENERGY IN DEVELOPING COUNTRIES - PERSPECTIVES AND PROSPECTS.
*AUTHOR: ALTMEN M. ET AL.
*KEYWORDS: SOLAR, HEAT, DRYING.

ABSTRACT 2110

*TITLE: THE INTEGRATION OF SOLAR STILLs INTO MINIMUM COST DWELLINGS FOR ARID AREAS.
*AUTHOR: ALWARD R, NCHESON A, LAWAND Y A.
*SOURCE: BRACE RESEARCH INST, 11 PP, UNDATED.
*KEYWORDS: SOLAR, DISTILLATION.

SOLAR 2106 — 2432
ABSTRACT 2110

*TITLE: SOLAR STEAM COOKER.
*AUTHOR: ALWARD R.
*KEYWORDS: SOLAR.
*DATE: 721000

ABSTRACT 2111

*AUTHOR: AMERICAN SECTION OF THE INTERNATIONAL SOLAR ENERGY SOCIETY.
*SOURCE: AMER SECTION OF THE INTERNATIONAL SOLAR ENERGY SOC, PUBL OFFICE, MCDONELL HALL, UNIV OF DELAWARE, NEWARK, DE 19711, AUG 1978, 1057 PP.
*KEYWORDS: SOLAR, AGRICULTURE, ITALY, DRYING.
*DATE: 780800

ABSTRACT 2112

*TITLE: THE SOLAR HOME BOOK - HEATING, COOLING AND DESIGNING WITH THE SUN.
*AUTHOR: ANDERSON B & RIORDAN M.
*SOURCE: HARRISVILLE, NH 03450/CHESHIRE BOOKS, 1976, 297PP.
*KEYWORDS: SOLAR, HOME, DESIGN.
*DATE: 760800

ABSTRACT 2113

*TITLE: USES OF THE SUN IN THE SERVICE OF MAN.
*AUTHOR: ANDROSKY A.
*SOURCE: AEROSPACE REPORT NO ATR-74(9970)-1, THE AEROSPACE CORP, SYSTEMS EVALUATION OFFICE, EL SEGUNDO, CALIF, OCT 1973, 37 PP.
*KEYWORDS: SOLAR, DEVELOPING COUNTRIES.
*DATE: 731000

ABSTRACT 2114

*TITLE: POWER TO THE PEOPLE FROM LEAVES OF GRASS.
*AUTHOR: ANON.
*SOURCE: NEW SCIENTIST, 3 AUG 1972, P 228.
*KEYWORDS: SOLAR.
*DATE: 720803

ABSTRACT 2115

*TITLE: SOLAR EQUIPMENT MANUFACTURERS.
*AUTHOR: ANON.
*SOURCE: SOLAR ENERGY INDUSTRIES, DIRECTORY AND BUYER'S GUIDE, 1001 CONNECTICUT AVE, WASHINGTON D C.
*KEYWORDS: SOLAR, ADVERTISEMENT.
*DATE: 760800

ABSTRACT 2116

*TITLE: SOLAR POWER FOR YOUR HOUSE - HOW PRACTICAL NOW.
*AUTHOR: ANON.
*KEYWORDS: SOLAR, HOME.
*DATE: 760300
ABSTRACT 2118

**TITLE**: ENERGY FROM THE SUN.

**AUTHOR**: ANON.

**SOURCE**: ENERGY PERSPECTIVES 12, BATTLE MEMORIAL INST, 505 KING AVE, COLUMBUS, OH, JULY 1974, 6 PP.

**KEYWORDS**: SOLAR, STORAGE, HEAT, COOLING.

**NOTES**: FILED.

**DATE**: 740700

ABSTRACT 2119

**TITLE**: SOLAR CELLS.

**AUTHOR**: ANON.

**SOURCE**: RTC LA RADIOTECHNIQUE - COMPELEC, 130 AVENUE LEDRU-ROLLIN, 75540 PARIS CEDEX 11, FRANCE, 1975, 18PP.

**KEYWORDS**: SOLAR, PHOTOVOLTAIC, FRANCE.

**NOTES**: FILED.

**DATE**: 750000

ABSTRACT 2120

**TITLE**: NON-CONVENTIONAL AND NON-POLLUTING SOURCES OF ENERGY.

**AUTHOR**: ANON.

**SOURCE**: ITEN 4(C) OF THE PROVISIONAL AGENDA, ADVISORY COMMITTEE ON THE APPLICATION OF SCI AND TECH TO DEVELOPMENT, TWENTY-FIRST SESSION, GENEVA, 17-28 NOV 1975, 86 PP.

**KEYWORDS**: SOLAR, WIND, HEAT, COOLING, PHOTOVOLTAIC, WATER POWER, ELECTRICAL, DEVELOPING COUNTRIES.

**NOTES**: FILED.

**DATE**: 751117

ABSTRACT 2121

**TITLE**: USE OF SOLAR ENERGY FOR HEATING PURPOSES - SOLAR COOKING.

**AUTHOR**: ANON.


**KEYWORDS**: SOLAR, HEAT.

**NOTES**: FILED.

**DATE**: 610800

ABSTRACT 2122

**TITLE**: SOLAR POND SHOWS PROMISE IN ENERGY CONSERVATION.

**AUTHOR**: ANON.

**SOURCE**: NATIONAL HOG FARMER, OCT 1975, P 83.

**KEYWORDS**: SOLAR, HEAT, STORAGE.

**NOTES**: FILED.

**DATE**: 751000

ABSTRACT 2123

**TITLE**: SOLAR POWER COMES TO THE COUNTRY.

**AUTHOR**: ANON.

**SOURCE**: THE FURROW, JULY-AUG 1975, PP 16-17.

**KEYWORDS**: SOLAR, DRYING.

**NOTES**: FILED.

**DATE**: 750700

ABSTRACT 2124

**TITLE**: HOW SOLAR HEAT CAN COOL YOUR HOME.

**AUTHOR**: ANON.


**KEYWORDS**: SOLAR, AIR CONDITIONING, HEAT.

**NOTES**: FILED.

**DATE**: 750900

ABSTRACT 2125

**TITLE**: SOLAR AND GEOTHERMAL ENERGY - NEW COMPETITION FOR THE ATOM.

**AUTHOR**: ANON.


**KEYWORDS**: SOLAR, GEOTHERMAL.

**NOTES**: FILED.

**DATE**: 741129

ABSTRACT 2126

**TITLE**: COCINA SOLAR - MANUAL DE CONSTRUCCION.

**AUTHOR**: ANON.

**SOURCE**: YITA, 3706 RHODE ISLAND AVE, MT RAINER, MARYLAND, 18 PP, UNDATED.

**KEYWORDS**: SOLAR, MORE.

**NOTES**: FILED, IN SPANISH.

**DATE**
ABSTRACT 2127

*TITLE: APPROPRIATE TECHNOLOGIES FOR SEMIARID AREAS - WIND AND SOLAR ENERGY FOR WATER SUPPLY.

*AUTHOR: ANON.

*SOURCE: CONFERENCE REPORT GERMAN FOUNDATION FOR INTERNATIONAL DEVELOPMENT, SEMINAR CENTRE FOR ECONOMIC AND SOCIAL DEVELOPMENT, WEST BERLIN, 20 SEPT. 1975, 334 PP.

*KEYWORDS: SOLAR, WIND, PUMPS, ELECTRICAL, DESIGN, DEVELOPING COUNTRIES.

*DATE: 750920

ABSTRACT 2128

*TITLE: ENERGIE SOLAIRE - POSSIBILITES UTILISATION DANS LES PAYS DU SAHEL.

*AUTHOR: ANON.

*SOURCE: ETUDES DOCUMENTS 16, MINISTÈRE DE LA COOPERATION, DIRECTION DES PROGRAMMES, SOUS-DIRECTION DES ÉCONOMIQUES ET DE LA PLANNIFICATION, JUIN 1975, 45 PP.

*KEYWORDS: SOLAR, PUMPS, ANIMAL DRAFT, DIESEL, WIND, AFRICA.

*DATE: 750630

ABSTRACT 2129

*TITLE: A GUIDE TO FEDERAL PROGRAMS OF POSSIBLE ASSISTANCE TO THE SOLAR ENERGY COMMUNITY.

*AUTHOR: ANON.

*SOURCE: SCIENCE POLICY RESEARCH DIV, CONGRESSIONAL RESEARCH SERVICE, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1977, 529 PP.

*KEYWORDS: SOLAR, GENERAL, AGRICULTURE, MARKETING, HOME, DEVELOPMENT, POLICY.

*DATE: 770630

ABSTRACT 2130

*TITLE: SOLAR CROP DRYING CONFERENCE.

*AUTHOR: ANON.

*SOURCE: PROCEEDINGS OF THE SOLAR CROP DRYING CONFERENCE, USDA, ASA, ERDA, DEPT OF BIOLOGICAL AND AGRIC. ENG, RALEIGH, NC, 30 JUNE 1977, 145 PP.

*KEYWORDS: SOLAR, DRYING.

*DATE: 770630

ABSTRACT 2131

*TITLE: SOLAR ENERGY AND ELECTRIC UTILITIES - SHOULD THEY BE INTERFACED.

*AUTHOR: ASBURY J G, MUELLER R O.


*KEYWORDS: SOLAR, ELECTRICAL, ECONOMICS.

*DATE: 770204

ABSTRACT 2132

*TITLE: PADRE SOL AND CHEMICAL FUEL PRODUCTION.

*AUTHOR: AXTELL R C.


*KEYWORDS: SOLAR, CHEMICALS, ORGANIC.

*DATE: 731000

ABSTRACT 2133

*TITLE: PUTTING THE SUN TO WORK.

*AUTHOR: BACHER K.

*SOURCE: CONSERVATION SECTION, ARIZONA FUEL AND ENERGY OFFICE, 1624 W ADAMS, PHOENIX, 1974, 27PP.

*KEYWORDS: SOLAR, MEAT, WIND, PHOTOVOLTAIC.

*DATE: 740000
**Abstract 2134**

**Title:** Preservation and Commercialization of Milk by Means of Adapted Techniques and Use of Solar Energy

**Author:** Bachmann M, Leuenberger K.

**Source:** Proc of the First International Congress on Energy and Food, Boston, 9-13 Aug 1976, p 133.

**Keywords:** Solar, Dairy.

**Date:** 760809

**Abstract 2135**

**Title:** A Feasibility Study of Solar Heating in Iran

**Author:** Bahaddri M.

**Source:** SDL ErgTo 15/2. Pergamon Press, 1976.

**Keywords:** Solar, Iran.

**Date:** 760501

**Abstract 2136**

**Title:** Solar Domestic Water Heater

**Author:** Baird C D.

**Source:** EC-44, Inst of Food and Agr Sci, Univ of Florida, Gainesville FL 32611, 1977.

**Keywords:** Solar, Heat.

**Date:** 770201

**Abstract 2137**

**Title:** Solar Drying of Commercially Produced Large Round Hay Bales

**Author:** Baker J L, Shove G C.

**Source:** ASAE Paper 76-3066, 1976, 14 pp.

**Keywords:** Solar, Drying, Design.

**Notes:** FILED. A solar hay drying facility began operation on an Illinois farm in the summer of 1977. The solar hay dryer was designed to dry 60 large round bales in two days. Construction details of the hay building are discussed and typical results for drying hay are presented. Drying criteria and design parameters are presented.

**Date:** 780601

**Abstract 2138**

**Title:** Solar Energy Conversion by Water Photodissociation

**Author:** Balzani V, Mozzi L, Manfrin M F, Bolletta F, Gleria M.

**Source:** Science, 197/630-638, 12 Aug 1977.

**Keywords:** Solar, Conversion, Chemicals, Heat.

**Date:** 750912

**Abstract 2139**

**Title:** Home Mortgage Lending and Solar Energy

**Author:** Barrett D, Epstein P, Har C M.


**Keywords:** Solar, Economics.

**Notes:** FILED. Summary of the major findings of the regional and urban planning implementation is presented in a study to assess the likely responses of financial institutions to requests for mortgages on solar heated homes.

**Date:** 770290

**Abstract 2140**

**Title:** Increasing Crop Production Through More Controlled Photosynthesis

**Author:** Bassham J A.

**Source:** Science, 197/630-638, 12 Aug 1977.

**Keywords:** Solar, Photosynthesis, Developing Countries, Agriculture.

**Notes:** FILED.

**Date:** 770812
ABSTRACT 2141

TITLE: MANUAL ON SOLAR DISTILLATION OF SALINE WATER.
AUTHOR: BATTELLE MEMORIAL INSTITUTE.
SOURCE: REPORT 546, BATTELLE MEMORIAL INST, 505 KING AVE.
COLUMBUS, OH; APRIL 1978; 263 PP.
KEYWORDS: SOLAR, DISTILLATION.
DATE: 780440.

ABSTRACT 2142

TITLE: DEVELOPMENT OF A SOLAR PUMP FOR LIFT IRRIGATION PURPOSES.
AUTHOR: BAUM V A, BABAEL A G.
KEYWORDS: SOLAR, IRRIGATION, PUMPS, SOVIET UNION.
DATE: 760900.

ABSTRACT 2143

TITLE: LOW TEMPERATURE GRAIN DRYING WITH SUPPLEMENTAL SOLAR HEAT FROM AN ADJACENT METAL BUILDING.
AUTHOR: BAUMAN B S, FINNER R F, STOVE G C.
SOURCE: ASAE PAPER 75-3514; 12 PP.
KEYWORDS: SOLAR, DRYING, HEAT.
DATE: 750000.

ABSTRACT 2144

TITLE: SOLAR RADIATION AVAILABILITY ON SURFACES IN THE UNITED STATES AS AFFECTED BY SEASON, ORIENTATION, LATITUDE, ALTITUDE AND CLOUDINESS.
AUTHOR: BECKER C F, BOYD J S.
KEYWORDS: SOLAR, RADIATION.
DATE: 770000.

ABSTRACT 2145

TITLE: SOLAR HEATING DESIGN - BY THE F-CHART METHOD.
AUTHOR: BECKMAN W A, KLEIN S A, DUFFIE J A.
SOURCE: NEW YORK, NY/JOHN WILEY AND SONS, INC, 1977; 200 PP.
KEYWORDS: SOLAR, DESIGN, INSULATION.
DATE: 770000.

ABSTRACT 2146

AUTHOR: BERRY R E, LUND D D, DUCLON F H.
SOURCE: USDA, SCI AND EDUCATION ADMINISTRATION, 12 MAY 1978; 15 PP.
KEYWORDS: SOLAR, FOOD PROCESSING.
DATE: 780512.

ABSTRACT 2147

TITLE: A SOLAR ASSISTED HEAT EXCHANGER FOR LIVESTOCK SHELTERS.
AUTHOR: BESANT R W, SCHOFENAV G J, DUMONT R S.
SOURCE: PRESENTED AT THE 4TH ANNUAL MEETING OF THE SOLAR ENERGY SOC OF CANADA, UNIV OF WESTERN ONTARIO, LONDON, ONTARIO, CANADA; 20-24 AUG 1978; 5 PP.
KEYWORDS: SOLAR, ANIMAL PRODUCTION, DESIGN.
DATE: 780820.
ABSTRACT 2148

• TITLE: DIRECT SOLAR ENERGY CONVERSION FOR TERRESTRIAL USE.
• AUTHOR: BOER K W.
• KEYWORDS: SOLAR.
• NOTES: NAS.
• DATE: 740100

ABSTRACT 2149

• TITLE: PROCEEDINGS OF THE 1978 ANNUAL MEETING OF THE INTERNATIONAL SOLAR ENERGY SOCIETY.
• AUTHOR: BOER K W, FRANTA G E, ED.
• SOURCE: AMER SECTION OF THE INTERNATIONAL SOLAR ENERGY SOC, MCDOWELL MALL, UNIV OF DELAWARE, NEWARK, DE 19711, 28-31 AUG 1978, 768 PP.
• KEYWORDS: SOLAR, WIND, ECONOMICS.
• NOTES: FILED.
• DATE: 780828

ABSTRACT 2150

• TITLE: RENEWABLE ALTERNATIVES - 1978 CONFERENCE PROCEEDINGS VOL 1.
• AUTHOR: BOLTON J R.
• KEYWORDS: SOLAR, TECHNOLOGY ASSESSMENT, ALTERNATIVES, AGRICULTURE, PHOTOVOLTAIC, WIND, ECONOMICS, POLICY.
• NOTES: FILED.
• DATE: 780826

ABSTRACT 2151

• TITLE: HOW TO BUILD A SOLAR WATER HEATER.
• AUTHOR: BRACE RESEARCH INSTITUTE.
• KEYWORDS: SOLAR.
• DATE: 720500

ABSTRACT 2152

• TITLE: HOW TO MAKE A SOLAR STILL (PLASTIC COVERED).
• AUTHOR: BRACE RESEARCH INSTITUTE.
• SOURCE: DO-IT-YOURSELF LEAFLET 1, BRACE RESEARCH INST, MACDONALD COLLEGE OF MCGILL UNIV, QUEBEC, CANADA, JAN 1965.
• KEYWORDS: SOLAR.
• DATE: 650100

ABSTRACT 2153

• TITLE: A SURVEY OF SOLAR AGRICULTURAL DRYERS.
• AUTHOR: BRACE RESEARCH INSTITUTE.
• SOURCE: TECH REPORT T99, BRACE RESEARCH INST, MACDONALD COLLEGE OF MCGILL UNIV, QUEBEC, CANADA, DEC 1975, 202 PP.
• KEYWORDS: SOLAR, AGRICULTURE, DRYING.
• NOTES: FILED.
• DATE: 751200

ABSTRACT 2154

• TITLE: HOW TO HEAT YOUR SWIMMING POOL USING SOLAR ENERGY.
• AUTHOR: BRACE RESEARCH INSTITUTE.
• SOURCE: DO-IT-YOURSELF LEAFLET 5, BRACE RESEARCH INST, MACDONALD COLLEGE OF MCGILL UNIV, QUEBEC, CANADA, FEB 1973, 4 PP.
• KEYWORDS: SOLAR, HEAT.
• NOTES: FILED.
• DATE: 730200
ABSTRACT 2155

TITLE: SOLAR ENERGY.
AUTHOR: BRANLEY F M.
SOURCE: NEW YORK/T Y CROWELL CO. 1975, 117 PP.
KEYWORDS: SOLAR.
NOTES: FILED.
DATE: 75000.

ABSTRACT 2156

TITLE: SELLING SOLAR ENERGY AS A CASH CROP.
AUTHOR: BRANTLEY L W.
SOURCE: AER ENGR 59(3)/1216, MARCH 1978.
KEYWORDS: SOLAR, ECONOMICS, TECHNOLOGY ASSESSMENT, AGRICULTURE.
NOTES: FILED.
DATE: 760300.

ABSTRACT 2157

TITLE: SOLAR HEATING FOR HOMES.
AUTHOR: BREVIK T J; BUELOH F M; DUFFIE J A.
SOURCE: J 3765, UNIV OF WISC AGR BULLETIN BUILDING 1535 OBSERVATORY DR.
MADISON, WI 53706, JUNE 1976, 4PP.
KEYWORDS: SOLAR, HOME, EFFICIENCY.
NOTES: FILED.
DATE: 760500.

ABSTRACT 2158

TITLE: SOLAR ENERGY.
AUTHOR: BRINKWORTH B J.
KEYWORDS: SOLAR, INDUSTRY, CONVERSION, HEAT.
NOTES: FILED.
DATE: 740821.

ABSTRACT 2159

TITLE: UTILIZATION OF SOLAR ENERGY IN BROILER PRODUCTION.
AUTHOR: BRINSFIELD R B; FELTON K E.
SOURCE: ASAE PAPER 77-4535, 1977, 44 PP.
KEYWORDS: SOLAR, POULTRY, ANIMAL PRODUCTION.
NOTES: FILED.
DATE: 770800.

ABSTRACT 2160

TITLE: SOLAR POWER - THE PHOTOCHMICAL ALTERNATIVE.
AUTHOR: BRODA E.
KEYWORDS: SOLAR, PHOTOCHEMICAL.
NOTES: FILED.
DATE: 760300.

ABSTRACT 2161

TITLE: INSTRUMENTS FOR MEASURING SOLAR RADIATION.
AUTHOR: BRODIE H W.
SOURCE: THE HAWAIIAN PLANTERS' RECORD. 57(2)/159-197, MARCH 1976.
KEYWORDS: SOLAR, RADIATION.
NOTES: PERIOD MENTIONED 1928-1962.
DATE.

ABSTRACT 2162

TITLE: THE OREGON SUNBOOK - A SOLAR PERSPECTIVE.
AUTHOR: BROWN H W.
SOURCE: OREGON DEPT OF ENERGY. 568 COTTAGE ST NE, SALEM, OR 97310, 48 PP.
KEYWORDS: SOLAR, HOME, OREGON.
NOTES: FILED.
DATE.
**ABSTRACT 2163**

**TITLE:** THE DESIGN AND UTILIZATION OF LOW COST SOLAR COLLECTORS FOR AGRICULTURE.

**AUTHOR:** BROWN R. M.

**SOURCE:** ASAE PAPER 78-3045, 27-30 JUNE 1978, 15 PP.

**KEYWORDS:** SOLAR, AGRICULTURE.

**NOTES:** FILED. LOW-COST SOLAR COLLECTORS FOR HEATING OF AIR AND WATER HAVE BEEN USED SUCCESSFULLY IN AGR APPLICATIONS. DESIGN DATA AND SYSTEM CONCEPTS INCLUDING WIND ENERGY AND BIOMASS BURNING ARE PRESENTED.

**DATE:** 780627

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**ABSTRACT 2164**

**TITLE:** DIRECT SOLAR DRYING OF FRUITS AND VEGETABLES IN SOUTHEASTERN UNITED STATES.

**AUTHOR:** BRYAN W. L.


**KEYWORDS:** SOLAR, FOOD PROCESSING, FRUITS AND VEGETABLES, DEHYDRATION, DESIGN.

**NOTES:** FILED. THIS PAPER DESCRIBES A 24 HOUR BATCH SOLAR DRYING PROCESS FOR FRUITS AND VEGETABLES USING AN ENCLOSED SOLAR COLLECTOR/HOT AIR DRYER WITH TRANSPARENT COVERS AND WITH FLAT REFLECTORS MOUNTED TO INCREASE SOLAR RADIATION TO THE FOOD TRAY.

**DATE:** 771024

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**ABSTRACT 2165**

**TITLE:** SOLAR ENERGY RECEIVED BY INCLINED SURFACES.

**AUTHOR:** BUELOW F. M.

**SOURCE:** QUARTERLY BULLETIN, 49(3)/294-327, MICH AGR EXPT STA, EAST LANSING, FEB 1967.

**KEYWORDS:** SOLAR, INSULATION.

**NOTES:** FILED.

**DATE:** 670200

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**ABSTRACT 2166**

**TITLE:** DRYING CROPS WITH SOLAR HEATED AIR.

**AUTHOR:** BUELOW F. M.


**KEYWORDS:** SOLAR, DRYING.

**DATE:** 610800

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**ABSTRACT 2167**

**TITLE:** DRYING CROPS WITH SOLAR ENERGY.

**AUTHOR:** BUELOW F. M.

**SOURCE:** ANNUALS OF ARID ZONE, 15(3)/172-176, SEP 1976.

**KEYWORDS:** SOLAR, DRYING.

**NOTES:** FILED.

**DATE:** 760900

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**ABSTRACT 2168**

**TITLE:** HEATING AIR BY SOLAR ENERGY.

**AUTHOR:** BUELOW F. M., BOYD J. S.

**SOURCE:** AGR. ENG, JAN 1957, 3 PP.

**KEYWORDS:** SOLAR.

**NOTES:** FILED.

**DATE:** 570100

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**ABSTRACT 2169**

**TITLE:** APPLICATION OF SOLAR ENERGY FOR PEANUT DRYING AND CURING.

**AUTHOR:** BUTLER J. L., TROEGER J. M.

**SOURCE:** ASAE PAPER 75-3505, 1975, 13 PP.

**KEYWORDS:** SOLAR, DRYING.

**NOTES:** FILED.

**DATE:** 751200
ABSTRACT 2170

TITLE: ECONOMIC FEASIBILITY OF HEATING MARYLAND BROILER HOUSES WITH SOLAR ENERGY.

AUTHOR: CAIN J L, VAN DYNE D L.

SOURCE: MARYLAND AGR. EXPT STA, DEPT OF AGR AND RESOURCE ECON., UNIV OF MARYLAND, COLLEGE PARK, MD, FEB 1977, 50 PP.

KEYWORDS: SOLAR, POULTRY, ECONOMICS, MARYLAND.

NOTES: FILED.

DATE: 770200

ABSTRACT 2171

TITLE: PHOTOVOLTAIC CONVERSION OF SOLAR ENERGY FOR TERRESTRIAL APPLICATIONS.

AUTHOR: CALIFORNIA INSTITUTE OF TECHNOLOGY.


