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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO Guides to Information Sources

No.33

09285

INFORMATION
SOURCES
ON
BIOCONVERSION
OF AGRICULTURAL
WASTES



UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna

**UNIDO Guides to Information Sources
No. 33**

**INFORMATION SOURCES
ON BIOCONVERSION
OF AGRICULTURAL WASTES**



UNITED NATIONS
New York, 1979

Notations for bioconversion of agricultural wastes

Universal Decimal Classification (UDC)

- 628.37 Sewage utilization in agriculture
- 628.38 Utilization of screenings, sludge gas, effluents as fertilizers, fuels
- 631.57 Crop by- and co-products
- 631.89 Organic fertilizers. Green manuring, humus, refuse compost
- 662.76 Methane

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PREFACE

The United Nations Industrial Development Organization (UNIDO) promotes the use of industrial information in developing countries by giving guidance in improving local information facilities. As one of the means of promotion UNIDO compiles directories and guides to selected information sources on branches of industry of primary concern to developing countries. The present guide, dealing with the bioconversion of agricultural wastes, is the thirty-third in the series of *UNIDO Guides to Information Sources* (UNIDO/LIB/SER.D). A list of the guides published to date appears at the end of this guide, more are planned for the series.

The directories and guides are not intended to be exhaustive, nor are they intended to be research tools; rather, they present sources considered to be of practical value to users. The data have been compiled so as to facilitate rapid access to the bodies referred to and the acquisition of the publications listed.

The energy crisis and the world-wide shortage of chemical fertilizers have highlighted the economic potential for utilizing agricultural wastes in developing countries. The bioconversion of animal and vegetable residues through biogasification and composting can provide cheap power, fertilizers and soil conditioners at the village level. Both processes, aside from helping to solve the sanitation problem of waste disposal, are of particular interest because they are based on renewal of the original materials. This means that the agricultural sector has the potential to meet most of its needs in fuel and fertilizers.

Composting has long been practised in traditional systems of agriculture, and biogas plants have been used successfully in India and elsewhere. Both processes are examples of appropriate rural technologies which do not require substantial investment or skilled labour to be operated efficiently. With adequate management and organizational structures, they could be used on a wider scale in rural communities. Further research is needed in order to optimize fuel and fertilizer production and improve techniques of application.

The present guide will be followed by another dealing specifically with industrial uses of agricultural wastes.

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Publications listed in this guide have been selected mainly from literature in the official languages of the United Nations; when appropriate, publications in other languages have also been included.

The names of organizations and publications are given in their original languages, wherever available; for those listed in languages other than the official languages of the United Nations, a translation of the title into English is included.

Where available, the date and the number of pages of the most recent known edition are given as well as the address of the issuing organization or publisher. In the case of United Nations sales publications the year of publication is indicated as part of the sales number.

Requests for non-sales items that are issued by the United Nations and related bodies should be made direct to the issuing bodies. Sales publications should be ordered by sales number from an authorized distributor or from:

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United Nations
New York, New York 10017
United States of America

or

Sales Section
United Nations Office
Palais des Nations
CH-1211 Geneva 10
Switzerland

Suggestions for the inclusion of additional information in a future, revised version would be appreciated and should be addressed to:

Industrial Documentation Unit
United Nations Industrial Development Organization
P.O. Box 300
A-1400 Vienna
Austria

PREFACE

Pour faciliter la diffusion et l'utilisation de l'information industrielle dans les pays en développement, l'Organisation des Nations Unies pour le développement industriel (ONUDI) aide ces pays à améliorer leurs moyens d'information, notamment en établissant des répertoires et des guides des principales sources d'information sur les secteurs industriels qui présentent pour eux un intérêt majeur. Le présent guide, qui concerne la transformation biochimique des déchets agricoles, est le trente-troisième de la série des *Guides des sources d'information* (UNIDO/LIB/SER.D). On trouvera à la fin de cette publication la liste des guides déjà parus. D'autres sont prévus.

Les ouvrages de cette série ne prétendent pas être exhaustifs; ce ne sont pas non plus des instruments de recherche, mais de simples guides des sources d'information présentant un intérêt pratique pour les utilisateurs. Les données sont présentées de manière à permettre à ceux-ci de se mettre rapidement en rapport avec les sources d'information mentionnées et d'obtenir les publications auxquelles ils s'intéressent.

La crise de l'énergie et la pénurie mondiale d'engrais chimiques ont mis en relief les possibilités qu'offre l'utilisation des déchets agricoles dans les pays en développement. La transformation biochimique des résidus animaux et végétaux grâce à la production de gaz par fermentation et au compostage permet d'obtenir de l'énergie à bon marché, ainsi que des engrains et des amendements pour l'utilisation locale. Ces deux procédés, outre qu'ils contribuent à résoudre le problème sanitaire que pose l'évacuation des ordures, présentent l'avantage de ne pas consommer de matières premières non renouvelables. L'agriculture est ainsi en mesure de faire face à l'essentiel de ses besoins en combustible et en engrais.

Le compostage est depuis longtemps pratiqué dans les systèmes traditionnels d'agriculture, et il existe en Inde et dans d'autres pays des installations de production de gaz par fermentation fonctionnant de façon satisfaisante. Ces deux procédés sont des exemples de techniques appropriées aux conditions rurales et qui n'exigent ni investissements importants ni main-d'œuvre spécialisée pour être exploités efficacement. Avec une gestion rationnelle et une organisation adéquate, ils pourraient être généralisés dans les communautés rurales. De nouvelles recherches seront nécessaires pour améliorer la production de combustible et d'engrais et améliorer les techniques d'application.

Le