KEYWORDS: SOLAR.

NOTES:

DATE: 741015

ABSTRACT 2172

TITLE: ASSESSMENT OF THE TECHNOLOGY REQUIRED TO DEVELOP PHOTOVOLTAIC POWER SYSTEMS FOR LARGE-SCALE NATIONAL ENERGY APPLICATIONS.

AUTHOR: CALIFORNIA INSTITUTE OF TECHNOLOGY.


KEYWORDS: SOLAR.

NOTES:

DATE: 741015

ABSTRACT 2173

TITLE: ENERGIES NOUVELLES - L'ENERGIE SOLAIRE.

AUTHOR: CALVIN M.

SOURCE: ACTUALITES - DOCUMENTS 110, PREMIER MINISTRE, SERVICE D'INFORMATION ET DE DIFFUSION, MARCH 1976, 59 PP.

KEYWORDS: SOLAR, WIND.

NOTES: FILED.

DATE: 760300

ABSTRACT 2174

TITLE: PHOTOSYNTHESIS AS A RESOURCE FOR ENERGY AND MATERIALS.

AUTHOR: CALVIN M.


KEYWORDS: SOLAR, PHOTOSYNTHESIS, PHOTOCHEMICAL.

NOTES: FILED.

DATE: 760500

ABSTRACT 2175

TITLE: SOLAR ENERGY BY PHOTOSYNTHESIS.

AUTHOR: CALVIN M.


KEYWORDS: SOLAR, PHOTOSYNTHESIS, ORGANIC.

NOTES: NAS.

DATE: 740419

ABSTRACT 2176

TITLE: TWO WAYS TO HEAT A HOME WITH SUNSHINE POWER.

AUTHOR: CARLSON E.

SOURCE: THE MOTHER EARTH NEWS HANDBOOK OF HOMEMADE POWER, 1974, 10 PP.

KEYWORDS: SOLAR, AWARENESS, MOTHER EARTH.

NOTES: FILED.

DATE: 740000
ABSTRACT 2178

TITLE: CONSTRUCTION OF AN AGRICULTURAL INDUSTRIAL SOLAR DEHYDRATION SYSTEM.
AUTHOR: CARNEGIE E J.
KEYWORDS: SOLAR, AGRICULTURE, DRYING, INDUSTRY.
NOTES: FILED.

ABSTRACT 2179

TITLE: AGRICULTURAL APPLICATIONS OF SOLAR ENERGY.
AUTHOR: CAVOOD W M.
KEYWORDS: SOLAR, ECONOMICS, AGRICULTURE.
NOTES: FILED.

ABSTRACT 2180

TITLE: PROCEEDINGS OF THE FOURTH MEETING OF ALL INDIA SOLAR ENERGY WORKING GROUP.
AUTHOR: CENTRAL BUILDING RESEARCH INSTITUTE.
SOURCE: CENTRAL BUILDING RESEARCH INST, ROORKEE, INDIA, 6-7 JULY 1972.
KEYWORDS: SOLAR, INDIA.
NOTES: FILED.

ABSTRACT 2181

TITLE: THE PHOTOWOVLATIC GENERATION OF ELECTRICITY.
AUTHOR: CHALMERS B.
KEYWORDS: SOLAR, PHOTOVOLTAIC.
NOTES: FILED.

ABSTRACT 2182

TITLE: NEW POTENTIALITIES FOR INTERNATIONAL CO-OPERATION IN THE FIELD OF SOLAR ENERGY AND ITS APPLICATIONS.
AUTHOR: CHATEL B M.
SOURCE: OFFICE FOR SCI AND TECH, UNITED NATIONS, NEW YORK, JULY 1974, 8 PP.
KEYWORDS: SOLAR, PHOTOVOLTAIC, CONVERSION, HEAT.
NOTES: FILED.

ABSTRACT 2183

TITLE: PERFORMANCE OF A PLASTIC SOLAR AIR HEATER.
AUTHOR: CHAW K V, BAIRC C D, BAGMALL L D.
SOURCE: ASAE PAPER 77-4014, 1977, 15PP.
KEYWORDS: SOLAR, HEAT, EFFICIENCY.
NOTES: FILED.

A 1.07 SQ M PLASTIC AIR HEATER WITH A SUSPENDED PLASTIC SCREEN AS AN EXTRA ABSORBING SURFACE WAS TESTED AND COMPARED AGAINST AN AIR HEATER WITHOUT THE SCREEN.

DATE: 770000
ABSTRACT 2184
• TITLE: SOLAR WATER HEATING IN SOUTH AFRICA.
• AUTHOR: CHINNERY D N W.
• SOURCE: CSIR RESEARCH REPORT 248, PRETORIA: S AFRICA, 1971; 79 PP.
• KEYWORDS: SOLAR, HEAT, SOUTH AFRICA, BIBLIOGRAPHY.
• NOTES: FILED. GOOD GENERAL PRINCIPLES DISCUSSION. RESULTS OF 3-WEEK TEST WITH DIFFERENT ABSORBERS, MATHEMATICAL ANALYSIS, CONSTRUCTION DETAILS. GOOD BIBLIOGRAPHY.
• DATE: 710609

ABSTRACT 2185
• TITLE: SOLAR ENERGY APPLICATIONS LABORATORY AT COLORADO STATE UNIVERSITY.
• AUTHOR: COLORADO STATE UNIVERSITY.
• SOURCE: SOLAR ENERGY APPLICATIONS LAB, COLORADO STATE UNIV., DENVER, CO, 12 PP.
• KEYWORDS: SOLAR, HOME, COOLING, TECHNOLOGY ASSESSMENT.
• NOTES: FILED.
• DATE: 730430

ABSTRACT 2186
• TITLE: SOLAR ENERGY - PROGRESS AND PROMISE.
• AUTHOR: COUNCIL ON ENVIRONMENTAL QUALITY.
• SOURCE: COUNCIL ON ENVIR QUALITY, 722 JACKSON PLACE NW, WASHINGTON DC 20006, APRIL 1978; 52 PP.
• KEYWORDS: SOLAR, POLICY.
• NOTES: FILED.
• DATE: 780422

ABSTRACT 2187
• TITLE: ELECTRIC ENERGY SUBSTITUTION - SOLAR ENERGY FOR FARMS AND IMPACT ON ELECTRIC ENERGY USE.
• AUTHOR: COWAN A.
• SOURCE: FARM ELECTRIFICATION COUNCIL, FOOD AND ENERGY SYMPOSIUM, 21 AUG 1975, WASHINGTON D C, 4 PP.
• KEYWORDS: SOLAR, ELECTRICAL, AGRICULTURE.
• NOTES: FILED.
• DATE: 750821

ABSTRACT 2188
• TITLE: THE DESIGN AND DEVELOPMENT OF A SOLAR POWERED WATER PUMP.
• AUTHOR: COVELL P A.
• SOURCE: INTERIM PROGRESS REPORT, ASIAN INST OF TECH, 3 JULY 1975, 6 PP.
• KEYWORDS: SOLAR.
• NOTES: FILED.
• DATE: 750703

ABSTRACT 2189
• TITLE: HERE COMES THE SUN.
• AUTHOR: COXON D A. DEBOER P P.
• SOURCE: JORDAN COLLEGE, 360 PINE ST, CEDAR SPRINGS, MI 49319, 1977; 191 PP.
• KEYWORDS: SOLAR, HOME, DESIGN.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 2190
• TITLE: DIRECT USE OF THE SUN'S ENERGY.
• AUTHOR: DANIELS F.
• SOURCE: NEW YORK/BALLANTINE BOOKS, SEPT 1975, 271 PP.
• KEYWORDS: SOLAR, HISTORICAL, RADIATION, COOKING, DRYING, DISTILLATION, COOLING, REFRIGERATION, THERMODYNAMIC, PHOTOVOLTAIC, STORAGE, TRANSPORTATION.
• NOTES: FILED.
• DATE: 750500
ABSTRACT 2198

•TITLE: SOLAR ENERGY AS A NATIONAL ENERGY RESOURCE.
•AUTHOR: DONOVAN P. ET AL.
•SOURCE: NSF/PA/73-001, DEC 1972, 85 PP.
•KEYWORDS: SOLAR, ENERGY SOURCES, ELECTRICAL.
•NOTES: FILED.
•DATE: 721200

ABSTRACT 2199

•TITLE: SOLAR ASSISTED HEAT PUMP INSTALLATIONS IN COLD CLIMATIC ZONES.
•AUTHOR: DUBIN F. S.
•SOURCE: PRESENTED AT THE WORKSHOP: SOLAR ENERGY HEAT PUMP SYSTEMS FOR THE HEATING AND COOLING OF BUILDINGS, 12-14 JUNE 1975, PENN STATE UNIV., UNIVERSITY PARK, 11 PP.
•KEYWORDS: SOLAR, HEAT.
•NOTES: FILED.
•DATE: 750612

ABSTRACT 2200

•TITLE: AGRICULTURAL EQUIPMENT DEVELOPMENT RESEARCH FOR TROPICAL RICE CULTIVATION.
•AUTHOR: DUFF B., NICHOLS F. E., CAMPBELL J., LEE C. C.
•KEYWORDS: SOLAR, DRYING, ECONOMICS.
•NOTES: FILED.
•DATE: 741100

ABSTRACT 2201

•TITLE: SOLAR HEATING AND COOLING.
•AUTHOR: DUFFIE J. A., BECKMAN W. A.
•SOURCE: SCIENCE, 191(4223)/143-149, 16 JAN 1976.
•KEYWORDS: SOLAR, HEAT, COOLING.
•NOTES: FILED.
•DATE: 760116

ABSTRACT 2202

•TITLE: SOLAR ELECTRICITY--THE HYBRID SYSTEM APPROACH.
•AUTHOR: DUGUAY M. A.
•KEYWORDS: SOLAR, ELECTRICAL, HEAT, PHOTOVOLTAIC, ECONOMICS.
•NOTES: FILED. GENERATION OF SOLAR ELECTRICITY MAY FIRST BE ACHIEVED MOST ECONOMICALLY IN SYSTEMS THAT COMBINE IT WITH OTHER FUNCTIONS, SUCH AS HEATING AND LIGHTING.
•DATE: 770700

ABSTRACT 2203

•TITLE: NEW WAYS TO MAKE SOLAR CELLS TRIM COSTS OF FUTURE SUN POWER FOR YOUR HOME.
•AUTHOR: EDELSON E.
•SOURCE: POPULAR SCIENCE, 208(5)/74-77, 152, 156, MAY 1976.
•KEYWORDS: SOLAR, HOME.
•NOTES: FILED.
•DATE: 760500

ABSTRACT 2204

•TITLE: SOLAR COLLECTOR DESIGN.
•AUTHOR: EDWARD S. D. K.
•SOURCE: PHILADELPHIA, PA/FRANKLIN INST PRESS, 1977, 64 PP.
•KEYWORDS: SOLAR, DESIGN.
•NOTES: FILED.
•DATE: 770800
ABSTRACT 2213

**TITLE:** TECHNOLOGY UTILIZATION - INCENTIVES AND SOLAR ENERGY

**AUTHOR:** FRIE A A

**SOURCE:** SCIENCE, 187(4176):707-713, 28 FEB 1975.

**KEYWORDS:** SOLAR, TECHNOLOGY ASSESSMENT.

**DATE:** 750228

ABSTRACT 2214

**TITLE:** A SUMMARY OF THE PERSPECTIVE USES OF SOLAR ENERGY FOR AGRICULTURE IN DEVELOPING COUNTRIES

**AUTHOR:** FAIDLEY L W

**SOURCE:** BASED UPON SOLAR ENERGY IN DEVELOPING COUNTRIES - PERSPECTIVES AND PROSPECTS. NAS, WASHINGTON, D.C. 1972; 5 PP.

**KEYWORDS:** SOLAR, DISTILLATION, DRYING, CONVERSION, ELECTRICAL, PHOTOSYNTHESIS.

**DATE:** 720200

ABSTRACT 2215

**TITLE:** SOLAR ENERGY CONVERSION RESEARCH AND DEVELOPMENT AT THE UNIVERSITY OF FLORIDA.

**AUTHOR:** FARBER E A

**SOURCE:** BUILDING SYSTEMS DESIGN, FEB-MARCH 1974, PP 195-206.

**KEYWORDS:** SOLAR, DISTILLATION, REFRIGERATION, COOKING, CONVERSION, ELECTRICAL, TRANSPORTATION.

**DATE:** 740220

ABSTRACT 2216

**TITLE:** SOLAR POWER TOWER.

**AUTHOR:** FISHER A A

**SOURCE:** POPULAR SCIENCE, OCT 1975, PP 88-90.

**KEYWORDS:** SOLAR, THERMOELECTRIC.

**DATE:** 751000

ABSTRACT 2217

**TITLE:** STEADY-STATE SIMULATION OF SUSPENDED PLATE SOLAR COLLECTORS.

**AUTHOR:** FITZGIBBONS D A, KLINE G L

**SOURCE:** ASAE PAPER 76-3981: 1978: 40 PP.

**KEYWORDS:** SOLAR, MODELS.

**DISCLAIMER:** THE PURPOSE OF THIS STUDY WAS TO PRESCRIBE THE THEORETICAL EQUATIONS NECESSARY TO DEFINE THE BEHAVIOR OF CERTAIN FORCED-AIR SOLAR ENERGY COLLECTORS, AND TO ASSEMBLE THEM INTO A MODEL SUITABLE FOR SIMULATION OF A DIGITAL COMPUTER.

**DATE:** 780900

ABSTRACT 2218

**TITLE:** ECONOMIC FEASIBILITY AND MARKET READINESS OF SOLAR TECHNOLOGIES -- DRAFT FINAL REPORT VOL 1.

**AUTHOR:** FLAIR S J ET AL

**SOURCE:** SOLAR ENERGY RESEARCH INST, A DIV OF MIDWEST RESEARCH INST, 1526 COLE BLVD, GOLDEN, CO 80401, SEPT 1978: 328 PP.

**KEYWORDS:** SOLAR, ECONOMICS, WIND, BIOMASS, HEAT, COOLING, THERMOELECTRIC, PHOTOVOLTAIC.

**DATE:** 780900

**NOTES:** SYSTEMS DESCRIPTIONS, COSTS, TECHNICAL AND MARKET READINESS ASSESSMENTS ARE REPORTED FOR TEN SOLAR TECHNOLOGIES -- SOLAR HEATING AND COOLING OF BUILDINGS, PASSIVE, AGRICULTURAL AND INDUSTRIAL PROCESS HEAT, BIOMASS, OCEAN THERMAL, WIND, SOLAR THERMAL ELECTRIC, PHOTOVOLTAIC, SATELLITE POWER STATION AND SOLAR TITAN ENERGY SYSTEMS.

**STUDY OBJECTIVES, SCOPE, AND METHODS ARE PRESENTED.**

**DATE:** 780900
ABSTRACT 2219

•TITLE: THE HEATING OF A POULTRY BROILER HOUSE USING SOLAR ENERGY.
•AUTHOR: FORBES R E, MCCLENDON R W.
•SOURCE: ASAE PAPER 77-3905, 1977, 15 PP.
•KEYWORDS: SOLAR, POULTRY.
•NOTES: FILED. A PRE-ENGINEERED METAL BUILDING HAS BEEN MODIFIED TO INCLUDE AN AIR HEATER SOLAR COLLECTOR AS AN INTEGRAL PART OF THE SOUTH WALL. TESTS WERE MADE ON THE PERFORMANCE OF THE SOLAR COLLECTOR AND THE ROCK BED HEAT STORAGE CHAMBER.
•DATE: 770000

ABSTRACT 2220

•TITLE: HOMEOWNERS GUIDE TO SOLAR HEATING AND COOLING.
•AUTHOR: FOSTER W M.
•SOURCE: BLUE RIDGE SUMMIT, PA 17214/TAB BOOKS, THIRD PRINTING, 1977, 196PP.
•KEYWORDS: SOLAR, HEAT, COOLING, HOME, DESIGN, MAINTENANCE.
•NOTES: FILED. HOW TO PURCHASE, INSTALL, AND MAINTAIN SOLAR HEATING AND COOLING AND HOTWATER SYSTEMS.
•DATE: 770000

ABSTRACT 2221

•TITLE: SOLAR CELLS.
•AUTHOR: FREE J.
•SOURCE: POPULAR SCIENCE, DEC 1974, PP 52-55, 120, 121.
•KEYWORDS: SOLAR, PHOTOVOLTAIC.
•NOTES: FILED.
•DATE: 741200

ABSTRACT 2222

•TITLE: SOLAR ENERGY - GETTING WARMER.
•AUTHOR: FRITH B.
•KEYWORDS: SOLAR.
•NOTES: FILED.
•DATE: 740325

ABSTRACT 2223

•TITLE: SOLAR ENERGY RESEARCH AT CAZRI, JODHPUR - ACHIEVEMENTS AND FUTURE PLANS.
•AUTHOR: GARG H P.
•KEYWORDS: SOLAR, INDIA, HEAT, DESIGN, COOKING, DISTILLATION.
•NOTES: FILED.
•DATE: 760900

ABSTRACT 2224

•TITLE: SOLAR ENERGY UTILIZATION RESEARCH.
•AUTHOR: GARG H P.
•SOURCE: CENTRAL ARID ZONE RESEARCH INSTITUTE, JODHPUR, INDIA.
•JUNE 1975, 48 PP.
•KEYWORDS: SOLAR, INDIA, RADIATION, DISTILLATION, DRYING, COOKING.
•NOTES: FILED.
•DATE: 750600

ABSTRACT 2225

•TITLE: BIBLIOGRAPHY OF INDIAN APPLIED SOLAR ENERGY RESEARCH 1950-1975.
•AUTHOR: GARG M P, AMINULLAH.
•SOURCE: CAZRI LIBRARY PUBLICATION SERIES 2, CENTRAL ARID ZONE RESEARCH INST, JODHPUR, APRIL 1976, 38 PP.
•KEYWORDS: SOLAR, BIBLIOGRAPHY, INDIA.
•NOTES: FILED.
•DATE: 760400.
ABSTRACT 2226

**TITLE**: SOLAR ENERGY RESEARCH AT THE CENTRAL ARID ZONE RESEARCH INSTITUTE, JODHPUR - ACHIEVEMENTS AND FUTURE PLANS.

**AUTHOR**: GARG H P.

**SOURCE**: CENTRAL ARID ZONE RESEARCH INST, JODHPUR, INDIA, OCT 1976, FOR SPECIAL ISSUE OF ANNALS OF ARID ZONE, QUARTERLY 4, 13 PP.

**KEYWORDS**: SOLAR, INDIA, HEAT, DRYING, COOKING, DISTILLATION, PUMPS.

**NOTES**: RESEARCH WORK ON SOME OF THE IMPORTANT APPLICATIONS OF SOLAR ENERGY FOR DOMESTIC, AGRICULTURAL AND INDUSTRIAL PURPOSES SUCH AS FOR HEATING OF WATER, DRYING AND DEHYDRATION OF FRUITS AND VEGETABLES, COOKING AND BOILING OF FOOD, DISTILLATION OF SALINE WATER AND PUMPING OF WATER FOR LIFT IRRIGATION PURPOSES CARRIED OUT AT CAZRI IS REVIEWED IN THIS PAPER.

**DATE**: 761000

ABSTRACT 2227

**TITLE**: EFFECT OF DIRT ON TRANSPARENT COVERS IN FLAT-PLATE SOLAR ENERGY COLLECTORS.

**AUTHOR**: GARG H P.


**KEYWORDS**: SOLAR, RADIATION, INDIA, TECHNOLOGY ASSESSMENT.

**NOTES**: EFFECT OF DIRT ON THE TRANSMITTANCE OF SOLAR RADIATION THROUGH VARIOUS INCLINED GLASS PLATES AND PLASTIC FILMS, WHICH ARE USED AS A TRANSPARENT COVER FOR FLAT-PLATE COLLECTORS, HAS BEEN STUDIED.

**DATE**: 760800

ABSTRACT 2228

**TITLE**: A SOLAR OVEN FOR COOKING.

**AUTHOR**: GARG H P.

**SOURCE**: INDIAN FARMING, AUG 1976, 3 PP.

**KEYWORDS**: SOLAR, COOKING.

**NOTES**: A FILED. AN IMPROVED SOLAR WATER HEATER WHICH PERFORMS THE DUAL FUNCTION OF ABSORBING HEAT AND STORING THE HEATED WATER HAS BEEN DESIGNED AND A PROTOTYPE TESTED IN JODHPUR. A PERFORMANCE EQUATION FOR THIS TYPE OF HEATER IS ALSO DEVELOPED.

**DATE**: 760800

ABSTRACT 2229

**TITLE**: YEAR ROUND PERFORMANCE STUDIES ON A BUILT-IN STORAGE TYPE WATER HEATER AT JODHPUR, INDIA.

**AUTHOR**: GARG H P.


**KEYWORDS**: SOLAR, INDIA, HEAT, DESIGN.

**NOTES**: A FILED. AN IMPROVED SOLAR WATER HEATER WHICH PERFORMS THE DUAL FUNCTION OF ABSORBING HEAT AND STORING THE HEATED WATER HAS BEEN DESIGNED AND A PROTOTYPE TESTED IN JODHPUR. A PERFORMANCE EQUATION FOR THIS TYPE OF HEATER IS ALSO DEVELOPED.

**DATE**: 751000

ABSTRACT 2230

**TITLE**: SOLAR ENERGY UTILIZATION POTENTIAL IN JODHPUR AND NEW DELHI.

**AUTHOR**: GARG H P, KRISHNAN A.


**KEYWORDS**: SOLAR, RADIATION, INDIA.

**NOTES**: A FILED. AVERAGE USEFUL SOLAR ENERGIES AVAILABLE FOR UTILIZATION BY FLAT-PLATE COLLECTORS KEPT AT OPTIMUM TILTS IN JODHPUR AND DELHI WERE WORKED OUT FOR TYPICAL WINTER AND SUMMER MONTHS. BASED ON THESE AVERAGE ENERGIES, GENERALIZED DESIGN CURVES FOR WATER HEATING BY FLAT-PLATE COLLECTORS GIVING THE RATIO OF USEFUL ENERGY COLLECTED BY THE FLAT-PLATE COLLECTOR TO THE HEAT REMOVAL EFFICIENCY FACTOR IN TERMS OF INLET TEMPERATURE RISE OVER AMBIENT TEMPERATURE HAVE BEEN PREPARED.

**DATE**: 741000

ABSTRACT 2231

**TITLE**: EFFECT OF CLIMATE, OPERATIONAL AND DESIGN PARAMETERS ON THE YEAR ROUND PERFORMANCE OF SINGLE-SLOPED AND DOUBLE-SLOPED SOLAR STILL UNDER INDIAN ARID ZONE CONDITIONS.

**AUTHOR**: GARG H P, RANN M S.


**KEYWORDS**: SOLAR, INDIA, TECHNOLOGY ASSESSMENT, DESIGN.

**NOTES**: A FILED.

**DATE**: 761000

ABSTRACT 2232

**TITLE**: CAN SUNSHINE HEAT (AND COOL) YOUR HOUSE?

**AUTHOR**: GILMORE C P.

**SOURCE**: POPULAR SCIENCE, MARCH 1974, PP 78-81.

**KEYWORDS**: SOLAR, HOME, HEAT.

**NOTES**: A FILED.

**DATE**: 740300
ABSTRACT 2233

**TITLE**: DESIGN AND PERFORMANCE OF A SIMPLE SOLAR PUMP FOR LIFT IRRIGATION PURPOSES.

**AUTHOR**: GIRARDIER J P, CLEMNT M G.

**SOURCE**: ANNUALS OF ARID ZONES, CENTRAL ARID ZONE RESEARCH INST, JODHPUR, INDIA, 1976, 14 PP.

**KEYWORDS**: SOLAR, IRRIGATION, PUMPS, INDIA.

**NOTES**: FILED.

**DATE**: 760000

ABSTRACT 2234

**TITLE**: UTILIZATION OF SOLAR ENERGY FOR LIFTING WATER.

**AUTHOR**: GIRARDIER J P, PASSON M.

**SOURCE**: INTERNATIONAL SOLAR ENERGY CONF, MELBOURNE, AUSTRALIA, 1970.

**KEYWORDS**: SOLAR.

**NOTES**.

**DATE**: 700000

ABSTRACT 2235

**TITLE**: PERFORMANCE OF CRUSHED ROCK SOLAR HEAT STORAGE.

**AUTHOR**: GODBEY L E, NEWMAN J O, ZORNIG H F.

**SOURCE**: ASAE PAPER 76-4557, 1976, 15PP.

**KEYWORDS**: SOLAR, HEAT, STORAGE.

**NOTES**: FILED. PRESENTED IS AN EQUATION FOR COMPUTING THE PRESSURE DROP THROUGH A GRADATED CRUSHED ROCK BED. WITH TEMPERATURE HISTORY CURVES FOR STORING SOLAR HEAT IN A CRUSHED ROCK BED. CURVES REPRESENTING NOCTURNAL COOLING WHERE HEAT BUILDUP WITHIN A MOUSE IS STORED IN THE ROCK FOR REMOVAL WITH COOL NIGHT AIR.

**DATE**: 760000

ABSTRACT 2236

**TITLE**: SOLAR AND LONG WAVELENGTH ENERGY TRANSMISSION OF MATERIALS.

**AUTHOR**: GODBEY L E, BOND T E, ZORNIG H F.

**SOURCE**: ASAE PAPER 77-4013, 1977, 16PP.

**KEYWORDS**: SOLAR, TRANSMISSION, TECHNOLOGY ASSESSMENT.

**NOTES**: FILED. METHODS OF MEASUREMENT AND RESULTS ARE PRESENTED FOR LONG WAVELENGTH AND THE SOLAR SHORT WAVELENGTH RADIANT ENERGY TRANSMISSION CHARACTERISTICS OF NINE COMMON MATERIALS THAT MIGHT BE CONSIDERED FOR COVERING GREENHOUSES OR SOLAR COLLECTORS, AND FOR EIGHTY-ONE TWO-LAYER COMBINATIONS OF THE MATERIALS.

**DATE**: 770000

ABSTRACT 2237

**TITLE**: PHOTOVOLTAICS - THE SEMICONDUCTOR REVOLUTION COMES TO SOLAR.

**AUTHOR**: HAMMOND A L.

**SOURCE**: SCIENCE, 197/445447, 29 JULY 1977.

**KEYWORDS**: SOLAR, PHOTOVOLTAIC.

**NOTES**: FILED. THIRD ARTICLE IN A SERIES OF SEVEN.

**DATE**: 770729

ABSTRACT 2238

**TITLE**: SOLAR MOUSE DESIGN.

**AUTHOR**: HANSEN M J.

**SOURCE**: WRACES, OREGON STATE UNIV, CORVALLIS, OR 97331- 72/9-12, NOV 1977.

**KEYWORDS**: SOLAR, HOME, DESIGN, COOLING.

**NOTES**: FILED.

**DATE**: 771102

ABSTRACT 2239

**TITLE**: ESTIMATION OF SOLAR RADIATION.

**AUTHOR**: HARGREAVES G M.

**SOURCE**: ASAE PAPER 77-3544, 1977, 11 PP.

**KEYWORDS**: SOLAR, RADIATION, AGRICULTURE.

**NOTES**: FILED.

**DATE**: 770000
ABSTRACT 2249

**TITLE:** SOLAR ENERGY APPLICATIONS IN AGRICULTURE POTENTIAL, RESEARCH NEEDS AND ADOPTION STRATEGIES.

**AUTHOR:** HARRIS W L.

**SOURCE:** PREPARED FOR AGR RESEARCH SERVICE, USDA; JAN 1976, 305 PP.

**KEYWORDS:** SOLAR, DRYING, ANIMAL, GREENHOUSE, IRRIGATION, ECONOMICS.

**NOTES:** FILED.

**DATE:** 760100

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ABSTRACT 2237

**TITLE:** COMBINATION DOMESTIC HOT WATER AND SOLAR HOT AIR HEAT EXCHANGER.

**AUTHOR:** GODFREY L C, NEUMANN J D.

**SOURCE:** ASAE PAPER 78-457, 1978, 9 PP.

**KEYWORDS:** SOLAR, HOME, EFFICIENCY, ECONOMICS.

**NOTES:** FILED. A HEAT EXCHANGER/STORAGE DOMESTIC WATER HEATING SYSTEM MADE OF RELATIVELY LOW-COST MATERIALS HAS BEEN DEVELOPED THAT CAN BE SITE BUILT WITH LOCALLY AVAILABLE MATERIALS AND CONSTRUCTION TRADE PERSONNEL. THIS PAPER DESCRIBES THE DESIGN FEATURES AND PARAMETERS, ALONG WITH COSTS AND TEST RESULTS.

**DATE:** 780000

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ABSTRACT 2238

**TITLE:** SOLAR DISTILLATION IN INDIA.

**AUTHOR:** GOKALE S D, DATTA R L.

**SOURCE:** ANNALS OF ARID ZONE, 15(3)/296-218 SEPT 1976.

**KEYWORDS:** SOLAR, INDIA, DISTILLATION.

**NOTES:** FILED.

**DATE:** 760900

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ABSTRACT 2239

**TITLE:** A CITIZEN'S HANDBOOK ON SOLAR ENERGY.

**AUTHOR:** GUINN A.

**SOURCE:** PUBLIC INTEREST RESEARCH GROUP, 2000 P STREET N W, ROOM 711, WASHINGTON D.C., 1979, 37 PP.

**KEYWORDS:** SOLAR, HEAT, COOLING, WIND, PHOTOVOLTAIC.

**NOTES:** FILED.

**DATE:** 750900

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ABSTRACT 2240

**TITLE:** EFFECT OF FAMILY WATER USE SCHEDULING ON SOLAR WATER HEATER PERFORMANCE.

**AUTHOR:** GUPTA D K, ALLEN W H, NEUMANN J C.

**SOURCE:** ASAE PAPER 78-459, 1978, 18 PP.

**KEYWORDS:** SOLAR, MODELS, EFFICIENCY.

**NOTES:** FILED. THIS PAPER DESCRIBES THE PERFORMANCE OF A PROTOTYPE SOLAR WATER HEATER WITH AN ELECTRICALLY HEATED AUXILIARY TANK IN RELATION TO WATER CONSUMPTION RATES, CONSUMPTION PATTERN AND DESIRED WATER TEMPERATURE VIA COMPUTER SIMULATION. THE PERFORMANCE OF THE SYSTEM WAS INFLUENCED BY ALL THE VARIABLES.

**DATE:** 780000

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ABSTRACT 2241

**TITLE:** A REFLECTOR COOKER.

**AUTHOR:** HALEY D S.

**SOURCE:** SOLAR SCIENCE PROJECTS FOR A CLEANER ENVIRONMENT, SCHOLASTIC BOOK SERVICES, 14 PP, UNDATED.

**KEYWORDS:** SOLAR, COOKING.

**NOTES:** FILED.

**DATE:**
ABSTRACT 2242

• TITLE: SUMMER UTILIZATION OF SOLAR ENERGY FOR DRYING POULTRY EXCRETA.
• AUTHOR: HALL, W. E.; ESAY, M.; SHEPPARD, C.; FLEGAL, C.
• KEYWORDS: SOLAR, DRYING, WASTES, POULTRY.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 2243

• TITLE: MACHINE STORAGE BUILDING WITH SOLAR ROOF FOR GRAIN DRYING.
• AUTHOR: HALL, M. D.
• KEYWORDS: SOLAR, BUILDINGS, DRYING, DESIGN, TECHNOLOGY ASSESSMENT.
• NOTES: FILED. THE DESIGN AND TEST OF A 50 BY 96 FT MACHINE STORAGE BUILDING WITH A CLEAR FIBERGLASS ROOF FOR SOLAR HEATING. THE HEAT COLLECTED WAS USED IN DRYING SHELLED CORN AND HEATING AN INSULATED WORKSHOP.
• DATE: 780000

ABSTRACT 2244

• TITLE: SOLAR ENERGY RECONSIDERED - ERDA SEES BRIGHT FUTURE.
• AUTHOR: HAMMOND, A. L.
• SOURCE: SCIENCE, 189/538-539, 15 AUG 1975.
• KEYWORDS: SOLAR, HEAT, ELECTRICAL, WIND, PHOTOVOLTAIC, ORGANIC.
• NOTES: FILED.
• DATE: 750813

ABSTRACT 2245

• TITLE: PHOTOVOLTAIC CELLS - DIRECT CONVERSION OF SOLAR ENERGY.
• AUTHOR: HAMMOND, A. L.
• KEYWORDS: SOLAR, PHOTOVOLTAIC.
• NOTES: NA.
• DATE: 721117

ABSTRACT 2250

• TITLE: FIBERGLASS REINFORCED PANELS FOR SOLAR COLLECTOR GLAZINGS.
• AUTHOR: HARTMAN, H.; WHITRIDGE, J. E.
• KEYWORDS: SOLAR, EFFICIENCY.
• NOTES: FILED. PROPERTIES AND ADVANTAGES OF FIBERGLASS REINFORCED PANELS (FRP) ARE REVIEWED AND COMPARED WITH GLASS AND THERMOPLASTICS. ALSO DESCRIBED ARE THE AGING CHARACTERISTICS OF FRP AND MECHANISMS THAT ELIMINATE OR DELAY WEATHER DEGRADATION.
• DATE: 780000

ABSTRACT 2251

• TITLE: SOLAR THERMAL SYSTEMS IN THE MILKING PARLOR.
• AUTHOR: HAYDEN, H.; THOMPSON, P. D.
• KEYWORDS: SOLAR, DAIRY, BUILDINGS, DESIGN.
• NOTES: FILED.
• DATE: 770000

ABSTRACT 2252

• TITLE: SOLAR POWER IN THE MIDDLE EAST.
• AUTHOR: HAYES, D.
• SOURCE: SCIENCE, 188/1951/1, 27 JUNE 1975.
• KEYWORDS: SOLAR, MIDDLE EAST.
• NOTES: FILED.
• DATE: 750627

ABSTRACT 2253

• TITLE: SOLAR ENERGY - THE THIRD WORLD FIRST.
• AUTHOR: HAYES, D.
• SOURCE: AGENDA, 111/1-8, 1978.
• KEYWORDS: SOLAR, AGRICULTURE, WIND, DEVELOPING COUNTRIES.
• NOTES: FILED.
• DATE: 780000
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ABSTRACT 2261

**TITLE:** WILL SUNSHINE HEAT YOUR BROILER HOUSE

**AUTHOR:** HUGHES M A VAUGHAN D M

**SOURCE:** THE VIRGINIA POULTRYMAN, P 34

**KEYWORDS:** SOLAR, POULTRY, ECONOMICS, AGRICULTURE

**NOTES:** FILED

**DATE:**

ABSTRACT 2262

**TITLE:** LOW COST SOLAR CELL ARRAYS

**AUTHOR:** ILES P A ET AL

**SOURCE:** NATIONAL TECH INFO SERVICE, US DEPT OF COMMERCE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA; MAY 1975; 94 PP

**KEYWORDS:** SOLAR, PHOTOVOLTAIC

**NOTES:** FILED

**DATE:** 750530

ABSTRACT 2263

**TITLE:** INDO-US WORKSHOP ON SOLAR AND WIND ENERGY

**AUTHOR:** INDIA DEPARTMENT OF SCIENCE AND TECHNOLOGY

**SOURCE:** SYMPOSIUM ON SOLAR ENERGY RESOURCES, APPLICATION AND TECHNIQUES, AUSTRALIAN AND NEW ZEALAND SECTION OF THE INTERNATIONAL SOLAR ENERGY SOCIETY, AUSTRALIAN NATIONAL UNIV, 11 NOV 1975; 72 PP

**KEYWORDS:** SOLAR, INDIA, WIND, USA, REFRIGERATION, PUMPS, DRYING, ENGINE

**NOTES:** FILED

**DATE:** 760804

ABSTRACT 2264

**TITLE:** SOLAR ENERGY RESOURCES, APPLICATIONS AND TECHNIQUES

**AUTHOR:** INTERNATIONAL SOLAR ENERGY SOCIETY

**SOURCE:** SYMPOSIUM ON SOLAR ENERGY RESOURCES, APPLICATION AND TECHNIQUES, INTERNATIONAL SOLAR ENERGY SOCIETY, AMER SECTION, 12441 PARKLAWN DR, ROCKVILLE, MD 20850; 4 PP

**KEYWORDS:** SOLAR, BIBLIOGRAPHY

**NOTES:** FILED

**DATE:**

ABSTRACT 2265

**TITLE:** SOLAR ENERGY, OTHER SOURCES OF ENERGY

**AUTHOR:** INTERNATIONAL SOLAR ENERGY SOCIETY

**SOURCE:** INTERNATIONAL SOLAR ENERGY SOCIETY, AMER SECTION, 12441 PARKLAWN DR, ROCKVILLE, MD 20850; 4 PP

**KEYWORDS:** SOLAR, BIBLIOGRAPHY

**NOTES:** FILED

**DATE:** 751111

ABSTRACT 2266

**TITLE:** SOLAR HEATING SYSTEMS DESIGN MANUAL

**AUTHOR:** INTERNATIONAL TELEPHONE AND TELEGRAPH CORP

**SOURCE:** BULLETIN TELE•576, TRAINING AND EDUCATION DEPT, FLUID HANDLING DIV, INTERNATIONAL TELEPHONE AND TELEGRAPH CORP, 8200 W AUSTIN, MORTON GROVE, IL 60052; 1977; 135PP

**KEYWORDS:** SOLAR, HEAT, DESIGN, COOLING

**NOTES:** FILED, THIS DEALS WITH AVERAGES, HISTORICAL DATA AND ASSUMPTIONS WHICH SERVE AS EXAMPLES IN HIGHLIGHTING DESIGN, PROCEDURES

**DATE:** 770006

ABSTRACT 2267

**TITLE:** JAPANS SUNSHINE PROJECT

**AUTHOR:** JAPAN AGENCY OF INDUSTRIAL SCIENCE AND TECHNOLOGY

**SOURCE:** SUNSHINE PROJECT PROMOTION HEADQUARTERS, AGENCY OF INDUSTRIAL SCI AND TECH, MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY, TOKYO, JAPAN; APRIL 1975; 46 PP

**KEYWORDS:** SOLAR, JAPAN, GEOTHERMAL, COAL GASIFICATION, HYDROGEN

**NOTES:** FILED

**DATE:** 750406
ABSTRACT 2268

TITLE: SOLAR ENERGY R AND D PROGRAM - SUNSHINE PROJECT IN JAPAN.
AUTHOR: JAPAN AGENCY OF INDUSTRIAL SCIENCE AND TECHNOLOGY.
SOURCE: ENGLISH LANGUAGE EDITION. JAPAN, NOV 1975.
KEYWORDS: SOLAR, HEAT COOLING, PHOTOVOLTAIC, THERMOELECTRIC, JAPAN, SEATHEMAL.
NOTES: FILED.
DATE: 751100

ABSTRACT 2269

TITLE: PROCEEDINGS OF SOLAR ENERGY - FUEL AND FOOD WORKSHOP: THE UTILIZATION OF SOLAR ENERGY IN GREENHOUSES AND INTEGRATED GREENHOUSE - RESIDENTIAL SYSTEMS.
AUTHOR: JENSEN H.
SOURCE: UNIVERSITY OF ARIZONA.
KEYWORDS: SOLAR, GREENHOUSE.
NOTES: FILED.
DATE: 760406

ABSTRACT 2270

TITLE: EVALUATION OF FLAT-PLATE COLLECTOR EFFICIENCY UNDER CONTROLLED CONDITIONS IN A SOLAR SIMULATOR.
AUTHOR: JOHNSON S. M.
KEYWORDS: SOLAR, EFFICIENCY, MODELS.
NOTES: FILED.
DATE: 760800

ABSTRACT 2271

TITLE: THE PROSPECTS FOR PHOTOVOLTAIC CONVERSION.
AUTHOR: JOHNSTON W. D.
KEYWORDS: SOLAR, PHOTOVOLTAIC, ELECTRICAL, RADIATION.
NOTES: FILED.
DATE: 771100

ABSTRACT 2272

TITLE: SOCIO-ECONOMIC CONSIDERATIONS IN THE UTILIZATIONS OF SOLAR ENERGY IN UNDERDEVELOPED AREAS.
AUTHOR: KAPUR J. C.
SOURCE: PROC. INTERNATIONAL CONFERENCE ON NEW SOURCES OF ENERGY, VOLS 1.
DATE: 610800

ABSTRACT 2273

TITLE: PHOTOVOLTAIC POWER SYSTEMS - A TOUR THROUGH THE ALTERNATIVES.
AUTHOR: KELLY M.
KEYWORDS: SOLAR, PHOTOVOLTAIC.
NOTES: FILED.
DATE: 780210

ABSTRACT 2274

TITLE: THERMAL PERFORMANCE OF A PLASTIC FILM SOLAR WATER HEATER.
AUTHOR: KENCALL P. W., MEARS D. R., ROBERTS W. J., SIMPKINS J. C.
SOURCE: ASAE PAPER 78-3507. 1978, 10 PP.
KEYWORDS: SOLAR, EFFICIENCY.
NOTES: FILED. THIS PAPER DESCRIBES AND EVALUATES A PLASTIC FILM SOLAR WATER HEATER THAT PERFORMS WELL AT OPERATING TEMPERATURES OF ABOUT 25 DEGREES C IN NEW JERSEY WINTERS. CONSTRUCTION TECHNIQUES ARE SIMILAR TO THOSE USED IN PLASTIC FILM GREENHOUSES WITH LARGE SHEETS OF AIR INFLATED FILM FASTENED TO A RIGID FRAME.
DATE: 780900
ABSTRACT 2275
[TITLE] HARNESSEND THE SUN.
[AUTHOR] KEYES J.
[KEYWORDS] SOLAR.
[NOTES] FILED.
[DATE] 750800

ABSTRACT 2276
[TITLE] PRESENT TECHNOLOGIES OF SOLAR HEATING, COOLING, AND HOT WATER SUPPLY IN JAPAN.
[AUTHOR] KIMURA K.
[KEYWORDS] SOLAR, JAPAN, HEAT, COOLING, ENERGY CONSUMPTION.
[NOTES] FILED.
[DATE] 760600

ABSTRACT 2277
[TITLE] SOLAR COLLECTORS FOR LOW TEMPERATURE GRAIN DRYING
[AUTHOR] KLINE G L.
[SOURCE] ASAE PAPER 77-3007, 1977, 11PP.
[KEYWORDS] SOLAR, DRYING, EFFICIENCY.
[NOTES] FILED. PILOT SCALE SOLAR COLLECTORS SUITABLE FOR LOW-TEMPERATURE GRAIN DRYING WERE DESIGNED AND CONSTRUCTED. TWELVE DIFFERENT COLLECTORS WERE TESTED.
[DATE] 770000

ABSTRACT 2278
[TITLE] SILICA GEL REGENERATION BY SOLAR ENERGY.
[AUTHOR] KOH K. K., CHUNG D S, CONVERSE H M, FOSTER G H, AZER N Z.
[SOURCE] ASAE PAPER 78-3510, 1978, 15PP.
[KEYWORDS] SOLAR, SILICA GEL, DRYING, TECHNOLOGY ASSESSMENT.
[NOTES] FILED. FLAT-PLATE SOLAR COLLECTORS WERE DESIGNED AND CONSTRUCTED FOR INVESTIGATING THEIR POTENTIAL OF SILICA GEL REGENERATION. THE RESULTS SHOWED THAT SILICA GEL CAN BE SUCCESSFULLY REGENERATED BY THEM AND THE COLLECTOR AND THERMAL EFFICIENCIES WERE ABOUT 55 PERCENT.
[DATE] 780000

ABSTRACT 2279
[TITLE] PROSPECTS OF PHOTOSYNTHETIC ENERGY PRODUCTION.
[AUTHOR] KOK B.
[SOURCE] PRESENED AT AAAS SYMPOSIUM, SAN FRANCISCO, 24 FEB-1 MARCH 1974, 9 PP.
[KEYWORDS] SOLAR, PHOTOSYNTHESIS.
[NOTES] FILED.
[DATE] 740224

ABSTRACT 2280
[TITLE] SOLAR HEATING AND COOLING - ENGINEERING, PRACTICAL DESIGN, ECONOMICS.
[AUTHOR] KREIDER J F, KREITH F.
[SOURCE] WASHINGTON D C/HEMISPHERE PUB CORP, 1975, 336 PP.
[KEYWORDS] SOLAR, DESIGN, ECONOMICS, HEAT, COOLING, BUILDINGS, STORAGE, RADIATION.
[NOTES] FILED.
[DATE] 750300

ABSTRACT 2281
[TITLE] A SIMULATION OF SOLAR HEATING OF A DAIRY.
[AUTHOR] LARSON D L, ARMSTRONG D.
[SOURCE] ASAE PAPER 77-3546, 1977, 15PP.
[KEYWORDS] SOLAR, DAIRY, AGRICULTURE.
[NOTES] FILED.
[DATE] 770000

ABSTRACT 2282
[TITLE] ON-FARM SOLAR POWER PLANT LOAD MANAGEMENT.
[AUTHOR] LARSON D L ET AL.
[SOURCE] COLLEGE OF AGH, UNIV OF ARIZONA, TUCSON, AZ, 11 PP.
[KEYWORDS] SOLAR, IRRIGATION.
[NOTES] FILED.
[DATE]
ABSTRACT 2283

*TITLE* PLANS FOR A GLASS AND CONCRETE SOLAR STILL.
*AUTHOR* LAWAND T A, ALWARD R.
*SOURCE* TECH REPORT T58, BRACE RESEARCH INST, OCT 1972, 8 PP.
*KEYWORDS* SOLAR.
*NOTES*.
*DATE* 721000

ABSTRACT 2284

*TITLE* SIMPLE SOLAR STILL FOR THE PRODUCTION OF DISTILLED WATER.
*AUTHOR* LAWAND T A.
*SOURCE* TECH REPORT T17, BRACE EXPT STA, BARBADOS, WEST INDIES, SEPT 1967.
*KEYWORDS* SOLAR, DISTILLATION.
*NOTES*.
*DATE* 670900

ABSTRACT 2285

*TITLE* ENGINEERING AND ECONOMIC EVALUATION OF SOLAR DISTILLATION FOR SMALL COMMUNITIES.
*AUTHOR* LAWAND T A.
*SOURCE* PUBLICATION NO MT-6, BRACE RESEARCH INST, AUG 1968, 11 PP.
*KEYWORDS* SOLAR, DISTILLATION.
*NOTES*.
*DATE* 680800

ABSTRACT 2286

*TITLE* SYSTEMS FOR SOLAR DISTILLATION.
*AUTHOR* LAWAND T A.
*SOURCE* ANNALS OF ARID ZONE, 19(3)/177-205, SEPT 1976.
*KEYWORDS* SOLAR, DISTILLATION.
*NOTES* FILED.
*DATE* 760920

ABSTRACT 2287

*TITLE* NEW APPROACHES FOR THE APPROPRIATE USE OF SOLAR ENERGY IN NORTHERN CLIMATES.
*AUTHOR* LAWAND T A, BUDGEN H P, IVES C, LE NORMAND J, SKELETON A, GAVINIE L.
*SOURCE* PRESENTED AT THE 4TH ANNUAL MEETING OF THE SOLAR ENERGY SOC OF CANADA, UNIV OF WESTERN ONTARIO, LONDON, ONTARIO, CANADA, 20-24 AUG 1978, 18 PP.
*KEYWORDS* SOLAR, GREENHOUSE, BUILDINGS.
*NOTES*.
*DATE* 780820

ABSTRACT 2288

*TITLE* BIOENERGETICS.
*AUTHOR* LEHNINGER.
*SOURCE* NEW YORK/W A BENJAMIN INC, 1965, 258 PP.
*KEYWORDS* SOLAR, ENERGY FLOW, PHOTOSYNTHESIS.
*NOTES*.
*DATE* 650000

ABSTRACT 2289

*TITLE* INTEGRATING PHOTOVOLTAIC THRESHOLD PYROMETER.
*AUTHOR* LESEA A, MERRIAM M F.
*SOURCE* PRESENTED AT ISES CONF, LOS ANGELES, 1975, 6 PP.
*KEYWORDS* SOLAR, PHOTOVOLTAIC.
*NOTES* FILED.
*DATE* 750000

ABSTRACT 2290

*TITLE* THE CURRENT STATE OF KNOWLEDGE OF PHOTOCHEMICAL FORMATION OF FUEL.
*AUTHOR* LICHTIN H N.
*SOURCE* NSF-RA-W-75-094, RANN DOCUMENT CENTER, NATIONAL SCIENCE FOUNDATION, WASHINGTON D C, SEPT 1974, 176 PP.
*KEYWORDS* SOLAR, PHOTOCHEMICAL, HYDROGEN, ELECTRICAL, ORGANIC.
*NOTES* FILED.
*DATE* 740900
ABSTRACT 2298

• TITLE: RESEARCH ON THE APPLICATION OF SOLAR ENERGY TO THE FOOD DRYING INDUSTRY.
• AUTHOR: LUKES T.
• SOURCE: CALIF POLYTECHNIC STATE UNIV, SAN LUIS OBISPO, CA, 31 DEC 1975, 48PP.
• KEYWORDS: SOLAR, DRYING, FOOD PROCESSING.
• NOTES: FILED.
• DATE: 751231

ABSTRACT 2299

• TITLE: SOLAR ENERGY - THE STATE OF THE ART AND THE ART OF THE STATES.
• AUTHOR: LUSTIG H.
• SOURCE: PREPARED FOR UNESCO, TECH DIV OF HIGHER ED AND RESEARCH, 15 FEB 1974, 78 PP.
• KEYWORDS: SOLAR, BIBLIOGRAPHY.
• NOTES: FILED.
• DATE: 740215

ABSTRACT 2300

• TITLE: SOLAR ENERGY AND RURAL DEVELOPMENT FOR THE THIRD WORLD.
• AUTHOR: MAKHJANI A.
• KEYWORDS: SOLAR, COOKING, POLICY, DEVELOPING COUNTRIES.
• NOTES: FILED.
• DATE: 760600

ABSTRACT 2301

• TITLE: SOLAR ENERGY UTILIZATION FOR ARID ZONE DEVELOPMENT.
• AUTHOR: MANN H S.
• KEYWORDS: SOLAR, INDIA, DRYING, DISTILLATION.
• NOTES: FILED.
• DATE: 760900

ABSTRACT 2302

• TITLE: SOLAR ENERGY UTILIZATION.
• AUTHOR: MANN H S, ED.
• SOURCE: ANNALS OF ARID ZONE 19(3), SEPT 1976, THE ARID ZONE RESEARCH ASSOCIATION OF INDIA.
• KEYWORDS: SOLAR, PUMPS, DESIGN, DISTILLATION, DRYING.
• NOTES: FILED.
• DATE: 760900

ABSTRACT 2303

• TITLE: PROCEEDINGS OF THE SEVENTH MEETING OF ALL INDIA SOLAR ENERGY WORKING GROUP AND CONFERENCE ON THE UTILIZATION OF SOLAR ENERGY.
• AUTHOR: MANNAN K D, ED.
• SOURCE: DEPT OF MECH ENGR, COLLEGE OF AGR ENGR, PUNJAB AGR UNIV, LUDHIANA, INDIA, 13 NOV 1975, 182 PP.
• KEYWORDS: SOLAR, INDIA.
• NOTES: FILED.
• DATE: 751113

ABSTRACT 2304

• TITLE: AUTONOMOUS LIVING IN THE OUROBOROS HOUSE.
• AUTHOR: MARCOVICH S J.
• SOURCE: POPULAR SCIENCE, DEC 1975, PP 80-82, 111.
• KEYWORDS: SOLAR, HOME.
• NOTES: FILED.
• DATE: 751200
ABSTRACT 2312
*TITLE* COLLECTOR WINDOWS FROM FLUORESCENT LIGHT TUBES.
*AUTHOR* MERHAN M. F., RISSMAN, R. L., ONG K. S., SEEMAN K.
*SOURCE* DEPT. OF MATERIALS SCI AND ENGR. COLLEGE OF ENGR, UNIV OF CALIF. BERKELEY, JULY 1975, 10 PP.
*KEYWORDS* SOLAR.
*NOTES* FILED.
*DATE* 750708

ABSTRACT 2313
*TITLE* OCEAN THERMAL ENERGY - THE BIGGEST GAMBLE IN SOLAR POWER.
*AUTHOR* METZ W. D.
*SOURCE* SCIENCE, 197/18-200, 14 OCT 1977.
*KEYWORDS* SOLAR, SEATHERM.
*NOTES* FILED. LAST ARTICLE, IN A SERIES OF SEVEN.
*DATE* 771014

ABSTRACT 2314
*TITLE* SOLAR THERMAL ELECTRICITY - POWER TOWER DOMINATES RESEARCH.
*AUTHOR* METZ W. D.
*KEYWORDS* SOLAR, ELECTRICAL.
*NOTES* FILED. SECOND ARTICLE IN A SERIES OF SEVEN.
*DATE* 770722

ABSTRACT 2315
*TITLE* SOLAR THERMAL ENERGY - BRINGING THE PIECES TOGETHER.
*AUTHOR* METZ W. D.
*KEYWORDS* SOLAR.
*NOTES* FILED. FOURTH ARTICLE IN A SERIES OF SEVEN.
*DATE* 770812

ABSTRACT 2316
*TITLE* SOLAR HEATED AIR DRYING OF SOYBEAN SEED AND SHELLED CORN.
*AUTHOR* MEYER G. E., KEENER M. M., ROLLER W. L.
*SOURCE* ASAE PAPER 75-3002, 1975, 21 PP.
*KEYWORDS* SOLAR, DRYING, AGRICULTURE.
*NOTES* FILED.
*DATE* 750000

ABSTRACT 2317
*TITLE* SOYBEAN DRYING WITH SOLAR HEAT.
*AUTHOR* MEYER G. E., KEENER M. M.
*SOURCE* PRESENTED AT THE SOLAR GRAIN DRYING SYMPOSIUM, MANHATTAN, KS, 1 MAY 1975, 7 PP.
*KEYWORDS* SOLAR, DRYING.
*NOTES* FILED.
*DATE* 750501

ABSTRACT 2318
*TITLE* SOLAR ENERGY HOME DESIGN IN FOUR CLIMATES.
*AUTHOR* MICHAL C. J.
*SOURCE* TOTAL ENVIRONMENT ACTION, HARRISVILLE, NH, AUG 1976, 196 PP.
*KEYWORDS* SOLAR, DESIGN, HOME, HEAT, STORAGE, COOLING.
*NOTES* FILED.
*DATE* 760800

ABSTRACT 2319
*TITLE* OLD SOURCE FOR NEW ENERGY.
*AUTHOR* MOCKOVCIK J.
*SOURCE* HORIZONS, 10/11/2-7, 1974.
*KEYWORDS* SOLAR, FOSSIL FUELS, PETROLEUM, COAL.
*NOTES* FILED.
*DATE* 740000
ABSTRACT 2320

**Title**: Five Solar Water Heaters You Can Build.

**Author**: Moran E.

**Source**: Popular Science, 208(5)/99-103, May 1976.

**Keywords**: Solar, Heat.

**Notes**: Filed.

**Date**: 760500

ABSTRACT 2321

**Title**: Field Evaluation of a Solar Energy Grain Drying System.

**Author**: Morey R V, Cloud H A, Nelson W W.

**Source**: ASAE Paper 75-3515, 17 pp.

**Keywords**: Solar, Drying.

**Notes**: Filed.

**Date**: 750908

ABSTRACT 2322

**Title**: Solar Cells Find Their Niche in Everyday Life on Earth.

**Author**: Smithsonion, 817(7)/37-45, Oct 1977.

**Keywords**: Solar, Photovoltaic.

**Notes**: Filed. Present and future costs, performance, and potential of solar cells.

**Date**: 771000

ABSTRACT 2323

**Title**: Bare Plate Solar Collector Grain Drying Bin.

**Author**: Morrison D W, Shove G C.

**Source**: ASAE Paper 75-3513, 6 pp.

**Keywords**: Solar, Drying.

**Notes**: Filed.

**Date**: 750900

ABSTRACT 2324

**Title**: Solar Energy - Heat Pump Low Temperature Grain Drying.

**Author**: Morrison D W, Shove G C.

**Source**: ASAE Paper 77-3546, 1977, 8 pp.

**Keywords**: Solar, Drying, Heat Pumps.

**Notes**: Filed.

**Date**: 771000

ABSTRACT 2325

**Title**: Solar Energy - Its Time Is Near.

**Author**: Morrow W E.

**Source**: Technology Review, Dec 1973, pp 30-43.

**Keywords**: Solar, Economics.

**Notes**: Filed. Facts about solar energy and its possible implementation as a major energy source. Possible designs for solar energy power plants are viewed.

**Date**: 731220

ABSTRACT 2326

**Title**: Solar Energy As a Major Primary Energy Source.

**Author**: Morse R M, et al.


**Keywords**: Solar, Australia, Organic, Photosynthesis.

**Notes**: Filed.

**Date**: 731112

ABSTRACT 2327

**Title**: The Status of Solar Energy Utilization in Australia for Industrial Commercial and Domestic Purposes.

**Author**: Morse R M, Cooper P I, Proctor D.


**Keywords**: Solar, Heat, Buildings, Cooling, Drying, Australia, Storage.

**Notes**: Filed.

**Date**: 740710
ABSTRACT 2328

*TITLE* SOLAR POWER FROM SATELITES
*AUTHOR* MOSS F E ET AL.
*SOURCE* HEARINGS BEFORE THE SUBCOMMITTEE ON AEROSPACE TECH AND NATIONAL NEEDS OF THE COMMITTEE ON AERONAUTICAL AND SPACE SCIENCES, UNITED STATES SENATE, 90TH CONGRESS, SECOND SESSION, 19-21 JAN 1976, 230 PP.
*KEYWORDS* SOLAR, SOCIAL IMPLICATIONS, ECONOMICS, TECHNOLOGY ASSESSMENT, CONVERSION.
*NOTE* FILED.
*DATE* 760119

ABSTRACT 2329

*TITLE* SMALL AND MEDIUM SCALE APPLICATIONS OF SOLAR ENERGY AND THEIR POTENTIAL FOR THE DEVELOPING COUNTRIES
*AUTHOR* MOUSSAOU A.
*SOURCE* WORKING PARTY ON SOLAR ENERGY, UNESCO, PARIS, FRANCE, 10 JUNE 1973, 19 PP.
*KEYWORDS* SOLAR, DEVELOPING COUNTRIES, COOKING, HEAT, DISTILLATION, ELECTRICAL.
*NOTE* FILED.
*DATE* 730610

ABSTRACT 2330

*TITLE* DIRECT USE OF SOLAR ENERGY FOR WATER DESALINATION.
*AUTHOR* NOUSTAFA S M A, BRUSEWITZ & N. FARMER D A.
*SOURCE* PAPER OKLAHOMA AGR EXPT STA, OKLAHOMA STATE UNIV, STILLWATER, OK, 1977, 26 PP.
*KEYWORDS* SOLAR, DISTILLATION.
*NOTE* FILED.
*DATE* 770630

ABSTRACT 2331

*TITLE* APPLICATIONS OF SOLAR ENERGY FOR PREHEATING VENTILATING AIR.
*AUTHOR* MYERS C A, ROBBINS F V.
*SOURCE* ASAE PAPER 77-3545, 1977, 10 PP.
*KEYWORDS* SOLAR, VENTILATION, BUILDINGS.
*NOTE* FILED.
*DATE* 770300

ABSTRACT 2332

*TITLE* SOLAR ENERGY USE IN AGRICULTURE.
*AUTHOR* MYERS C A, STOUT B A.
*SOURCE* AEIS 355, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, 30 AUG 1976, 12 PP.
*KEYWORDS* SOLAR, AGRICULTURE.
*NOTE* FILED.
*DATE* 760930

ABSTRACT 2333

*TITLE* SOLAR ENERGY USE IN AGRICULTURE.
*AUTHOR* MYERS C A, STOUT B A.
*SOURCE* AEIS 355, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, 30 AUG 1976, 12 PP.
*KEYWORDS* SOLAR, AGRICULTURE.
*NOTE* FILED.
*DATE* 770300

ABSTRACT 2334

*TITLE* PHOTOVOLTAIC CONVERSION OF SOLAR ENERGY FOR TERRESTRIAL APPLICATIONS.
*SOURCE* PHOTOVOLTAIC CONVERSION OF SOLAR ENERGY FOR TERRESTRIAL APPLICATIONS, VOL II, INVITED PAPERS.
*AUTHOR* NATIONAL SCIENCE FOUNDATION.
*KEYWORDS* SOLAR, PHOTOVOLTAIC, CONVERSION.
*NOTE* FILED.
*DATE* 731023
ABSTRACT 2335

TITLE: SOLAR TECHNOLOGY APPLICATIONS - A LITERATURE REVIEW OF SOLAR THERMAL POWERED IRRIGATION SYSTEMS.

AUTHOR: NEWKIRK H W.

SOURCE: LAWRENCE LIVERMORE LAB, CALIF, UNIV, LIVERMORE, CA.

KEYWORDS: SOLAR, IRRIGATION.

NOTES: NTIS: UCID-17510.

DATE: 770630.

ABSTRACT 2336

TITLE: RECENT RESEARCH AND DEVELOPMENT ON SOLAR ENERGY APPLICATION IN JAPAN.

AUTHOR: NOGUCHI T.


KEYWORDS: SOLAR, JAPAN, COOLING, HEAT.

DATE: 760900.

ABSTRACT 2337

TITLE: SOLAR ENERGY - THE REVOLUTION IS UNDER WAY.

AUTHOR: ODELL R.


KEYWORDS: SOLAR, BUILDINGS, ELECTRICAL, ENVIRONMENT.

DATE: 770600.

ABSTRACT 2338

TITLE: SOLAR HEATING AND COOLING DEMONSTRATION PROGRAM - A DESCRIPTIVE SUMMARY OF HUD SOLAR RESIDENTIAL DEMONSTRATION.

AUTHOR: ORLEBEKE C J.


DATE: 760900.

ABSTRACT 2339

TITLE: SOLAR ENERGY FIXATION WITH ALGAL-BACTERIAL SYSTEMS.

AUTHOR: OSWALD W Jr.


DATE: 740110.

ABSTRACT 2340

TITLE: THE SOLAR STILL.

AUTHOR: PARKER R, HUMENIK F J, HOLMES R G, OVERTCASH M.


DATE: 740900.

ABSTRACT 2341

TITLE: MULTIPLE FIN SOLAR ENERGY RECEIVER FOR LINE FOCUSING COLLECTORS.

AUTHOR: PARKER B F.

SOURCE: ASAE PAPER 77-4534, 1977, 12 PP.

DATE: 770000.
ABSTRACT 2342

*TITLE: SOLAR WATER HEATER FOR YOUR VACATION HOME.
*AUTHOR: PAYNE J., MCENGLISH T.
*SOURCE: POPULAR SCIENCE, SEPT 1974, 3 PP.
*KEYWORDS: SOLAR, HOME.
*DATE: 740900

ABSTRACT 2343

*TITLE: SOLAR-ELECTRIC CROP DRYER PROGRESS REPORT.
*AUTHOR: PETESON W. H.
*SOURCE: AGR ENGR DEPT, SOUTH DAKOTA STATE UNIV, 1 DEC 1973, 10 PP.
*KEYWORDS: SOLAR, ELECTRICAL, DRYING.
*DATE: 731201

ABSTRACT 2344

*TITLE: SOLAR HEAT FOR DRYING SHELLED CORN.
*AUTHOR: PETERSON W. H.
*SOURCE: ASAE PAPER 73-302, 14 PP.
*KEYWORDS: SOLAR, DRYING.
*DATE: 750000

ABSTRACT 2345

*TITLE: THE LONG-RANGE PROSPECTS FOR SOLAR ENERGY.
*AUTHOR: POLLARD W. G.
*KEYWORDS: SOLAR, ELECTRICAL, TECHNOLOGY ASSESSMENT.
*DATE: 760700

ABSTRACT 2346

*TITLE: SOLAR ENERGY HANDBOOK - 1978.
*AUTHOR: POPULAR SCIENCE.
*SOURCE: POPULAR SCIENCE, 1978, 112 PP.
*KEYWORDS: SOLAR, HOME, COOLING, LEGISLATION, ADVERTISEMENT.
*DATE: 780400

ABSTRACT 2347

*TITLE: THE USE OF WASTE HEAT IN A SOLAR STILL.
*AUTHOR: PROCTOR D.
*SOURCE: SOLAR ENERGY, 14/433-449.
*KEYWORDS: SOLAR.
*DATE: NAS

ABSTRACT 2348

*TITLE: SOLAR CELLS - OUTLOOK FOR IMPROVED EFFICIENCY.
*AUTHOR: RAPPAPORT P. ET AL.
*SOURCE: AD HOC PANEL ON SOLAR CELL EFFICIENCY, NAS, SPACE SCIENCE BOARD.
*KEYWORDS: SOLAR, PHOTOSYNTHESIS, PHOTOVOLTAIC.
*DATE: 720000

ABSTRACT 2349

*TITLE: SOLAR ENERGY FOR PROCESS HEATING: INDUSTRIAL HOT WATER AND STEAM.
*AUTHOR: READ W. R., DAVEY E. T.
*SOURCE: PROC SYMPOSIUM ON REALISTIC PROSPECTS FOR SOLAR POWER IN AUSTRALIA.
*DATE: 731122
ABSTRACT 2350

**TITLE**: ENERGY CONSERVATION AND SOLAR HEATING IN POULTRY PRODUCTION.
**AUTHOR**: REECE F. M.
**KEYWORDS**: SOLAR, POULTRY, BUILDINGS.
**DATE**: 771024

ABSTRACT 2351

**TITLE**: DESIGNING A RESIDENTIAL SOLAR HEATING SYSTEM.
**AUTHOR**: REMMERS H. E.
**KEYWORDS**: SOLAR, HEAT.
**DATE**: 750100

ABSTRACT 2352

**TITLE**: FIELD TEST PROCEDURE FOR RATING RESIDENTIAL SOLAR HEATING SYSTEMS BASED ON USEFUL HEAT DELIVERY.
**AUTHOR**: REMMERS H. E., KIER M. W.
**SOURCE**: ISC-01-23, ENGR DIV, INTERNATIONAL SOLKINHERMICS CORP, BOX 397, NEDERLAND, COLORADO, MAY 1975, 22 PP.
**KEYWORDS**: SOLAR, HEAT, HOME.
**DATE**: 750500

ABSTRACT 2353

**TITLE**: SOLAR ENERGY TRANSMISSION THROUGH TWO TRANSPARENT COVERS.
**AUTHOR**: ROBBINS F. V., SILLMAN C. K.
**SOURCE**: ASAE PAPER 77-3006, 1977, 15PP.
**KEYWORDS**: SOLAR, TRANSMISSION, INSULATION.
**DATE**: 770604

ABSTRACT 2354

**TITLE**: HEATING PLASTIC GREENHOUSES WITH SOLAR ENERGY.
**AUTHOR**: ROBERTS W. J. ET AL.
**SOURCE**: ASAE PAPER 76-102, 15 AUG 1976, 10 PP.
**KEYWORDS**: SOLAR, GREENHOUSE, STORAGE.
**DATE**: 760815

ABSTRACT 2355

**TITLE**: IRAN—THE USE OF SECONDARY TREATED WASTE WATER EFFLUENT FOR ENERGY EFFICIENT CROP PRODUCTION.
**AUTHOR**: SHAH A., SHAYEGAN J.
**KEYWORDS**: SOLAR, PHOTOSYNTHEIS, IRRIGATION, WASTES, FERTILIZER, IRAN.
**DATE**: 771124

ABSTRACT 2356

**TITLE**: HEATING WITH SOLAR ENERGY.
**AUTHOR**: SCHINDLER D. E.
**SOURCE**: FS-18, KANSAS STATE UNIV, MANHATTAN, KS, MAY 1977, 4PP.
**KEYWORDS**: SOLAR, HEAT, STORAGE.
**DATE**: 770500
ABSTRACT 2357

•TITLE• THE ECONOMICS OF SOLAR HOME HEATING.
•AUTHOR• SCHULZE W D ET AL.
•SOURCE• JOINT ECONOMIC COMMITTEE• US CONGRESS• 95TH CONGRESS• 1ST SESSION• US GOVT PRINTING OFFICE• WASHINGTON DC 20405• 13 MARCH 1977• 86 PP.
•KEYWORDS• SOLAR• ECONOMICS• HOME.
•NOTES• FILED• STUDY REVIEW THE ECONOMICS OF SOLAR ENERGY USED TO HEAT RESIDENTIAL STRUCTURES AND TO HEAT WATER. IT ANALYZES THE EXTENT TO WHICH SUCH SOLAR APPLICATIONS CAN ECONOMICALLY SUBSTITUTE FOR MORE CONVENTIONAL RESIDENTIAL HEATING AND HOT WATER SYSTEMS. THE ANALYSIS IS DONE ON A STATE-BY-STATE BASIS, AND COVERS THE PERIOD, 1976-1990.
•DATE• 770313

ABSTRACT 2358

•TITLE• SOLAR HEATING AND COOLING OF BUILDINGS.
•AUTHOR• SHERIDAN N R.
•SOURCE• PROCEEDINGS ON REALISTIC PROSPECTS FOR SOLAR POWER IN AUSTRALIA• INTERNATIONAL SOLAR ENERGY SOC• 22 NOV 1973.
•KEYWORDS• SOLAR• HEAT• COOLING• AUSTRALIA• STORAGE.
•NOTES• FILED.
•DATE• 731122

ABSTRACT 2359

•TITLE• A SOLAR POND FOR HEATING AND COOLING GREENHOUSES AND RURAL RESIDENCES.
•AUTHOR• SHORT T M• ROLLER W L• BADGER P C.
•SOURCE• AGR ENSR DEPT• OHIO AGR RESEARCH AND DEV CENTER• WOOSTER• 3 PP• UNDATED.
•KEYWORDS• SOLAR• HEAT• COOLING• GREENHOUSE• HOME.
•NOTES• FILED.
•DATE•

ABSTRACT 2360

•TITLE• A SOLAR POND FOR HEATING GREENHOUSES AND RURAL RESIDENCES - A PRELIMINARY REPORT.
•AUTHOR• SHORT T M• ROLLER W L• BADGER P C.
•SOURCE• ASAE PAPER 76-4012• 6 PP• UNDATED.
•KEYWORDS• SOLAR• GREENHOUSE• HOME• HEAT.
•NOTES• FILED.
•DATE• 760000

ABSTRACT 2361

•TITLE• A SOLAR-HEATED GREENHOUSE.
•AUTHOR• SHORT T M• BADGER P C• ROLLER W L.
•SOURCE• ASAE PAPER 76-4012• 6 PP• UNDATED.
•KEYWORDS• SOLAR• GREENHOUSE• HEAT.
•NOTES• FILED.
•DATE• 760700

ABSTRACT 2362

•TITLE• ACTIVE-TYPE SOLAR HEATING SYSTEMS FOR HOUSES - A TECHNOLOGY IN FERMENT.
•AUTHOR• SMUCKLIF T W A.
•SOURCE• BULLETIN OF THE ATOMIC SCIENTISTS• 32(2)/30•40• FEB 1976.
•KEYWORDS• SOLAR• HOME• HEAT.
•NOTES• FILED.
•DATE• 760200

ABSTRACT 2363

•TITLE• PERFORMANCE OF A DIURNALLY TRACKING SOLAR ENERGY - INTENSIFIER.
•AUTHOR• SIEGEL C• HELLEICKSON R A• VERA L R• PETERSON W M.
•SOURCE• ASAE PAPER 75-1531• 1978• 29 PP• UNDATED.
•KEYWORDS• SOLAR• EFFICIENCY• ECONOMICS.
•NOTES• FILED.
•DATE• 780000
ABSTRACT 2364

*TITLE: COVERED PLATE SOLAR COLLECTOR INCORPORATED INTO WALL AND ROOF OF A FARM BUILDING.
*AUTHOR: SMIT C D, SHOVE G C.
*SOURCE: ASAE PAPER 76-3515, 1976, 8 PP.
*KEYWORDS: SOLAR, DRYING, DESIGN.
*NOTES: FILED.
*DATE: 760000

ABSTRACT 2365

*TITLE: A SOLAR POWERED DOMESTIC HOT WATER HEATER.
*AUTHOR: SMITH N, ANDERSON W.
*SOURCE: ASAE PAPER 76-105, 18 AUG 1976, 9 PP.
*KEYWORDS: SOLAR, HOME.
*NOTES: FILED.
*DATE: 760815

ABSTRACT 2366

*TITLE: SOLAR PROCESS DRYING OF POTATO PRODUCTS.
*AUTHOR: SMITH C C, HAGA J A, CHAPMAN J C.
*SOURCE: ASAE PAPER 77-621, 1977, 19 PP.
*KEYWORDS: SOLAR, FOOD PROCESSING, DEHYDRATION.
*NOTES: FILED. THE PRINCIPLE OBJECTIVE OF THIS WORK IS TO ESTABLISH THE METHODS AND CONDITIONS UNDER WHICH SOLAR ENERGY CAN BE USED MOST PROFITABLY IN THE FOOD PROCESS DEHYDRATION PLANT.
*DATE: 770000

ABSTRACT 2367

*TITLE: COMPANY LITERATURE.
*AUTHOR: SOLAR ENERGY PRODUCTS CO.
*SOURCE: SOLAR, SOLAR ENERGY PRODUCTS CO, 121 MILLER RD, AVON LAKE, OH.
*KEYWORDS: SOLAR, DRYING, ADVERTISEMENT.
*NOTES: FILED.
*DATE:

ABSTRACT 2368

*TITLE: SOLAR AGE.
*AUTHOR: SOLAR AGE.
*SOURCE: SOLAR AGE, PO BOX 4934, MANCHESTER, NH 03108.
*KEYWORDS: SOLAR, JOURNAL.
*NOTES: FILED. MONTHLY JOURNAL.
*DATE:

ABSTRACT 2369

*TITLE: HOW TO BUY SOLAR-WITHOUT GETTING BURN'T.
*AUTHOR: WELLS R, SPEITELG I.
*SOURCE: EMAS, PARADALE PRESS, 1978, 262 PP.
*KEYWORDS: SOLAR, HOME.
*NOTES: J. POSSELIUS. A CONSUMER'S GUIDE TO CHOOSING, FINANCING, AND INSTALLING SOLAR HOUSE HEATING EQUIPMENT.
*DATE: 780000

ABSTRACT 2370

*TITLE: INDUSTRIAL APPLICATIONS OF SOLAR ENERGY.
*AUTHOR: SRINIVASAN S P R, ET AL.
*SOURCE: SEMINAR PROCEEDINGS, NATIONAL PRODUCTIVITY COUNCIL, PRODUCTIVITY HOUSE, LODI ROAD, NEW DELHI 110003, 4 JUNE 1975, 336 PP.
*KEYWORDS: SOLAR, INDUSTRY, INDIA.
*NOTES: FILED.
*DATE: 750604

ABSTRACT 2371

*TITLE: PROCEEDINGS OF WORLD SYMPOSIUM ON APPLIED SOLAR ENERGY.
*AUTHOR: STANFORD RESEARCH INSTITUTE.
*SOURCE: SRI, MENLO PARK, CA 94025, 1996.
*KEYWORDS: SOLAR.
*NOTES.
*DATE: 960000
ABSTRACT 2372

**TITLE:** NOW YOU CAN BUY SOLAR HEATING EQUIPMENT FOR YOUR HOME.

*Author:* STEPLER R.

*Source:* POPULAR SCIENCE, MARCH 1975, PP 74-77; 136-142.

*Keywords:* SOLAR, HEAT.

*Notes:* Filed.

*Date:* 750300

ABSTRACT 2373

**TITLE:** SOLAR WATER HEATERS YOU CAN BUY NOW.

*Author:* STEPLER R.

*Source:* POPULAR SCIENCE, 208(5)/104-105; 137-138; 142, MAY 1976.

*Keywords:* SOLAR, HEAT.

*Notes:* Filed.

*Date:* 760500

ABSTRACT 2374

**TITLE:** USING THE SUN TO DRY GRAIN.

*Author:* STEVENS A L.

*Source:* OHIO REPORT, 59(6)/73, NOV-DEC 1974.

*Keywords:* SOLAR, DRYING.

*Notes:* Filed.

*Date:* 741100

ABSTRACT 2375

**TITLE:** AGRICULTURAL APPLICATIONS OF SOLAR ENERGY.

*Author:* STOUT B A; MYERS C A.


*Keywords:* SOLAR, AGRICULTURE, TECHNOLOGY ASSESSMENT.

*Notes:* Filed. SUMMARIES OF EXAMPLE PROJECTS FOR EIGHT CATEGORIES OF ON AND OFF FARM APPLICATIONS OF SOLAR ENERGY ARE INCLUDED.

*Date:* 780831

ABSTRACT 2376

**TITLE:** A UNIVERSAL SOLAR KITCHEN.

*Author:* SVET C J E.

*Source:* REPORT APL/JHU, JOHNS HOPKINS UNIV, JULY 1972; 23 PP.

*Keywords:* SOLAR, COOKING, DEVELOPING COUNTRIES.

*Notes:* NAS.

*Date:* 720700

ABSTRACT 2377

**TITLE:** LOW HEAD SOLAR WATER PUMPING.

*Author:* SVET C J E; FOX M E.


*Keywords:* SOLAR, WATER POWER.

*Notes:* Filed.

*Date:* 730000

ABSTRACT 2378

**TITLE:** SOLAR ENERGY FOR DEVELOPING REGIONS.

*Author:* TABOR H Z.

*Source:* WORKING PARTY ON SOLAR ENERGY, UNESCO, PARIS, 27-29 JUNE 1973; 29 PP.

*Keywords:* SOLAR, DEVELOPING COUNTRIES, DISTILLATION, DRYING, REFRIGERATION.

*Notes:* Filed.

*Date:* 730627

ABSTRACT 2379

**TITLE:** SOLAR PONDS.

*Author:* TABOR H Z.


*Keywords:* SOLAR, HEAT.

*Notes:* Filed.

*Date:* 660600
ABSTRACT 2387

• TITLE: SOLAR DISTILLATION
• AUTHOR: THOMAS R G
• SOURCE: WATER RESOURCES, DEV AND MANAGEMENT SERVICE, LAND AND WATER DEV DIV
• FAD: AHSCE, 1 JAN 1975, 2 PP
• KEYWORDS: SOLAR, DISTILLATION, ECONOMICS
• NOTES: FILED
• DATE: 750101

ABSTRACT 2388

• TITLE: FEASIBILITY OF SOLAR WATER HEATING IN MILK PROCESSING PLANTS IN THE MIDWESTERN UNITED STATES
• AUTHOR: THOMAS S H, BARKER-ARKEMA F W, RIPPEM A L
• SOURCE: ASAE PAPER 77-3526, 1977, 16 PP
• KEYWORDS: SOLAR, MODELS, FOOD PROCESSING, MILK
• NOTES: FILED
• DATE: 770320

ABSTRACT 2389

• TITLE: THE EFFECT OF ENVIRONMENTAL AND OPERATING CONDITIONS ON THE THERMAL PERFORMANCE OF FLAT-PLATE SOLAR COLLECTORS
• AUTHOR: THOMAS W C, VAUGHAN D M
• SOURCE: ASAE PAPER 78-4528, 1978, 19 PP
• KEYWORDS: SOLAR, MODELS, EFFICIENCY, TECHNOLOGY ASSESSMENT
• NOTES: FILED: RESULTS ARE PRESENTED TO SHOW THE DIFFERENCE BETWEEN COLLECTOR PERFORMANCE WHEN USING STANDARD TEST PROCEDURES AND WHEN USING TYPICAL AVERAGE MONTHLY WEATHER CONDITIONS
• DATE: 780700

ABSTRACT 2390

• TITLE: SOLAR HEATING FOR THE HANDYMAN
• AUTHOR: THOMASON H E, HAND Jo, BEASON R B
• SOURCE: MECHANIX ILLUSTRATED, SEPT 1974, 4 PP
• KEYWORDS: SOLAR, HEAT, HOME
• NOTES: FILED
• DATE: 740900

ABSTRACT 2391

• TITLE: SOLAR ENERGY FOR MILKING PARLOR HEATING AND COOLING
• AUTHOR: THOMPSON P D
• SOURCE: ASAE PAPER 78-3521, 8 PP
• KEYWORDS: SOLAR, HEAT, COOLING, DAIRY
• NOTES: FILED
• DATE: 750000

ABSTRACT 2392

• TITLE: MILKING PARLOR SOLAR HEATING SYSTEM PERFORMANCE
• AUTHOR: THOMPSON P D, HAIDEN R B
• SOURCE: ASAE PAPER 76-3571, 1976, 10 PP
• KEYWORDS: SOLAR, DAIRY, HEAT
• NOTES: FILED
• DATE: 760700

ABSTRACT 2393

• TITLE: SOLAR HEATING FOR MILKING PARLORS
• AUTHOR: THOMPSON P D, CLARY M G
• SOURCE: FARMERS BULLETIN NC 2266, AGR RESEARCH SERVICE, USDA
• HYATTSVILLE: MD, 20782, SEPT 1977, 15 PP
• KEYWORDS: SOLAR, DAIRY
• NOTES: FILED
• DATE: 770900
ABSTRACT 2394

•TITLE: UNESCO FEATURES.  
•AUTHOR: TROMBE F, FULLERTON A G, BEHRMAN D.  
•SOURCE: UNESCO FEATURES 656, PARIS, FRANCE, 1973, 27 PP.  
•KEYWORDS: SOLAR, HEAT, SOVIET UNION, COOKING, IRRIGATION, DEVELOPING COUNTRIES.  
•NOTES: FILED.  
•DATE: 730200

ABSTRACT 2395

•TITLE: SOLAR ENERGY DATA WORKSHOP.  
•AUTHOR: TURNER C.  
•SOURCE: NSF-RA-974-562, US GOVERNMENT PRINTING OFFICE, WASHINGTON D C.  
•DATE: 731129

•KEYWORDS: SOLAR, DESIGN, PHOTOVOLTAIC, BIBLIOGRAPHY.  
•NOTES: FILED.  
•DATE: 731129

ABSTRACT 2396

•TITLE: SOLAR HEATING FOR HOME, FARM AND SMALL BUSINESS - BASIC FACTS ABOUT COLLECTION, STORAGE AND UTILIZATION.  
•AUTHOR: TURNER L V, DALE A C, MCKENZIE B A.  
•SOURCE: AE 88, COOPERATIVE EXTENSION SERVICE, PURDUE UNIV., WEST LAFAYETTE, IN 47907, 1977, 18 PP.  
•KEYWORDS: SOLAR, HOME, GENERAL.  
•NOTES: FILED.  
•DATE: 770710

ABSTRACT 2397

•TITLE: REPORT OF THE EXPERT WORKING GROUP ON THE USE OF SOLAR AND WIND ENERGY.  
•AUTHOR: UN-ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC.  
•SOURCE: COMMITTEE ON NATURAL RESOURCES, ESCAP, BANGKOK, THAILAND.  
•KEYWORDS: SOLAR, WIND, ASIA.  
•NOTES: FILED.  
•DATE: 760927

ABSTRACT 2398

•TITLE: SYMPOSIUM ON WIND AND SOLAR ENERGY.  
•AUTHOR: UN-EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION.  
•SOURCE: UNESCO SYMPOSIUM, 22-25 OCT 1954, NEW DELHI, INDIA, 238 PP.  
•KEYWORDS: SOLAR.  
•NOTES:  
•DATE: 541022

ABSTRACT 2399

•TITLE: THE SUN IN THE SERVICE OF MANKIND.  
•AUTHOR: UN-EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION.  
•SOURCE: PROC. OF THE INTERNATIONAL CONGRESS, UNESCO, PARIS.  
•DATE: 730702

ABSTRACT 2400

•TITLE: SOME NEW SOLAR ENERGY ACTIVITIES IN AFRICA.  
•AUTHOR: UN-EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION.  
•SOURCE: BULLETIN OF THE REGIONAL OFFICE OF SCI AND TECH FOR AFRICA, UNESCO, NAIROBI, KENYA.  
•DATE: 741002

ABSTRACT 2401

•TITLE: UNESCO COURIER.  
•AUTHOR: UN-EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION.  
•SOURCE: UNESCO COURIER, PLACE DE FONTENAY, 75700, PARIS, JAN 1974, 60 PP.  
•KEYWORDS: SOLAR, DEVELOPING COUNTRIES, JOURNAL.  
•NOTES: SERIES OF ARTICLES ON SOLAR ENERGY UTILIZATION AND IMPLICATIONS FOR DEVELOPING COUNTRIES.  
•DATE: 740130
ABSTRACT 2402

•TITLE• SOLAR DWELLING DESIGN CONCEPTS.
•AUTHOR• US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
•SOURCE• STOCK 023-000-00534-1, US DEPT. OF HUD, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, MAY 1976, 146PP.
•KEYWORDS• SOLAR, HOME, DESIGN.
•NOTES• FILED. PUBLICATION IS ABOUT SOLAR ENERGY AND HOW ITS USE FOR HEATING AND COOLING WILL EFFECT DWELLING DESIGN AND SITE PLANNING. A BRIEF INTRODUCTION FOR CONSUMERS, DESIGNERS AND BUILDERS INTERESTED IN SOLAR HEATING AND COOLING.
•DATE• 770500

ABSTRACT 2403

•TITLE• SOLAR ENERGY FOR AGRICULTURE AND INDUSTRIAL PROCESS HEAT.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• ERDA 77-72 PROGRAM SUMMARY, ERDA, DIV OF SOLAR ENERGY, WASHINGTON DC 20545, JUNE 1977, 91 PP.
•KEYWORDS• SOLAR, AGRICULTURE, INDUSTRY, DRYING, DEHYDRATION, GREENHOUSE, HEAT, USA.
•NOTES• FILED.
•DATE• 770600

ABSTRACT 2404

•TITLE• SOLAR ENERGY.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• ERDA 527C2, US DEPT OF SOLAR ENERGY, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, MARCH 1975, 14 PP.
•KEYWORDS• SOLAR, HEAT, PHOTOVOLTAIC, STORAGE.
•NOTES• FILED. EXCELLENT ELEMENTARY EXPLANATION OF SOLAR.
•DATE• 750300

ABSTRACT 2405

•TITLE• SOLAR ENERGY PROGRAM.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• DIVISION OF SOLAR ENERGY, RUID BRANCH, ERDA, WASHINGTON DC MARCH 1975, 14 PP.
•KEYWORDS• SOLAR, HEAT, COOLING, PHOTOVOLTAIC, WIND.
•NOTES• FILED.
•DATE• 750300

ABSTRACT 2406

•TITLE• SOLAR ENERGY FOR SPACE HEATING AND HOT WATER.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• SE101, ERDA, DIV OF SOLAR ENERGY, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, MARCH 1977, 104 PP.
•KEYWORDS• SOLAR, GENERAL, ECONOMICS.
•NOTES• FILED. PAMPHLET PROVIDES A BASIC UNDERSTANDING OF SOLAR HEATING AND HOT WATER SYSTEMS. WHAT THEY ARE, HOW THEY PERFORM, THE ENERGY SAVINGS POSSIBLE AND THE COST FACTORS INVOLVED.
•DATE• 760500

ABSTRACT 2407

•TITLE• SOLAR ENERGY IN AMERICAS FUTURE.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• SCE-115/1, ERDA, DIV OF SOLAR ENERGY, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, MARCH 1977, 104 PP.
•KEYWORDS• SOLAR, GENERAL, ECONOMICS.
•NOTES• FILED. THE REPORT DOCUMENTS A SRI STUDY OF THE POTENTIAL ROLES THAT SOLAR ENERGY TECH COULD HAVE FOR MEETING US ENERGY NEEDS OVER THE NEXT 45 YEARS. THREE COMPUTER SIMULATIONS OF DIFFERENT ENERGY SUPPLY PROJECTIONS WERE SELECTED TO BE DEVELOPED INTO BROADER SCENARIOS.
•DATE• 770300

ABSTRACT 2408

•TITLE• SOLAR AGRICULTURAL AND INDUSTRIAL PROCESS HEAT.
•AUTHOR• US ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
•SOURCE• ERA-77-47/2, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, 1977, 53 PP.
•KEYWORDS• SOLAR, ENVIRONMENT, SAFETY.
•NOTES• FILED. REPORT PRESENTS THE MAJOR ENVIRONMENT ISSUES ASSOCIATED WITH THE FURTHER DEV OF SOLAR ENERGY AS A SOURCE OF PROCESS HEAT IN THE INDUSTRIAL AND AGR SECTORS. AN ENVIRONMENT WORK PLAN IS PRESENTED.
•DATE• 770300
ABSTRACT 2409

**Title:** SOLCOST - SOLAR HOT WATER HANDBOOK

**Author:** US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

**Source:** GS-2531/2, ERDA, DIV OF SOLAR ENERGY TECH TRANSFER, WASHINGTON DC 20545; JUNE 1977, 15 PP.

**Keywords:** SOLAR, HOME.

**Notes:** FILED.

**Date:** 770600

ABSTRACT 2410

**Title:** SOLAR HEATING OF A PIG NURSERY

**Author:** VAUGHAN D M; HOLMES B J; BELL E S.

**Source:** ASAE PAPER 70-3825; 1970, 21 PP.

**Keywords:** SOLAR, HEAT PUMPS, ANIMAL BUILDINGS, SWINE.

**Notes:** FILED. A SOLAR ASSISTED HEAT PUMP SYSTEM USING A THERMAL STORAGE POND WAS USED TO HEAT A PIG NURSERY FOR Raising THREE GROUPS OF PIGS DURING THE WINTER 77-78. SYSTEM OPERATING TEMPERATURES, ELECTRIC POWER USAGE, AND SOLAR RADIATION WERE RECORDED.

**Date:** 780000

ABSTRACT 2411

**Title:** SOLAR TECHNOLOGIES

**Author:** VON HIPPEL P, WILLIAMS R M.

**Source:** BULLETIN OF THE ATOMIC SCIENTISTS, NOV 1975, PP 25-31.

**Keywords:** SOLAR, HEAT, HOME, ECONOMICS, WIND, STORAGE, PHOTOSYNTHESIS, ORGANIC.

**Notes:** FILED.

**Date:** 751100

ABSTRACT 2412

**Title:** POSSIBILITIES FOR THE UTILIZATION OF SOLAR ENERGY IN UNDERDEVELOPED RURAL AREAS

**Author:** WARD G T.

**Source:** FAD INFORMAL WORKING BULLETIN NO 16, 1961, 60 PP.

**Keywords:** SOLAR.

**Notes:**

**Date:** 610000

ABSTRACT 2413

**Title:** SOLAR HEATING AND COOLING OF RESIDENTIAL BUILDINGS - DESIGN OF SYSTEMS

**Author:** WARD D S; LDF G O G; KARAKI S; WINN C B; LARSON M; VALENTINE J; JOHNSON G &; DUFF M; TAYLOR S.

**Source:** STOCK NO 003-011-00085-4, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, OCT 1977, 660 PP.

**Keywords:** SOLAR, HOME, DESIGN.

**Notes:** FILED. A MANUAL OF TRAINING COURSES DESIGNED TO DEVELOPE THE CAPABILITY OF PRACTITIONERS IN THE HOME BUILDING INDUSTRY TO DESIGN SOLAR HEATING AND COOLING SYSTEMS FOR RESIDENTIAL BUILDINGS.

**Date:** 771000

ABSTRACT 2414

**Title:** SOLAR HEATING AND COOLING OF RESIDENTIAL BUILDINGS - SIZING, INSTALLATION AND OPERATION OF SYSTEMS

**Author:** WARD D S; LDF G O G; KARAKI S; SMITH C C; LOWENSTEIN M; VALENTINE J; JOHNSON G; LARSON M; VALENTINE J.

**Source:** STOCK NO 003-011-00085-2, US GOVT PRINTING OFFICE, WASHINGTON DC 20402, OCT 1977, 500 PP.

**Keywords:** SOLAR, HOME, DESIGN.

**Notes:** FILED. A MANUAL OF COURSES TO TRAIN HOME DESIGNERS AND BUILDERS IN THE FUNDAMENTALS OF SOLAR HYDRONIC AND AIR SYSTEMS FOR SPACE HEATING AND COOLING AND DOMESTIC HOT WATER HEATING FOR RESIDENTIAL BUILDINGS.

**Date:** 771000
ABSTRACT 2415

**Title:** Solar Age Catalog.  
**Author:** Wasserman K J et al.  
**Keywords:** Solar, Buildings, Conservation, Greenhouse, Insulation, Efficiency, Economics, Heat Pumps.  
**Notes:** Filed. A Guide to Solar Energy Knowledge and Materials.  
**Date:** 770000

ABSTRACT 2416

**Title:** Solar Energy Systems.  
**Author:** Weeks S A, Wilson G E.  
**Source:** 33rd Annual Progress Report to The New York Farm Electrification Council, May 1976, pp 10-23.  
**Keywords:** Solar, Heat, Storage, Drying.  
**Notes:** Filed.  
**Date:** 760500

ABSTRACT 2417

**Title:** Photovoltaic Conversion of Sunlight to Electricity - Considerations for Developing Countries.  
**Author:** Weigart J M.  
**Keywords:** Solar, Photovoltaic, Electrical, Developing Countries.  
**Notes:** Filed.  
**Date:** 751100

ABSTRACT 2418

**Title:** Developing Country Applications of Photovoltaic Cells.  
**Author:** Weiss C, Pak S.  
**Keywords:** Solar, Developing Countries, Photovoltaic.  
**Notes:** Filed.  
**Date:** 760120

ABSTRACT 2419

**Title:** Residential Solar Heating.  
**Author:** Wiebel J A.  
**Source:** D-1013, OSU Extension Facts, College of Engr, Oklahoma State Univ, Stillwater, Ok, 1976, 2 pp.  
**Keywords:** Solar, Home.  
**Notes:** Filed.  
**Date:** 760600

ABSTRACT 2420

**Title:** Research in Solar Heating for Milking Parlors.  
**Author:** Viersma P F, Thompson P.  
**Keywords:** Solar, Dairy, Buildings.  
**Notes:** Filed.  
**Date:** 771024

ABSTRACT 2421

**Title:** Solar Cooling.  
**Author:** Wilbur P J, Karaki S.  
**Keywords:** Solar, Cooling.  
**Notes:** Filed.  
**Date:** 770000
ABSTRACT 2422

TITLE: SOLAR ENERGY THE ULTIMATE POWERHOUSE.
AUTHOR: WILHELM J L.
SOURCE: NATIONAL GEOGRAPHIC, 149(3)/381-397, MARCH 1976.
KEYWORDS: SOLAR, HEAT, COOLING.
NOTES: FILED.
DATE: 764300

ABSTRACT 2423

TITLE: SOLAR GRAIN DRYING.
AUTHOR: WILLIAMS E C, PEARY R M, BARRETT J R.
SOURCE: AEC-128, AGR ENGR DEPT, AGR EXPT STA, PRUDUE UNIV, LAFAYETTE.
DATE: 1977, 4 PP.
KEYWORDS: SOLAR, DRYING.
NOTES: FILED.
DATE: 764300

ABSTRACT 2424

TITLE: SOLAR HEATING COMMERCIAL GREENHOUSES.
AUTHOR: WILSON E E, PRICE D R, FRENNICH D P.
DATE: 1976, 9 PP.
KEYWORDS: SOLAR, GREENHOUSE.
NOTES: FILED.
DATE: 764300

ABSTRACT 2425

TITLE: SOLAR WATER HEATING - A MOBILE TEACHING DEMONSTRATION.
AUTHOR: WINDHAM J R.
SOURCE: COOPERATIVE EXTENSION SERVICE, DEPT OF AGR ENGR, UNIV OF FLORIDA, GAINESVILLE, 1976, 9 PP.
KEYWORDS: SOLAR, DESIGN.
NOTES: FILED.
DATE: 764300

ABSTRACT 2426

TITLE: SOLAR ENERGY UTILIZATION BY PHYSICAL METHODS.
AUTHOR: WOLF M.
KEYWORDS: SOLAR.
NOTES: NAS.
DATE: 744419

ABSTRACT 2427

TITLE: PHOTOVOLTAIC SOLAR ENERGY CONVERSION.
AUTHOR: WOLF M.
KEYWORDS: SOLAR, PHOTOVOLTAIC CONVERSION.
NOTES: FILED.
DATE: 764419

ABSTRACT 2428

TITLE: HOW SOLAR ENERGY CAN BENEFIT AGRICULTURE.
AUTHOR: WOODS C.
SOURCE: CITRUS AND VEGETABLE MAGAZINE, OCT 1975, PP 9, 35.
KEYWORDS: SOLAR, DRYING, ELECTRICAL, COOLING, HEAT, GREENHOUSE.
NOTES: FILED.
DATE: 751000

ABSTRACT 2429

TITLE: SOLAR ENERGY UTILIZATION FOR HEATING AND COOLING.
AUTHOR: YELLOTT J I, MACPHEE C W.
SOURCE: CHAPTER 59, APPLICATIONS HANDBOOK VOLUME, ASHRAE GUIDE AND DATA BOOK SERIES, 1974, 20 PP.
KEYWORDS: SOLAR, HEAT, STORAGE, HISTORICAL, REFRIGERATION, BIBLIOGRAPHY, NONE.
NOTES: FILED.
DATE: 744419
ABSTRACT 2430

*TITLE*: SOLAR ENERGY FOR SUPPLEMENTAL HEATING OF LIVESTOCK BUILDINGS.
*AUTHOR*: TEIXLEY D P, HELMICKSON M A, WITHER W B.
*SOURCE*: ASAE PAPER 77-3004, 1977, 51PP.
*KEYWORDS*: SOLAR, VENTILATION, HEAT, ECONOMICS.
*NOTES*: FILED. THREE TYPES OF LOW-COST, LOW-TEMPERATURE RISE SOLAR COLLECTORS WERE USED TO HEAT VENTILATION AIR FOR A BEEF CONFINEMENT BUILDING. THE PERFORMANCE OF ALL THREE ARE NOTED.
*DATE*: 770000

ABSTRACT 2431

*TITLE*: IMPROVING THE EFFICIENCY OF PHOTOSYNTHESIS.
*AUTHOR*: ZELITCH I.
*SOURCE*: SCIENCE, 188/626-635, 9 MAY 1975.
*KEYWORDS*: SOLAR, PHOTOSYNTHESIS.
*NOTES*: FILED.
*DATE*: 750609

ABSTRACT 2432

*TITLE*: SOLAR SEA POWER.
*AUTHOR*: ZENER C.
*KEYWORDS*: SOLAR, ELECTRICAL, WATER POWER.
*NOTES*: FILED.
*DATE*: 760100

STIRLING 2433 — 2437

ABSTRACT 2433

*TITLE*: THE HARWELL THERMO-MECHANICAL GENERATOR.
*AUTHOR*: COOKE-YARBOROUGH E M, FRANKLIN E, GEISOW J, HOWLETT R, WEST C D.
*SOURCE*: ELECTRONICS AND APPLIED PHYSICS DIV, UKAEA RESEARCH GROUP, ATOMIC ENERGY RESEARCH ESTABLISHMENT, HARWELL, UNITED KINGDOM, MARCH 1974, 5 PP.
*KEYWORDS*: STIRLING, MACHINERY.
*NOTES*: FILED.
*DATE*: 740300

ABSTRACT 2434

*TITLE*: NEW STIRLING POWERED ZERO-POLLUTION CAR RUNS ON STORED HEAT.
*AUTHOR*: SCOTT D.
*KEYWORDS*: STIRLING, HEAT, AUTOMOBILE.
*NOTES*: FILED.
*DATE*: 740600

ABSTRACT 2435

*TITLE*: THE STIRLING ENGINE.
*AUTHOR*: WALKER G.
*KEYWORDS*: STIRLING.
*NOTES*: N/A.
*DATE*: 730600
ABSTRACT 2436

TITLE: AND YET IT MOVES.
AUTHOR: WEST C D.
KEYWORDS: STIRLING, ENGINE.
NOTES: FILED.
DATE: 740000

ABSTRACT 2437

TITLE: THE STIRLING ENGINE.
AUTHOR: A-RINGELFAN J
SOURCE: INTERMEDIATE TECH DEV GROUP, 9 KING ST, LONDON WCE2 8HN, ENGLAND, APRIL 1972, 32 PP.
KEYWORDS: STIRLING.
NOTES: FILED.
DATE: 720000

ABSTRACT 2438

TITLE: CHARGE/DISCHARGE CHARACTERISTICS OF ROCK STORAGE FOR SOLAR ENERGY.
AUTHOR: BUTLER J L; TROGER J M.
SOURCE: ASAE PAPER 78-4055, 1978, 9 PP.
KEYWORDS: STORAGE, SOLAR.
NOTES: FILED.
DATE: 780000

ABSTRACT 2439

TITLE: ENERGY STORAGE.
AUTHOR: EATON W V.
SOURCE: ERDA, OFFICE OF PUBLIC AFFAIRS, WASHINGTON D C, 1975, 35 PP.
KEYWORDS: STORAGE, ELECTRICAL.
NOTES: FILED.
DATE: 750000

ABSTRACT 2440

TITLE: ENERGY (NOT WATER) STORAGE IN GROUNDWATER AQUIFERS.
AUTHOR: EBELING L L; REDDELL D L.
SOURCE: ASAE PAPER 76-2540, 1976, 26 PP.
KEYWORDS: STORAGE, SOLAR, DESIGN, TEXAS.
NOTES: FILED.
DATE: 760000

ABSTRACT 2441

TITLE: THERMAL STORAGE COMPARISON.
AUTHOR: ECKHOFF S R; OKOS M R.
SOURCE: ASAE PAPER 78-4051, 1978, 33 PP.
KEYWORDS: STORAGE, DRYING.
NOTES: FILED.
DATE: 780000

STORAGE 2438 — 2461
ABSTRACT 2442

*TITLE*: EVALUATION OF LOW-COST THERMAL STORAGE PONDS FOR SOLAR ENERGY.
*AUTHOR*: HOLMES B J, VAUGHAN D M, BELL E S.
*SOURC*: ASAE PAPER 78-3563, 1978, 13 PP.
*KEYWORDS*: STORAGE, SOLAR, TECHNOLOGY ASSESSMENT.
*NOTES*: FILED. THERMAL STORAGE IN THE FORM OF INSULATED WATER TANKS IS OFTEN A MAJOR COST FOR SOLAR HEATING SYSTEMS. AS AN ALTERNATIVE A POND BUILT USING AVAILABLE FARM EQUIPMENT AND MATERIALS MAY BE USED. FOUR SUCH PONDS WERE CONSTRUCTED AND EVALUATED FOR HEAT RETENTION CHARACTERISTICS. HEAT LOSS DATA AND METHODS OF REDUCING LOSSES ARE PRESENTED.
*DATE*: 780300

ABSTRACT 2443

*TITLE*: ANNUAL STORAGE.
*AUTHOR*: HOOPER F C.
*KEYWORDS*: STORAGE, SOLAR.
*NOTES*: FILED.
*DATE*: 760400

ABSTRACT 2444

*TITLE*: EUTECTIC SALTS.
*AUTHOR*: KANDO P F.
*KEYWORDS*: STORAGE, SOLAR.
*NOTES*: FILED.
*DATE*: 780400

ABSTRACT 2445

*TITLE*: REPORT ON ENERGY STORAGE.
*AUTHOR*: KELLY B P.
*SOURC*: CONTRACT SCA NO 75-187, OFFICE OF PROJECTS EXECUTION OF THE UNITED NATIONS DEVELOPMENT PROGRAMME, JULY 1975, 38 PP.
*KEYWORDS*: STORAGE, TECHNOLOGY ASSESSMENT, ECONOMICS.
*NOTES*: FILED.
*DATE*: 750700

ABSTRACT 2446

*TITLE*: RULES OF THUMB FOR SIZING STORAGE.
*AUTHOR*: KOHLER J J.
*KEYWORDS*: STORAGE, SOLAR.
*NOTES*: FILED.
*DATE*: 760400

ABSTRACT 2447

*TITLE*: OFF-PEAK COOLNESS STORAGE.
*AUTHOR*: MACCRABEN C M.
*KEYWORDS*: STORAGE, SOLAR.
*NOTES*: FILED.
*DATE*: 740400

ABSTRACT 2448

*TITLE*: ENERGY STORAGE AND SOLAR POWER - AN EXAGGERATED PROBLEM.
*AUTHOR*: METZ W D.
*SOURC*: SCIENCE, 203/1471-1473, 30 JUNE 1978.
*KEYWORDS*: STORAGE, SOLAR.
*NOTES*: FILED.
*DATE*: 780630

ABSTRACT 2449

*TITLE*: PRESSURE DROP AND HEAT TRANSFER IN CRUSHED LIMESTONE.
*AUTHOR*: PARKER B F, WHITE G H, LOEWER G J, ARNOLD C D.
*SOURC*: ASAE PAPER 78-4053, 1978, 20 PP.
*KEYWORDS*: STORAGE, TECHNOLOGY ASSESSMENT.
*NOTES*: FILED. ANALYTICAL AND EXPERIMENTAL STUDIES OF HEAT STORAGE IN CRUSHED LIMESTONE SHOW THAT HEAT RECOVERY FROM A ROCK BED INCREASES AS THE SIZE OF STONE DECREASES. THUS THE DESIGNER OF ROCK BED HEAT STORAGE SHOULD SELECT THE SMALLEST STONE WHICH IS CONSISTANT WITH A REASONABLE PRESSURE HEAD.
*DATE*: 780300
ABSTRACT 2450

*TITLE* STORAGE - A BASIC GUIDE TO KEEPING SOLAR HEAT IN.
*AUTHOR* RIORDAN M.
*SOURCE* SOLAR AGE 3(4)/12-14 APRIL 1978.
*KEYWORDS* STORAGE, SOLAR.
*NOTES* FILED.
*DATE* 780400

ABSTRACT 2451

*TITLE* ADVANCED STORAGE BATTERIES - PROGRESS, BUT NOT ELECTRIFYING.
*AUTHOR* ROBINSON A L.
*SOURCE* SCIENCE 192/541-543 7 MAY 1976.
*KEYWORDS* STORAGE.
*NOTES* FILED.
*DATE* 760507

ABSTRACT 2452

*TITLE* FUEL STORAGE.
*AUTHOR* SHELTON D P, BASHFORD L L.
*SOURCE* FARM ENERGY TIPS CC270 INST OF AGR AND NAT RESOURCES, UNIV OF NEBR LINCOLN NE 2 PP.
*KEYWORDS* STORAGE, FOSSIL FUELS.
*NOTES* FILED.
*DATE*

ABSTRACT 2453

*TITLE* SOLAR ENERGY STORAGE FOR THE NORTHEAST.
*AUTHOR* SMITH N, RILEY J G, MILL A C. J.
*SOURCE* ASAE PAPER 78-4052 1978 19 PP.
*KEYWORDS* STORAGE, SOLAR, BUILDINGS, MAINE.
*NOTES* FILED. THREE UNITS OPERATING IN MAINE USING THESE FORMS OF SOLAR ENERGY STORAGE ARE DESCRIBED.
*DATE* 780900

ABSTRACT 2454

*TITLE* CONSTRUCTION MANUAL - ROCK BINS.
*AUTHOR* SOLARON CORP.
*SOURCE* SOLAR AGE 3(4)/24-25 APRIL 1978.
*KEYWORDS* STORAGE, SOLAR.
*NOTES* FILED. THE WHOLE MANUAL IS AVAILABLE FROM SOLARON CORP.
*DATE* 780400

ABSTRACT 2455

*TITLE* BATTERIES FOR OFF-PEAK ELECTRICAL STORAGE.
*AUTHOR* US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
*SOURCE* ERDA WASHINGTON D C JAN 1975 4 PP.
*KEYWORDS* STORAGE, ELECTRICAL.
*NOTES* FILED.
*DATE* 750100

ABSTRACT 2456

*TITLE* HIGH PERFORMANCE BATTERY FOR ELECTRIC CARS.
*AUTHOR* US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
*SOURCE* ERDA WASHINGTON D C JAN 1975 4 PP.
*KEYWORDS* STORAGE, ELECTRICAL, AUTOMOBILE.
*NOTES* FILED.
*DATE* 750100

ABSTRACT 2457

*TITLE* ENERGY CONVERSION, STORAGE, AND TRANSMISSION.
*AUTHOR* US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
*SOURCE* TECH INFO CENTER ERDA OAK RIDGE TN MARCH 1976.
*KEYWORDS* STORAGE, CONVERSION, STORAGE, TRANSMISSION.
*NOTES* FILED.
*DATE* 760330
**ABSTRACT 2458**

- **TITLE**: THERMAL ENERGY AVAILABILITY IN A WASTE LAGOON.
- **AUTHOR**: VAUGHAN C H, MILL C L, BELL E S.
- **SOURCE**: ASAE PAPER 78-4050, 1978, 35 PP.
- **KEYWORDS**: STORAGE, SOLAR, ANIMAL, MODELS, HEAT PUMPS, BUILDINGS.
- **NOTES**: FILED. THE FEASIBILITY OF USING A WASTE LAGOON AS A HEAT SOURCE AND STORAGE FOR A SOLAR ASSISTED HEAT PUMP FOR LIVESTOCK HOUSING WAS EVALUATED. DATA WAS COLLECTED ON THE EXPERIMENTAL SOLAR HEATING SYSTEM. A COMPUTER SIMULATION MODEL WAS DEVELOPED FOR THE ENERGY BALANCE OF THE LAGOON.
- **DATE**: 780000

**ABSTRACT 2459**

- **TITLE**: ENERGY STORAGE USING HEAT TRANSFER OIL.
- **AUTHOR**: WALLY K. ABERNATHY.
- **SOURCE**: ASAE PAPER 78-4049, 1978, 21 PP.
- **KEYWORDS**: STORAGE, SOLAR, IRRIGATION.
- **NOTES**: FILED. SOLAR THERMAL POWER SYSTEMS REQUIRE HEAT STORAGE TO AVOID INTERMITTENT OPERATION DURING PARTIALLY CLOUDY WEATHER AND TO PROVIDE NIGHTTIME OPERATION. MEDIUM TEMPERATURE SYSTEMS APPEAR TO BE THE MOST FOR FARM APPLICATION. HEAT STORAGE USING OIL AND A STRATIFIED TANK IS PROVING TO BE A HIGHLY SATISFACTORY SYSTEM.
- **DATE**: 780000

**ABSTRACT 2460**

- **TITLE**: STORING SOLAR ENERGY IN AN UNDERGROUND ROCK BED.
- **AUTHOR**: WALTON L R, HENSON W M, MCNEILL S G, BUNN J M.
- **SOURCE**: ASAE PAPER 78-4054, 1978, 21 PP.
- **KEYWORDS**: STORAGE, SOLAR, TECHNOLOGY ASSESSMENT.
- **NOTES**: FILED. THE OPERATION OF AN INSULATED AND AN UNINSULATED ROCK BED ARE DESCRIBED. THE MAXIMUM TEMPERATURES REACHED BY THE INSULATED AND UNINSULATED ROCK BED WERE 50 AND 30 DEGREES, RESPECTIVELY. EQUATIONS ARE DEVELOPED TO PROVIDE ESTIMATES OF THE AVERAGE MEAN DAILY ROCK BED TEMPERATURE AT STEADY STATE AND THE THERMAL DECAY OF THE ROCK BED.
- **DATE**: 780000

**ABSTRACT 2461**

- **TITLE**: SOLAR PONDS.
- **AUTHOR**: ZANGRANDO F, BRYANT H C.
- **KEYWORDS**: STORAGE, SOLAR.
- **NOTES**: FILED.
- **DATE**: 780400

**TILLAGE 2462 — 2484**

**ABSTRACT 2462**

- **TITLE**: LIMITED TILLAGE OF FURROW IRRIGATED WINTER WHEAT.
- **AUTHOR**: ALLEN R R, HUSICK J T, WIESE A F.
- **SOURCE**: USDA SOUTHWESTERN GREAT PLAINS RESEARCH CENTER, AGR RESEARCH SERVICE, US DEPT OF AGR, BUSHLAND, TEXAS, 17 PP, UNDATED.
- **KEYWORDS**: TILLAGE, IRRIGATION.
- **NOTES**: FILED.
- **DATE**: 
ABSTRACT 2463

•TITLE: MINIMUM TILLAGE - A PRELIMINARY TECHNOLOGY ASSESSMENT.
•AUTHOR: BOCK W E.
•SOURCE: OFFICE OF PLANNING AND EVALUATION, USDA, MAY 1975, 34 PP.
•KEYWORDS: TILLAGE, MINIMUM TILLAGE, ECONOMICS.
•NOTES: FILED.
•DATE: 750600

ABSTRACT 2464

•TITLE: COMPANY LITERATURE.
•AUTHOR: CHEVRON CHEMICAL CO.
•SOURCE: ORTHO CHEVRON CHEM CO, 200 BUSH ST, SAN FRANCISCO, CA.
•KEYWORDS: TILLAGE, ADVERTISEMENT.
•NOTES: FILED.

ABSTRACT 2465

•TITLE: GETTING STARTED WITH NO-TILL.
•AUTHOR: CHEVRON CHEMICAL CO.
•SOURCE: ORTHO CHEVRON CHEM CO, 200 BUSH ST, SAN FRANCISCO, CA 94120.
•DATE: SEP 1975, 12 PP.
•KEYWORDS: TILLAGE, MINIMUM TILLAGE, FERTILIZER.
•NOTES: FILED - THE WHYS AND HOWS OF USING NO-TILL ARE ANSWERED.
•DATE: 750900

ABSTRACT 2466

•TITLE: ENERGY-COST BUDGETS FOR GRAIN SORGHUM TILLAGE SYSTEMS.
•AUTHOR: CLARK S J, JOHNSON W M.
•KEYWORDS: TILLAGE, ECONOMICS.
•NOTES: FILED.
•DATE: 750900

ABSTRACT 2467

•TITLE: ENERGY REQUIREMENTS AND MACHINERY PERFORMANCE FOR FOUR SUMMER FALLOW METHODS.
•AUTHOR: FORSTROM K J, BECKER C F.
•SOURCE: ASAE PAPER 76-1020, 9 PP.
•KEYWORDS: TILLAGE, REQUIREMENTS.
•NOTES: FILED.
•DATE: 760000

ABSTRACT 2468

•TITLE: REDUCED TILLAGE SYSTEMS FOR CONSERVATION AND PROFITABILITY.
•AUTHOR: FORSTER D L, RASH W, BONE S W, SCHURLE B W.
•SOURCE: UNPUBLISHED, DEPT OF AGR ECON AND RURAL SOCIOLOGY, THE OHIO STATE UNIV, COLUMBUS, JUNE 1976, 9 PP.
•KEYWORDS: TILLAGE, CONSERVATION.
•NOTES: FILED.
•DATE: 760600

ABSTRACT 2469

•TITLE: ECONOMIC AND ENERGY EFFICIENCY COMPARISONS OF SOYBEAN TILLAGE SYSTEMS.
•AUTHOR: GERMAN L, SCHNEEGERER K, VORKMAN H, MCKINSEY J.
•SOURCE: PROC OF A CONF ON ENERGY AND AGR, CENTER FOR THE BIOLOGY OF NATURAL SYSTEMS, WASHINGTON UNIV, ST LOUIS, MO, 17-19 JUNE 1976, 11 PP.
•KEYWORDS: TILLAGE, ECONOMICS, CONSERVATION.
•NOTES: FILED.
•DATE: 760617
ABSTRACT 2470
*TITLE* ENERGY REQUIREMENTS AND AREAS OF ADAPTATION FOR EIGHT TILLAGE-PLANTING SYSTEMS FOR CORN.
*AUTHOR* GRIFFITH D R, MANNERING J V, RICHEY C B.
*SOURC* AGR ENGR DEPT, PURDUE UNIV, WEST LAFAYETTE; IN, JUNE 1976; 22 PP.
*KEYWORDS* TILLAGE, REQUIREMENTS.
*NOTES* FILED; PROC OF CONF ON ENERGY AND AGR, ST LOUIS, MO, 16-19 JUNE 1976.
*DATE* 760600

ABSTRACT 2471
*TITLE* ENERGY CONSERVATION FOR KANSAS AGRICULTURE - CAN MINIMUM TILLAGE HELP YOU.
*AUTHOR* HERRON M W.
*SOURC* DEPT OF AGR ENGR, KANSAS STATE UNIV, MANHATTAN, KS, SEPT 1976; 8 PP.
*KEYWORDS* TILLAGE, CONSERVATION.
*NOTES* FILED.
*DATE* 760900

ABSTRACT 2472
*TITLE* REDUCE TILLAGE - CONSERVE ENERGY AND INCREASE PROFITS.
*AUTHOR* HINZ W M.
*SOURC* ARAES - OREGON STATE UNIV, CORVALLIS, OR 97331 - 61/5-8, AUG 1977.
*KEYWORDS* TILLAGE, CONSERVATION.
*NOTES* FILED.
*DATE* 770800

ABSTRACT 2473
*TITLE* HALF THE FUEL AND TWICE THE OUTPUT.
*AUTHOR* LUERS H.
*SOURC* ARABLE FARMING, NOV 1974; 2 PP.
*KEYWORDS* TILLAGE, GENERAL.
*NOTES* FILED.
*DATE* 741100

ABSTRACT 2474
*TITLE* TILLAGE AND ENERGY SURVEY.
*AUTHOR* MARDE R S M.
*SOURC* REPORT OF THE ILLINOIS AGR ENERGY ADVISORY COMMITTEE, ILLINOIS DEPT OF BUSINESS AND ECON DEV, DIV OF ENERGY, 222 COLLEGE ST, SPRINGFIELD, 1975; 17 PP.
*KEYWORDS* TILLAGE, ILLINOIS.
*NOTES* FILED.
*DATE* 751200

ABSTRACT 2475
*TITLE* NEW TILLAGE SYSTEMS CAN SAVE FUEL.
*AUTHOR* NILSON E G, SCHROCK M D.
*SOURC* PF-337 NO 5, COOPERATIVE EXTENSION SERVICE, KANSAS STATE UNIV, MANHATTAN, DEC 1973; 2 PP.
*KEYWORDS* TILLAGE.
*NOTES* FILED.
*DATE* 731200

ABSTRACT 2476
*TITLE* CORN TILLAGE SYSTEMS - WILL ENERGY COSTS DETERMINE THE CHOICE.
*AUTHOR* RASK N, FORSTER D L.
*SOURC* UNPUBLISHED, DEPT OF AGR ECON, THE OHIO STATE UNIV, COLUMBUS, 8 PP.
*KEYWORDS* TILLAGE, ECONOMICS.
*NOTES* FILED.
*DATE*
ABSTRACT 2477

TITLE: A COMPARISON OF THE ENERGY INPUT OF SOME TILLAGE TOOLS.
AUTHOR: REID J T.
KEYWORDS: TILLAGE, FUEL CONSUMPTION.
NOTES: FILED. IMPLEMENT DRAFT AND FUEL CONSUMPTIONS HAVE BEEN DETERMINED FOR SOME AND PREPARATION SYSTEMS IN COMMON USE BY GEORGIA FARMERS TO DETERMINE THE MOST EFFICIENT TILLAGE SYSTEM FROM AN ENERGY CONSERVATION STANDPOINT. A THREE POINT DYNAMOMETER FOR MEASURING DRAFT AND A SYSTEM FOR ACCURATELY MEASURING THE FUEL CONSUMED BY A TRACTOR WHEN USED ON SMALL PLOTS WERE USED IN THIS STUDY.
DATE: 783006

ABSTRACT 2478

TITLE: SOILS.
AUTHOR: ROBERTSON L S, MOKMA D L, QUISENBERRY D L, MEGGITT W F, HANSEN C M.
SOURCE: EXTENSION BULLETIN E-506, COOPERATIVE EXTENSION SERVICE, MICH STATE UNIV, EAST LANSING, JAN 1976, 8 PP.
KEYWORDS: TILLAGE, GENERAL.
NOTES: FILED.
DATE: 760100

ABSTRACT 2479

TITLE: CONSERVING ENERGY WITH NO TILLAGE.
AUTHOR: ROBERTSON W L, PRIME G M.
SOURCE: EC 37, UNIV OF FLORIDA, GAINESVILLE, FL 32611, 1976, 3 PP.
KEYWORDS: TILLAGE, CONSERVATION, FUEL CONSUMPTION.
NOTES: FILED.
DATE: 760300

ABSTRACT 2480

TITLE: NO-TILLAGE - A CONSERVATION SYSTEM THAT MINIMIZES POLLUTION AND ENERGY PROBLEMS.
AUTHOR: SMITH E S, LILLAND J M.
SOURCE: ASAE PAPER 74-2002, 8 PP.
KEYWORDS: TILLAGE, GENERAL.
NOTES: FILED.
DATE: 740300

ABSTRACT 2481

TITLE: CONSERVATION TILLAGE.
AUTHOR: SOIL CONSERVATION SOCIETY OF AMERICA.
SOURCE: SOIL CONSERVATION SOC OF AMER, 7515 NORTHEAST ANKENY RD, ANKENY, IA, MARCH 1973, 241 PP.
KEYWORDS: TILLAGE, CONSERVATION, ENVIRONMENT, ECONOMICS.
NOTES: FILED.
DATE: 730300

ABSTRACT 2482

TITLE: AGRICULTURE WITHOUT TILLAGE.
AUTHOR: TRIPLETT G B, VAN DOREN D M.
KEYWORDS: TILLAGE, CONSERVATION, MINIMUM TILLAGE, USA.
NOTES: FILED.
DATE: 770300

ABSTRACT 2483

TITLE: SOIL COMPACTION - OUR NEWEST NATURAL RESOURCE - GOOD AND BAD EFFECTS ON ENERGY NEEDS.
AUTHOR: VOORNEES W B, HENDRICK J G.
KEYWORDS: TILLAGE.
NOTES: FILED. ENERGY SAVINGS DUE TO SOIL COMPACTION ARE CONTRASTED WITH THE ENERGY LOSSES.
DATE: 770300
ABSTRACT 2484

TITLE: ENERGY REQUIREMENTS FOR CONVENTIONAL VERSUS MINIMUM TILLAGE.
AUTHOR: WITTMUS H, OLSON L, LAKE D.
SOURCE: SOIL AND WATER CONSERVATION APRIL 1975, PP 72-75.
KEYWORDS: TILLAGE, REQUIREMENTS, MINIMUM TILLAGE.
NOTES: FILED.
DATE: 750300

ABSTRACT 2485

TITLE: THE ENERGY COST OF AUTOMOBILES.
AUTHOR: BERRY S, FLEISHER P.
KEYWORDS: TRANSPORTATION.
NOTES: NAS.
DATE: 731220

ABSTRACT 2486

TITLE: ENERGY, MANPOWER, AND THE HIGHWAY TRUST FUND.
AUTHOR: EZIDIK R, HANSON E.
KEYWORDS: TRANSPORTATION, CONSERVATION, ECONOMICS, POLICY.
NOTES: FILED.
DATE: 740823

ABSTRACT 2487

TITLE: THE ENERGY CRISIS - ALTERNATIVES FOR TRANSPORTATION.
AUTHOR: COVINGTON J P.
KEYWORDS: TRANSPORTATION, ALTERNATIVES.
NOTES: FILED.
DATE: 730300

ABSTRACT 2488

TITLE: ENERGY AND TRANSPORTATION.
AUTHOR: NAZANIN J L.
KEYWORDS: TRANSPORTATION, PETROLEUM, ENERGY CONSUMPTION.
NOTES: FILED.
DATE: 750000

ABSTRACT 2489

TITLE: TRANSPORTATION ENERGY CONSERVATION POLICIES.
AUTHOR: HIRST E.
KEYWORDS: TRANSPORTATION, CONSERVATION, POLICY.
NOTES: FILED.
DATE: 760402
ABSTRACT 2490

- TITLE: TRANSPORTATION POLICY AND THE RURAL ENVIRONMENT.
- AUTHOR: KRIEBEL W R.
- KEYWORDS: TRANSPORTATION, POLICY.
- NOTES: FILED.
- DATE: 750000.

ABSTRACT 2491

- TITLE: METHANOL - A VERSATILE FUEL FOR IMMEDIATE USE.
- AUTHOR: REED T B, LERNER R M.
- KEYWORDS: TRANSPORTATION, METHANOL.
- NOTES: FILED.
- DATE: 711228.

ABSTRACT 2492

- TITLE: TOWARD MORE TRANSPORTATION WITH LESS ENERGY.
- AUTHOR: RICE R A.
- KEYWORDS: TRANSPORTATION, ENERGY CONSUMPTION.
- NOTES: FILED.
- DATE: 740200.

ABSTRACT 2493

- TITLE: THE AUTOMOBILE AS A SOCIAL MACHINE.
- AUTHOR: SANSON R L.
- SOURCE: DELIVERED AT THE INTERNATIONAL AUTOMOTIVE ENGINEERING CONGRESS AND EXHIBITION, DETROIT, MI, 10 JAN 1973, USEPA, 13 PP.
- KEYWORDS: TRANSPORTATION, AUTOMOBILE, ENERGY CONSUMPTION, POLLUTION, POLICY.
- NOTES: FILED.
- DATE: 730110.

ABSTRACT 2494

- TITLE: ENERGY AND THE AUTOMOBILE.
- AUTHOR: SOCIETY OF AUTOMOTIVE ENGINEERS.
- SOURCE: SP-456, SOC OF AUTOMOTIVE ENGR, 400 COMMONWEALTH DR, WARRENDALE, PA 15096, JULY 1973, 73 PP.
- KEYWORDS: TRANSPORTATION, AUTOMOBILE, ENERGY CONSUMPTION, SUPPLY DEMAND.
- NOTES: FILED.
- DATE: 730700.

ABSTRACT 2495

- TITLE: ENERGY AND TRANSPORTATION.
- AUTHOR: SOCIETY OF AUTOMOTIVE ENGINEERS.
- SOURCE: SP-466, SOC OF AUTOMOTIVE ENGR, 400 COMMONWEALTH DR, WARRENDALE, PA 15096, FEB 1976, 69 PP.
- KEYWORDS: TRANSPORTATION, ENERGY CONSUMPTION.
- NOTES: FILED.
- DATE: 760200.

ABSTRACT 2496

- TITLE: MINIMUM ENERGY REQUIREMENTS FOR TRANSPORTATION OF PROCESSED NEW YORK VEGETABLES USING LINEAR PROGRAMMING.
- AUTHOR: VERGARA W, RAO M A, JORDAN W K.
- KEYWORDS: TRANSPORTATION, FRUITS AND VEGETABLES, MODELS.
- NOTES: FILED.
- DATE: 780900.
ABSTRACT 2497
• TITLE: ENERGY OPTIONS FOR TODAY AND TOMORROW.
• AUTHOR: VOGELY V A.
• SOURCE: INCREASING UNDERSTANDING OF PUBLIC PROBLEMS AND POLICIES, FARM FOUNDATION, 600 S MICHIGAN AVE, CHICAGO, 1975, PP 43-54.
• KEYWORDS: TRANSPORTATION, POLICY, ENVIRONMENT.
• NOTES: FILED.
• DATE: 750000

ABSTRACT 2498
• TITLE: ALTERNATIVE AUTOMOBILE ENGINES.
• AUTHOR: WILSON D G.
• SOURCE: SCIENTIFIC AMER, 239(1), JULY 1978, 8 PP.
• KEYWORDS: TRANSPORTATION, ENGINE, AUTOMOBILE.
• NOTES: FILED. REQUIREMENTS FOR CLEANER AND MORE EFFICIENT ENGINES HAVE STIMULATED A SEARCH FOR ALTERNATIVES TO THE CONVENTIONAL SPARK-IGNITION ENGINE.
• DATE: 780700

ABSTRACT 2499
• TITLE: ENERGY CRISIS AND TRANSPORTATION.
• AUTHOR: WINGER J G.
• KEYWORDS: TRANSPORTATION, ENERGY SOURCES, AUTOMOBILE.
• NOTES: FILED.
• DATE: 730300

ABSTRACT 2500
• TITLE: HYDROGEN - ITS FUTURE ROLE IN THE NATIONS ENERGY ECONOMY.
• AUTHOR: WINSCH W E, HOFFMAN K C, SALZANO F J.
• KEYWORDS: TRANSPORTATION, HYDROGEN, ENERGY FLOW.
• NOTES: FILED.
• DATE: 730629

ABSTRACT 2501
• TITLE: USE OF WASTE HEAT FROM ELECTRIC GENERATING PLANTS FOR GREENHOUSE HEATING.
• AUTHOR: BOOY L L, FLIKKE A M, STANSFIELD R V, ASHLEY G C, HIEITATA J.
• SOURCE: ASAE PAPER 77-4531, 1977, 10 PP.
• KEYWORDS: WASTE HEAT, GREENHOUSE, DESIGN.
• NOTES: FILED.
• DATE: 770802

ABSTRACT 2502
• TITLE: HOW WASTE HEAT FROM ELECTRICITY GENERATION CAN HEAT GREENHOUSES.
• AUTHOR: BOOY L L, STANSFIELD R V, ASHLEY G C, HIEITATA J S, FLIKKE A M.
• KEYWORDS: WASTE HEAT, ELECTRICAL, GREENHOUSE.
• NOTES: FILED. A CONDENSED VERSION OF PAPER 78-3583.
• DATE: 790128
ABSTRACT 2503


**Author**: Hechtmann E.


**Keywords**: Waste Heat, Electrical

**Notes**: Filed, Abstract Only is Included.

**Date**: 7/7/62

ABSTRACT 2504

**Title**: Waste Heat Utilization from Power Plants with an Integrated Agricultural and Aquacultural System.

**Author**: Meekhof R L et al.

**Source**: Dept of Agr Econ, Mich State Univ, East Lansing, 1976, 21 PP.

**Keywords**: Waste Heat.

**Notes**: Filed.

**Date**: 7/6/00

ABSTRACT 2505

**Title**: System Studies of Agricultural Uses of Power Plant Condenser Effluent.

**Author**: Price D R, Math D A, Buchholz B A.

**Source**: ASAE Paper 75-3543, 20 PP.

**Keywords**: Waste Heat, Technology Assessment, Agriculture, Economics.

**Notes**: Filed.

**Date**: 7/5/80

ABSTRACT 2506

**Title**: Simulation Model to Study the Utilization of Waste Heat Using a Combination Multiple Reservoir and Greenhouse Complex.

**Author**: Price D R, Peart R M.


**Keywords**: Waste Heat, Models, Greenhouse, Design.

**Notes**: Filed.

**Date**: 7/3/04

ABSTRACT 2507


**Author**: Rotz C A, Aldrich R A.

**Source**: ASAE Paper 77-4310, 1977, 10 PP.

**Keywords**: Waste Heat, Greenhouse, Heat, Pennsylvania.

**Notes**: Filed.

**Date**: 7/7/00

ABSTRACT 2508

**Title**: Yield Response to Soil Warming - Agronomic Crops.

**Author**: Rykhost K A, Boersma L, Mack M J, Schnisseur W E.

**Source**: Agronomy J, 67/7/517-743, 794-798, Nov-Dec 1975.

**Keywords**: Waste Heat.

**Notes**: Filed.

**Date**: 7/51/00

ABSTRACT 2509

**Title**: Crop and Soil Temperature Response to Soil Warming in the Southeast.

**Author**: Sanders D C, Skaggs R W.

**Source**: ASAE Paper 75-3541, 10 PP.

**Keywords**: Waste Heat, Agriculture.

**Notes**: Filed.

**Date**: 7/50/00
ABSTRACT 2510

TITLE: FEASIBILITY OF SOIL WARMING WITH POWER PLANT WASTE HEAT.

AUTHOR: SHAPIRO M., ROLLER W. L.

SOURCE: ASAE PAPER 75-3542, 8 PP.

KEYWORDS: WASTE HEAT, AGRICULTURE.

DATE: 750300

ABSTRACT 2511

TITLE: HEAT RECOVERY FROM WASTED POULTRY PROCESSING SCALD WATER.

AUTHOR: SHUPE W. L., WHITEHEAD W. K., RUSSELL R. B.

SOURCE: ASAE PAPER 78-6508, 1978, 13 PP.

KEYWORDS: WASTE HEAT, POULTRY, HEAT.

DATE: 781219

ABSTRACT 2512

TITLE: WASTE HEAT UTILIZATION FOR AGRICULTURE AND AQUACULTURE.

AUTHOR: TENNESSEE VALLEY AUTHORITY.

SOURCE: TECH REPORT B-12, DIV OF FORESTRY, FISHERIES AND WILDLIFE DEV., NORRIS, TN 37828, AUG 1978, 405 PP.

KEYWORDS: WASTE HEAT, INDUSTRY, ENVIRONMENT, WASTES, WATER USE, DRYING, FOOD PROCESSING, GREENHOUSE.

DATE: 780800

ABSTRACT 2513

TITLE: SURFACE HEATING GREENHOUSES WITH POWER PLANT COOLING WATER.

AUTHOR: WALKER P. N.

SOURCE: ASAE PAPER 80-4518, 1978, 14 PP.

KEYWORDS: WASTE HEAT, GREENHOUSE, EFFICIENCY.

DATE: 780800

ABSTRACT 2514

TITLE: ALTERNATIVE ENERGY SOURCES MAY HELP STEM THE ENERGY CRISIS.

AUTHOR: ANON.


KEYWORDS: WIND, ENERGY SOURCES, DESIGN, SOLAR.

DATE: 731000

ABSTRACT 2515

TITLE: WATTS FROM THE WIND.

AUTHOR: ANON.

SOURCE: MICHIGAN NATURAL RESOURCES, 43(3)/14-17 MAY-JUNE 1974.

KEYWORDS: WIND, HOME.

DATE: 740900
ABSTRACT 2516

• Title: Company Literature.
• Author: Anonymous.
• Keywords: Wind, Advertisement, Statistics.
• Notes: Filed.
• Date: 

ABSTRACT 2517

• Title: Wind Energy.
• Author: Anonymous.
• Keywords: Wind, Economics.
• Notes:
• Date: 740521

ABSTRACT 2518

• Title: Application Study of Wind Power Technology to the City of Hart, Michigan Year II.
• Author: Asmusen J, et al.
• Keywords: Wind, Michigan, Economics, Models.
• Notes:
• Date:

ABSTRACT 2519

• Title: Wells and Windmills in Nebraska.
• Author: B&bour E M.
• Keywords: Historical.
• Notes: Filed. Excellent Review of US Windmill Tech at the Turn of the Century.
• Date: 990000

ABSTRACT 2520

• Title: Energy from the Wind.
• Author: Battelle Memorial Institute.
• Keywords: Wind, General.
• Notes: Filed.
• Date: 750100

ABSTRACT 2521

• Title: How to Construct a Cheap Wind Machine for Pumping Water.
• Author: Bodek A.
• Keywords: Wind.
• Notes:
• Date: 650200

ABSTRACT 2522

• Title: Low Cost Windmill for Developing Nations.
• Author: Bosssel H.
• Keywords: Wind, Operating Procedure, Developing Countries.
• Notes: Filed.
• Date:
ABSTRACT 2523

*TITLE: HOW TO CONSTRUCT A CHEAP WIND MACHINE FOR PUMPING WATER.
*AUTHOR: BRACE RESEARCH INSTITUTE.
*SOURCE: DO-IT-YOURSELF LEAFLET L-5, BRACE RESEARCH INST, MACDONALD COLLEGE OF MCGILL UNIV, QUEBEC, CANADA, FEB 1973, 13 PP.
*KEYWORDS: WIND, DESIGN, OPERATING PROCEDURE.
*NOTES, FILED.
*DATE: 730220

ABSTRACT 2524

*TITLE: TAKING POWER OFF THE WIND.
*AUTHOR: BRUCKNER A.
*KEYWORDS: WIND.
*NOTES, FILED, NAS.
*DATE: 740328

ABSTRACT 2525

*TITLE: TILTING AT THE ENERGY CRISIS - A WINDMILL ON YOUR ROOF.
*AUTHOR: BRYSON F E.
*KEYWORDS: WIND.
*NOTES, FILED.
*DATE: 740110

ABSTRACT 2526

*TITLE: RETURN OF THE WINDMILL.
*AUTHOR: CLARK R.
*SOURCE: SMITHSONIAN MAGAZINE, NOV 1973, 5 PP.
*KEYWORDS: WIND, HISTORICAL.
*NOTES, FILED.
*DATE: 740524

ABSTRACT 2527

*TITLE: IRRIGATION PUMPING WITH WIND ENERGY.
*AUTHOR: CLARK R, SCHNEIDER A D.
*SOURCE: ASAE PAPER 78-2549, 1978, 15 PP.
*KEYWORDS: WIND, IRRIGATION, EFFICIENCY.
*NOTES, FILED. DESCRIBED IS A WIND-ASSIST PUMPING SYSTEM THAT USES COMMERCIALLY AVAILABLE EQUIPMENT.
*DATE: 780300

ABSTRACT 2528

*TITLE: ELECTRIC POWER FROM THE WIND.
*AUTHOR: CLEWS M.
*SOURCE: SOLAR WIND COMPANY, E HOLDEN, MAINE, 1973, 29 PP.
*KEYWORDS: WIND, ADVERTISEMENT, ELECTRICAL.
*NOTES, FILED.
*DATE: 730300

ABSTRACT 2529

*TITLE: TILTING AT WINDMILLS.
*AUTHOR: DALYELL T.
*SOURCE: NEW SCIENTIST, 13 JUNE 1974, 1 P.
*KEYWORDS: WIND.
*NOTES, FILED.
*DATE: 740613
ABSTRACT 2530

*TITLE* SITES FOR WIND-POWER INSTALLATIONS.

*AUTHOR* DAVIDSON B, GERBIER H, PAPAGIANAKIS S, DJ RIKHOFDT P.

*SOURCE* TECH NOTE NO 635, WORLD METEOROLOGICAL ORGANIZATION, GENEVA, SWITZERLAND, 1964, 38 PP.

*KEYWORDS* WIND, WORLD WIDE, REQUIREMENTS.

*NOTES* FILED.

*DATE* 640000

ABSTRACT 2531

*TITLE* COMPANY LITERATURE.

*AUTHOR* DEMFSTER INDUSTRIES INC.

*SOURCE* DEMFSTER INDUSTRIES INC, PD BOX 84B, BEATRICE, NE.

*NOTES* FILED.

*DATE*

ABSTRACT 2532

*TITLE* WIND POWER IN KENYA.

*AUTHOR* DENTON J D.

*SOURCE* TECHNICAL REPORT M69/2, UNIV OF NAIROBI, 13 JUNE 1969, 8 PP.

*KEYWORDS* WIND, KENYA.

*NOTES* FILED.

*DATE* 690613

ABSTRACT 2533

*TITLE* EFFICIENCY AND ECONOMIC COMPARISON OF DIFFERENT WEC (WIND ENERGY CONVERTER) ROTOR SYSTEMS.

*AUTHOR* DORNER H.

*SOURCE* PRESENTED AT INTERNATIONAL CONF ON APPROPRIATE TECHNOLOGIES FOR SEMIARID AREAS—WIND AND SOLAR ENERGY FOR WATER SUPPLY, 15-20 SEPT 1975, BERLIN (WEST), 28 PP.

*KEYWORDS* WIND, EFFICIENCY, ECONOMICS, TECHNOLOGY ASSESSMENT.

*NOTES* FILED.

*DATE* 750915

ABSTRACT 2534

*TITLE* A PARTIAL LISTING OF COMMERCIAL SOURCES FOR WINDMILLS AND EQUIPMENT (WINDMILLS FOR GENERATING ELECTRICITY).

*AUTHOR* DOSS H J.

*SOURCE* AGR ENGR FACTS 17, MICH STATE UNIV, EAST LANSING, MI 48824.

*DATE* 740700

ABSTRACT 2535

*TITLE* A PARTIAL LISTING OF COMMERCIAL SOURCES FOR WINDMILLS AND EQUIPMENT (WINDMILLS FOR PUMPING WATER).

*AUTHOR* DOSS H J.

*SOURCE* AGR ENGR FACTS 18, MICH STATE UNIV, EAST LANSING, MI 48824.

*DATE* 740700

ABSTRACT 2536

*TITLE* WIND POWER ENERGY.

*AUTHOR* DOSS H J, HALL F W.

*SOURCE* AGR ENGR FACTS 16, MICH STATE UNIV, EAST LANSING, MI 48824.

*DATE* 740700
ABSTRACT 2537
*TITLE* WINDMILLS - A PARTIAL LISTING OF PLANS AND KITS.
*AUTHOR* DOSS H J.
*SOURCE* AEIS 303, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JULY 1974, 2 PP.
*KEYWORDS* WIND, INDUSTRY.
*NOTES* FILED.
*DATE* 740700

ABSTRACT 2538
*TITLE* WIND POWER ENERGY.
*AUTHOR* DOSS H J.
*SOURCE* AEIS 302, AGR ENGR DEPT, MICH STATE UNIV, EAST LANSING, MI 48824, JULY 1974, 4 PP.
*KEYWORDS* WIND.
*NOTES* FILED.
*DATE* 740700

ABSTRACT 2539
*TITLE* WIND-DRIVEN POWER PLANTS.
*AUTHOR* KUBLAV K J T.
*KEYWORDS* WIND, HISTORICAL, ELECTRICAL.
*NOTES* FILED.
*DATE* 220800

ABSTRACT 2540
*TITLE* WIND MACHINES.
*AUTHOR* ELDRIDGE F R.
*SOURCE* THE MITE CORP, WESTGATE RESEARCH PARK, MCLEAN, VIRGINIA, OCT 1975, 77 PP.
*KEYWORDS* WIND, HISTORICAL.
*NOTES* FILED.
*DATE* 751000

ABSTRACT 2541
*TITLE* PROCEEDINGS OF THE SECOND WORKSHOP ON WIND ENERGY CONVERSION SYSTEMS.
*AUTHOR* ELDRIDGE F R.
*SOURCE* NSF-R4-M-75-050, THE MITE CORP, WESTGATE RESEARCH PARK, MCLEAN, VIRGINIA, SEPT 1975, 640 PP.
*KEYWORDS* WIND, INTERNATIONAL, AGRICULTURE.
*NOTES* FILED.
*DATE* 750900

ABSTRACT 2542
*TITLE* COMPANY LITERATURE.
*AUTHOR* ENVIRONMENTAL ENERGIES INC.
*SOURCE* ENVI ENERGIES INC, 11350 SCHAEFER, DETROIT, MI.
*KEYWORDS* WIND, ADVERTISEMENT.
*NOTES* FILED.
*DATE* 750900

ABSTRACT 2543
*TITLE* FOOD FROM WINDMILLS.
*AUTHOR* FRAENKEL P L.
*SOURCE* INTERMEDIATE TECHNOLOGY PUB LTD, 9 KING STREET, LONDON WC2E 8HN.
*DATE* 1975, 75 PP.
*KEYWORDS* WIND, ETHIOPIA, DEVELOPING COUNTRIES, DESIGN, PUMPS.
*NOTES* FILED.
*DATE* 751100

ABSTRACT 2544
*TITLE* POWER IN THE WIND.
*AUTHOR* FREY, LEWIS ROTH, PARMAGNADAS.
*SOURCE* AGEN 5501, GRADUATE SEMINAR, OHIO STATE UNIV, SPRING 1975, 25 PP.
*KEYWORDS* WIND, ECONOMICS, ENERGY SOURCES, DESIGN.
*NOTES* FILED.
*DATE* 750500
ABSTRACT 2545

*TITLE: GENERATION OF ELECTRICITY BY WINDPOWER.
*AUTHOR: GOLDING E W.
*SOURCE: PHILOSOPHICAL LIBRARY; N Y; 1956; 318 PP.
*KEYWORDS: WIND.
*NOTES.
*DATE: 560000

ABSTRACT 2546

*TITLE: WINDMILLS FOR WATER LIFTING AND GENERATION OF ELECTRICITY ON THE FARM.
*AUTHOR: GOLDING E W.
*SOURCE: FAO INFORMAL WORKING BULLETIN NO 17, AGR ENGR BRANCH.
*KEYWORDS: WIND.
*NOTES.
*DATE.

ABSTRACT 2547

*TITLE: METHODS FOR ASSESSING THE POTENTIALITIES FOR WIND POWER ON DIFFERENT SCALES OF UTILIZATION.
*AUTHOR: GOLDING E W.
*SOURCE: PROG ON SOLAR AND AEOLIAN ENERGY, NATO SEMINAR, 4-12 SEP 1961, PLENUM PRESS; N Y.
*KEYWORDS: WIND.
*NOTES.
*DATE: 610904

ABSTRACT 2548

*TITLE: COMPANY LITERATURE.
*AUTHOR: GREAT LAKES WIND POWER INC.
*SOURCE: GREAT LAKES WIND POWER INC, PO BOX 1799, EAST LANSING, MI.
*KEYWORDS: WIND, ADVERTISEMENT.
*NOTES: FILED.
*DATE.

ABSTRACT 2549

*TITLE: A PROMISE IN THE WIND.
*AUTHOR: GUY D.
*SOURCE: YANKEE; MARCH 1974; PP 84-97.
*KEYWORDS: WIND, GENERAL, VERMONT; MASSACHUSETTS.
*NOTES: FILED.
*DATE: 740300

ABSTRACT 2550

*TITLE: WIND AND WINDSPINNERS.
*AUTHOR: HACKLEMAN M A.
*SOURCE: CULVER CITY; CALIF/PEACE PRESS; FEB 1976; 116 PP.
*KEYWORDS: WIND, ELECTRICAL.
*NOTES: FILED.
*DATE: 760200

ABSTRACT 2551

*TITLE: CAN WE HARNES THE WIND.
*AUTHOR: HAMILTON R.
*SOURCE: NATIONAL GEOGRAPHIC; NOV 1975; PP812-828.
*KEYWORDS: WIND, HISTORICAL, DESIGN.
*NOTES: FILED.
*DATE: 751100

ABSTRACT 2552

*TITLE: ARTIFICIAL TORNADOES - A NOVEL WIND ENERGY CONCEPT.
*AUTHOR: HAMMOND A L.
*SOURCE: SCIENCE; 190/257; 17 OCT 1975.
*KEYWORDS: WIND, DESIGN.
*NOTES: FILED.
*DATE: 751017
ABSTRACT 2553

TITLE: COMPANY LITERATURE
*AUTHOR: HELLER-ALLER CO.
*SOURCE: HELLER-ALLER CO., NAPOLEON, OH.
*KEYWORDS: WIND, ADVERTISEMENT.
*DATE:

ABSTRACT 2554

TITLE: A SURVEY OF THE POSSIBLE USES OF WINDPOWER IN THAILAND AND THE PHILIPPINES
*AUTHOR: HERONEMUS W. E.
*SOURCE: CONTRACT AID/TA-C-1143, DEPT. OF STATE, WASHINGTON D.C., NOV 1974, 139 PP.
*KEYWORDS: WIND.
*DATE: 741100

ABSTRACT 2555

TITLE: ENERGY FROM THE WIND
*AUTHOR: KEYSOR, E. W.
*KEYWORDS: WIND, USA, STORAGE.
*DATE: 770100

ABSTRACT 2556

TITLE: UTILISATION DE L'ENERGIE EOLIENNE POUR LE XAVRE DE LEAOU MALI
BILAN EXPLOITATION DES EOLIENNES DE LA REGION DE GAO.
*AUTHOR: M. LAVEK R., DUPUIS J.
*KEYWORDS: WIND, PUMPS, MALI.
*NOTE: WIND ENERGY FOR WATER PUMPING IN MALI, DEVELOPMENTS IN THE GAO AREA.
*DATE: 710900

ABSTRACT 2557

TITLE: SMALL WIND-POWER SYSTEMS.
*AUTHOR: HUGHES, H. A., VAUGHAN D. H.
*SOURCE: PUBL. 795, VIRGINIA POLYTECHNIC INST AND STATE UNIV. EXTENSION DIV., NOV 1978, 16 PP.
*KEYWORDS: WIND.
*DATE: 781100

ABSTRACT 2558

TITLE: REVIEW OF DEVELOPMENT IN WEST-GERMANY.
*AUTHOR: MUTTER U.
*SOURCE: PAPER PRESENTED AT WORKSHOP ON ADVANCED WINDENERGY-SYSTEMS IN STOCKHOLM, 29 AUG 1974, UNIV. OF STUTTGART, WEST GERMANY, 28 PP.
*KEYWORDS: WIND, GERMANY, TECHNOLOGY ASSESSMENT.
*DATE: 740829

ABSTRACT 2559

TITLE: OPTIMUM DESIGN CONCEPT FOR WIND ELECTRIC CONVERTERS.
*AUTHOR: MUTTER U.
*SOURCE: PAPER PRESENTED AT WORKSHOP ON ADVANCED WINDENERGY-SYSTEMS IN STOCKHOLM, 29 AUG 1974, UNIV. OF STUTTGART, WEST GERMANY, 20 PP.
*KEYWORDS: WIND, DESIGN, ELECTRICAL.
*DATE: 740829
ABSTRACT 2560
*TITLE: COMPANY LITERATURE.
*AUTHOR: INDEPENDENT POWER DEVELOPERS INC.
*SOURCE: INDEPENDENT POWER DEVELOPERS INC., BOX 1468, NOXON, MT.
*KEYWORDS: WIND, ADVERTISEMENT.
*NOTES: FILED.
*DATE: 731020

ABSTRACT 2561
*TITLE: WIND POWER NOW.
*AUTHOR: INGELIS D R.
*KEYWORDS: WIND, INDUSTRY, NUCLEAR.
*NOTES: FILED.
*DATE: 751020

ABSTRACT 2562
*TITLE: WIND POWER DEVELOPMENT AND APPLICATION.
*AUTHOR: JOHNSON C C, SHIH R T, SWANSON R K.
*KEYWORDS: WIND.
*NOTES: FILED.
*DATE: 741000

ABSTRACT 2563
*TITLE: WIND POWER FOR PUMPING WATER.
*AUTHOR: KRISHNAN A, GARG H P.
*KEYWORDS: WIND, PUMPS, INDIA.
*NOTES: FILED.
*DATE: 750300

ABSTRACT 2564
*TITLE: QUICK = HIGH-OUTPUT WIND GENERATOR.
*AUTHOR: LINDSLEY E F.
*SOURCE: POPULAR SCIENCE, MARCH 1974, P 52.
*KEYWORDS: WIND.
*NOTES: FILED.
*DATE: 740300

ABSTRACT 2565
*TITLE: ROBERT LANDING - HE RIDES ON THE WIND.
*AUTHOR: LINDSLEY E F.
*KEYWORDS: WIND.
*NOTES: FILED.
*DATE: 750400

ABSTRACT 2566
*TITLE: WIND POWER - HOW NEW TECHNOLOGY IS HARNESSING AN AGE-OLD ENERGY SOURCE.
*AUTHOR: LINDSLEY E F.
*KEYWORDS: WIND, DESIGN, GENERAL.
*NOTES: FILED.
*DATE: 740700

ABSTRACT 2567
*TITLE: WINDMILLS.
*AUTHOR: MCCAULL J.
*KEYWORDS: WIND.
*NOTES: NAS.
*DATE: 731100
ABSTRACT 2568

• TITLE: HOMEMADE SIX-VOLT WIND ELECTRIC PLANTS.
• AUTHOR: MCCOLLUM M F, BUCK F.
• SOURCE: CIRCULAR 56, AGR EXPT STA, NORTH DAKOTA AGR COLLEGE, FARGO, DEC 1935, 16 PP.
• KEYWORDS: WIND, HISTORICAL, DESIGN, OPERATING PROCEDURE.
• NOTES: FILED.
• DATE: 351200

ABSTRACT 2569

• TITLE: HARNESSING THE WIND FOR HOME ENERGY.
• AUTHOR: McGUIGAN D.
• SOURCE: CHARLOTTE, VT 05445/GARDEN WAY PUBL., 1978, 134 PP.
• KEYWORDS: WIND, HOME.
• NOTES: FILED.
• DATE: 780000

ABSTRACT 2570

• TITLE: IS THERE A PLACE FOR THE WINDMILL IN THE LESS DEVELOPED COUNTRIES.
• AUTHOR: MERRIAM M F.
• SOURCE: WORKING PAPER SERIES NO 20, EAST-WEST TECH AND DEV INST, HONOLULU, HAWAII, MARCH 1972, 21 PP.
• KEYWORDS: WIND, DEVELOPING COUNTRIES.
• NOTES: FILED, NAS.
• DATE: 720300

ABSTRACT 2571

• TITLE: WIND ENERGY FOR HUMAN NEEDS.
• AUTHOR: MERRIAM M F.
• SOURCE: PREPARED FOR UN ENVIRONMENT PROGRAM, LAWRENCE BERKELEY LAB, UNIV OF CALIF, BERKELEY, NOV 1974, 99 PP.
• KEYWORDS: WIND, ENVIRONMENT, WORLD WIDE, DESIGN, ENERGY SOURCES.
• NOTES: FILED, NAS.
• DATE: 741100

ABSTRACT 2572

• TITLE: WINDMILLS FOR LESS DEVELOPED COUNTRIES.
• AUTHOR: MERRIAM M F.
• SOURCE: TECHOS CASE 7 INTERNATIONAL DIV PUBL, APRIL-JUNE 1972, PP 9-23.
• KEYWORDS: WIND, DEVELOPING COUNTRIES, TECHNOLOGY ASSESSMENT, DESIGN, INDUSTRY.
• NOTES: FILED.
• DATE: 720400

ABSTRACT 2573

• TITLE: WIND ENERGY - LARGE AND SMALL SYSTEMS COMPETING.
• AUTHOR: METZ H D.
• KEYWORDS: WIND.
• NOTES: FILED, SIXTH IN A SERIES OF SEVEN.
• DATE: 770922

ABSTRACT 2574

• TITLE: SUPPLEMENT TO THE CLIMATE OF MICHIGAN BY STATIONS FOR THE PERIOD 1940
• AUTHOR: MICHIGAN DEPARTMENT OF AGRICULTURE, MICHIGAN WEATHER SERVICE.
• SOURCE: MICH DEPT OF AGR, MICH WEATHER SERVICE, JUNE 1974, 26 PP.
• KEYWORDS: WIND, STATISTICS.
• NOTES: FILED.
• DATE: 740600

ABSTRACT 2575

• TITLE: WIND ON A BOOM.
• AUTHOR: MORAN E.
• KEYWORDS: WIND, DESIGN.
• NOTES: FILED, AN EASY TO ASSEMBLE PORTABLE WINDMILL IS DISCUSSED.
• DATE: 770200
ABSTRACT 2576

*TITLE: GARY BREGG - WINDPOWER IN A DRUM.
*AUTHOR: MORAN E.
*KEYWORDS: WIND.
*NOTES: FILED.
*DATE, 750800

ABSTRACT 2577

*TITLE: WIND ENGINEERING.
*AUTHOR: NOWOOD H. E. ED.
*KEYWORDS: WIND.
*NOTES: FILED.
*DATE: 770000

ABSTRACT 2578

*TITLE: ENERGY FOR THE FUTURE - THE OSU EFFORT.
*AUTHOR: OKLAHOMA STATE UNIVERSITY.
*SOURCE: ENGR ENERGY LAB, OKLAHOMA STATE UNIV, STILLWATER, OK, 1974, 13 PP.
*KEYWORDS: WIND, SOLAR, BIBLIOGRAPHY.
*NOTES: FILED.
*DATE: 740000

ABSTRACT 2579

*TITLE: COST COMPARISON OF VILLAGE LEVEL POWER SOURCES.
*AUTHOR: PAK S.
*SOURCE: IIBRD UNPUBLISHED PAPER, 30 MAY 1974, 10 PP.
*KEYWORDS: WIND, ECONOMICS, DEVELOPING COUNTRIES, ENGINE.
*NOTES: FILED.
*DATE: 740530

ABSTRACT 2580

*TITLE: SUMMARY OF WIND-ELECTRIC POTENTIAL IN WESTERN MICHIGAN.
*AUTHOR: PARK G L, ASHUSSEN J, KRAUSS G.
*SOURCE: DIV OF ENGINEERING RESEARCH, MICH STATE UNIV, LANSING, MI 48824, 21 NOV 1977, 5 PP.
*KEYWORDS: WIND, ELECTRICAL, ECONOMICS, MICHIGAN.
*NOTES: FILED.
*DATE: 771121

ABSTRACT 2581

*TITLE: SIMPLIFIED WIND POWER SYSTEMS FOR EXPERIMENTERS.
*AUTHOR: PARK J.
*SOURCE: JACK PARK, BOX 4301, SYLMAR, CALIF, 1975, 80 PP.
*KEYWORDS: WIND.
*NOTES.
*DATE: 750000

ABSTRACT 2582

*TITLE: WINDMILLS AND WIND GENERATORS.
*AUTHOR: PARSONS R A, FAIRBANK W C.
*SOURCE: AGR ENGR LEAFLET 2001, UNIV OF CALIF, BERKELEY, 1974, 7 PP.
*KEYWORDS: WIND, CALIFORNIA, ECONOMICS.
*NOTES: FILED.
*DATE: 740800
ABSTRACT 2583

**TITLE**: WinD ENErGY SYSTEMS.
**AUTHOR**: PRICE D R, WEEKS S A.
**SOURCE**: AGR ENGR EXTENSION BULLETIN 413, NY STATE COLLEGE OF AGR AND LIFE SCIENCES, CORNELL UNIV, ITHACA, MAY 1975, 9 PP.
**KEYWORDS**: WIND, CONVERSION, GENERAL.
**NOTES**: FILED.
**DATE**: 750500

ABSTRACT 2584

**TITLE**: ENERGY ALTERNATIVES — THEY ARE BLOWING IN THE WIND.
**AUTHOR**: PRINCE M.
**SOURCE**: UNIV OF MASS ALUMNUS MAGAZINE, 6(13)/12-15, OCT-NOV 1975.
**KEYWORDS**: WIND, SOLAR, ENERGY SOURCES, DESIGN, MASSACHUSETTS.
**NOTES**: FILED.
**DATE**: 751100

ABSTRACT 2585

**TITLE**: WIND POWER SYSTEMS.
**AUTHOR**: PRIVETTE C W.
**SOURCE**: EXTENSION LEAFLET 102, CLEMSON UNIV, JAN 1976, 12 PP.
**KEYWORDS**: WIND.
**NOTES**: FILED.
**DATE**: 760100

ABSTRACT 2586

**TITLE**: POWER FROM THE WIND.
**AUTHOR**: PUTNAM P C.
**SOURCE**: NEW YORK/VAN NOSTRAND CO, 1948, 224 PP.
**KEYWORDS**: WIND.
**NOTES**: FILED.
**DATE**: 481000

ABSTRACT 2587

**TITLE**: A WIND ENERGY STORAGE AND CONVERSION SYSTEM FOR USE IN UNDERDEVELOPED COUNTRIES.
**AUTHOR**: RAMAKUMAR R, MCCOLLUM K A, ALLISON M J, HUGHES W L.
**KEYWORDS**: WIND, DEVELOPING COUNTRIES.
**NOTES**: FILED.
**DATE**: 690600

ABSTRACT 2588

**TITLE**: HARNESsing WIND POWER IN DEVELOPING COUNTRIES.
**AUTHOR**: RAMAKUMAR R.
**SOURCE**: IECEC RECORD, NEWARK, DELAWARE, AUG 1975, PP 966-973.
**KEYWORDS**: WIND, DEVELOPING COUNTRIES, EGYPT, INDIA, ECONOMICS.
**NOTES**: FILED.
**DATE**: 750830

ABSTRACT 2589

**TITLE**: THE OKLAHOMA STATE UNIVERSITY WIND ENERGY RESEARCH PROGRAM.
**AUTHOR**: RAMAKUMAR R, ALLISON M J, HUGHES W L.
**SOURCE**: PRESENTED AT SECOND US NATIONAL CONF ON WIND ENGINEERING RESEARCH, FORT COLLINS, COLORADO, JUNE 1975, 3 PP.
**KEYWORDS**: WIND.
**DATE**: 750630

ABSTRACT 2590

**TITLE**: WIND ENERGY UTILIZATION PROSPECTS.
**AUTHOR**: RAMAKUMAR R, HUGHES W L, ALLISON M J.
**SOURCE**: PROCEEDINGS OF THE INST OF ENVIRONMENTAL SCI, 14-16 APRIL 1975, ANAHEIM, CALIF, PP 138-142.
**KEYWORDS**: WIND, ENVIRONMENT, ECONOMICS.
**NOTES**: FILED.
**DATE**: 750410
ABSTRACT 2591

• TITLE: COMPANY LITERATURE.
• AUTHOR: REAL GAS AND ELECTRIC CO INC.
• SOURCE: REAL GAS AND ELECTRIC CO INC. PO BOX A, GUERNEVILLE, CA.
• KEYWORDS: WIND, ADVERTISEMENT.
• NOTES: FILED.
• DATE.

ABSTRACT 2592

• TITLE: WIND ENERGY CONVERSION SYSTEMS - WORKSHOP PROCEEDINGS.
• AUTHOR: SAVINO J M, ET AL.
• SOURCE: NSF-PA-H-73-006. NATIONAL TECH INFO SERVICE, SPRINGFIELD, VIRGINIA.
• KEYWORDS: WIND, HISTORICAL, CONVERSION, DESIGN, WORLD WIDE, OPERATING PROCEDURE.
• NOTES: FILED.
• DATE: 750611.

ABSTRACT 2593

• TITLE: COMPANY LITERATURE.
• AUTHOR: SENCEBAUGH WIND ELECTRIC.
• SOURCE: SENCEBAUGH WIND ELECTRIC, PO BOX 11174, PALO ALTO, CA.
• KEYWORDS: WIND, ADVERTISEMENT.
• NOTES: FILED.
• DATE.

ABSTRACT 2594

• TITLE: COMPANY LITERATURE.
• AUTHOR: SENCEBAUGH J.
• SOURCE: SENCEBAUGH INC, PALO ALTO, CALIF.
• KEYWORDS: WIND, OPERATING PROCEDURE, DESIGN, ADVERTISEMENT.
• NOTES: FILED.
• DATE.

ABSTRACT 2595

• TITLE: DEVELOPMENT OF WIND ENERGY UTILIZATION IN ASIA AND THE PACIFIC.
• AUTHOR: SHERMAN H R.
• SOURCE: ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC EXPERT WORKING GROUP ON THE USE OF SOLAR AND WIND ENERGY, BANGKOK, 2-9 MARCH 1976. 40 PP.
• KEYWORDS: WIND, PUMPS, ELECTRICAL, ASIA.
• NOTES: FILED.
• DATE: 760309.

ABSTRACT 2596

• TITLE: WIND-ELECTRIC POWER.
• AUTHOR: SODERHOLM L H, ANDREW J F.
• SOURCE: ASAE PAPER 74-3503. 11 PP.
• KEYWORDS: WIND, IOWA, ELECTRICAL.
• NOTES: FILED.
• DATE: 740500.

ABSTRACT 2597

• TITLE: WIND ENERGY FOR MODIFYING ELECTRIC HEATING LOAD DEMANDS.
• AUTHOR: SODERHOLM L H, WERER R C.
• SOURCE: ASAE PAPER 77-3051. 1977. 10PP.
• KEYWORDS: WIND, ELECTRICAL, HEAT PUMPS.
• NOTES: FILED.
• DATE: 770800.

A WIND-ENERGY/WATER- STORAGE HEATING SYSTEM AND A HEAT-PUMP/BACKUP ENERGY SOURCE ARE EVALUATED FOR PERFORMANCE AND FOR MODIFYING ELECTRIC HEATING LOAD DEMANDS.
ABSTRACT 2598

*TITLE*: USING WIND ENERGY FOR PEAK ELECTRICAL LOAD LEVELING.

*AUTHOR*: SODERHOLM L H.

*SOURCE*: ASAE PAPER 76-5040, 1976, 11 PP.

*KEYWORDS*: WIND, ELECTRICAL.

*NOTES*: FILED. PROJECT BACKGROUND, OBJECTIVES AND INITIAL EXPERIMENTAL AND SIMULATION RESULTS ARE PRESENTED FOR INVESTIGATIONS DEVOTED TO DETERMINING THE FEASIBILITY OF USING WIND ENERGY FOR HEATING RURAL STRUCTURES AND REDUCING PEAK ELECTRICAL LOADS.

*DATE*: 760000

ABSTRACT 2599

*TITLE*: DEPENDABILITY OF WIND ENERGY GENERATORS WITH SHORT TERM ENERGY STORAGE.

*AUTHOR*: SORENSEN B.


*KEYWORDS*: WIND, STORAG, ELECTRICAL, NUCLEAR.

*NOTES*: FILED. POWER FLUCTUATIONS AND POWER DURATION CURVES FOR WIND ENERGY GENERATORS ARE COMPARED TO THOSE OF TYPICAL NUCLEAR REACTORS. A STORAGE SYSTEM CAPABLE OF DELIVERING THE YEARLY AVERAGE POWER OUTPUT FOR ABOUT 10 HOURS ALREADY MAKES THE DEPENDABILITY OF THE WIND ENERGY SYSTEM COMPARABLE TO THAT OF A TYPICAL NUCLEAR PLANT.

*DATE*: 761126

ABSTRACT 2600

*TITLE*: NRC S VERTICAL WIND TURBINE.

*AUTHOR*: SOUTH P. RANGI R.

*SOURCE*: ASAE PAPER PNW 73-503, 20 PP.

*KEYWORDS*: WIND, DESIGN.

*NOTES*: FILED.

*DATE*: 750300

ABSTRACT 2601

*TITLE*: THE PERFORMANCE AND ECONOMICS OF THE VERTICAL-AXIS WIND TURBINE DEVELOPED AT THE NATIONAL RESEARCH COUNCIL, OTTAWA, CANADA.

*AUTHOR*: SOUTH P., RANGI R.

*SOURCE*: ASAE PAPER PNW 73-503, 20 PP.

*KEYWORDS*: WIND, DESIGN, ECONOMICS, OPERATING PROCEEDURE.

*NOTES*: FILED.

*DATE*: 750300

ABSTRACT 2602

*TITLE*: EGGBEATER WINDMILL.

*AUTHOR*: STEPLER R.

*SOURCE*: POPULAR SCIENCE, MAY.1975, PP 74-76.

*KEYWORDS*: WIND, DESIGN.

*DATE*: 750500

ABSTRACT 2603

*TITLE*: FAIR STAND THE WINDMILLS FROM FRANCE.

*AUTHOR*: TAYLOR D.


*KEYWORDS*: WIND, FRANCE.

*NOTES*: FILED.

*DATE*: 740320

ABSTRACT 2604

*TITLE*: PRELIMINARY RESULTS OF THE LARGE EXPERIMENTAL WIND TURBINE PHASE OF THE NATIONAL WIND ENERGY PROGRAM.

*AUTHOR*: THOMAS R L, SHOLES J E.

*SOURCE*: TECH PAPER PRESENTED AT THE FRONTIERS OF TECH CONF, OKLAHOMA STATE UNIV, STILLWATER, 1-2 OCT 1975, 13 PP.

*KEYWORDS*: WIND, DESIGN, TECHNOLOGY ASSESSMENT.

*NOTES*: FILED.

*DATE*: 751061
ABSTRACT 2605

• TITLE: WIND ENERGY UTILIZATION: A BIBLIOGRAPHY.
• AUTHOR: UNIVERSITY OF NEW MEXICO.
• SOURCE: TECH APPLICATION CENTER, UNIV OF NEW MEXICO, ALBUQUERQUE, NM, APRIL 1975, 496 PP.
• KEYWORDS: WIND, BIBLIOGRAPHY.
• NOTES: FILED.
• DATE: 750400

ABSTRACT 2606

• TITLE: FEDERAL WIND ENERGY PROGRAM: SUMMARY REPORT.
• AUTHOR: US-ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.
• SOURCE: ERDA, DIV OF SOLAR ENERGY, WASHINGTON DC, OCT 1975.
• KEYWORDS: WIND.
• DATE: 751000

ABSTRACT 2607

• TITLE: WIND ENERGY BIBLIOGRAPHY (PART 1 AND 2).
• AUTHOR: VAN STEYN R.
• SOURCE: LIBRARY ADMINISTRATION, UNIV OF TECH, EINDHOVEN, NETHERLANDS, JULY 1975.
• KEYWORDS: WIND, BIBLIOGRAPHY.
• NOTES: FILED.
• DATE: 750710

ABSTRACT 2608

• TITLE: WINDMILLS - THE RESURRECTION OF AN ANCIENT ENERGY TECHNOLOGY.
• AUTHOR: WÄDE R.
• KEYWORDS: WIND, HISTORICAL, GENERAL.
• NOTES: FILED.
• DATE: 740607

ABSTRACT 2609

• TITLE: APPROACHES TO WATER PUMPING IN ARID AND SEMI-ARID LANDS AND A DESCRIPTION OF THE CRETAN SAIL WINDMILL.
• AUTHOR: WATT S D.
• SOURCE: PAPER PRESENTED AT THE INTERNATIONAL CONF ON APPROPRIATE TECHNOLOGIES FOR SEMIARID AREAS - WIND AND SOLAR ENERGY FOR WATER SUPPLY, 15-20 SEPT 1975, 34 PP.
• KEYWORDS: WIND, PUMPS, DEVELOPING COUNTRIES, WORLD WIDE.
• NOTES: FILED.
• DATE: 750915

ABSTRACT 2610

• TITLE: WIND ENERGY FOR WATER HEATING.
• AUTHOR: WEEKS S A, PRICE D R.
• SOURCE: 35TH ANNUAL PROGRESS REPORT TO THE NEW YORK FARM ELECTRIFICATION COUNCIL, MAY 1976, PP. 84-87.
• KEYWORDS: WIND, HEAT.
• NOTES: FILED.
• DATE: 760500

ABSTRACT 2611

• TITLE: JACK KRUEGER - WIND POWER HELPS HEAT HIS HOME.
• AUTHOR: WILKE J.
• KEYWORDS: WIND, MODELS.
• NOTES: FILED.
• DATE: 760110

ABSTRACT 2612

• TITLE: THERES ELECTRICITY IN THE WIND IN CLAYTON, NM.
• AUTHOR: BISE C E.
• SOURCE: MACHINE DESIGN, 50(7)/50-52, 23 MARCH 1978.
• KEYWORDS: WIND, NEW MEXICO, ELECTRICAL.
• NOTES: FILED.
• DATE: 780323
ABBREVIATIONS

AAAS........................................American Association for the Advancement of Science
Agr....................................................Agriculture(a)l
Agron..............................................Agronomy
AID...............................................Agency for International Development
AIE.................................................Asian Institute of Technology
Amer...............................................America(n)
ASAE..............................................American Society of Agricultural Engineers
ASEE..............................................American Society of Electrical Engineers
Assoc.............................................Association
Aug.....................................................August
Ave.....................................................Avenue
Bldg..................................................Building(s)
Blvd..................................................Boulevard
Calif..............................................California
CBSA.............................................Center for Biology and Natural Science
dea..................................................Centre Europeen De Mecanisme Agricole
Chem...............................................Chemical
Co......................................................Company
Conf...............................................Conference
Conn...............................................Connecticut
Corp..............................................Corporation
CSIR.............................................Council for Scientific and Industrial Research
CSIRO...........................................Commonwealth Scientific and Industrial Research Organization
Dec..................................................December
Dept...............................................Department
Dev...................................................Development
Div...................................................Division
Dr......................................................Drive
E.......................................................East (street address only)
ECE..................................................Economic Commission for Europe
Econ...............................................Economic(s)
EXP.................................................Extension Committee on Policy
Eng....................................................Engineering
Envir...............................................Environment(a)l
EPA..................................................Environmental Protection Agency
ERDA...............................................Energy Research and Development Administration
ESCAP...........................................Economic and Social Commission for Asia and the Pacific
EXPT...............................................Experiment
FAO..................................................Food and Agriculture Organization-U.N.
FEA...............................................Federal Energy Administration
Feb...................................................February
Fed...................................................Federal or Federal
HDC..................................................Housing and Urban Development
IBRD...............................................International Bank for Reconstruction and Development
ILL...................................................Illinois
Inc...................................................Incorporated
Info...............................................Information
Ind...................................................Indiana
Inst...............................................Institution or Institute(s)
J.......................................................Journal
Jan....................................................January
Lab..................................................Laboratory
Ltd..................................................Limited
Mass...............................................Massachusetts
Mich...............................................Michigan
Minn...............................................Minnesota
MIT...............................................Massachusetts Institute of Technology
N.......................................................North (street address only)
NAS...............................................National Academy of Sciences
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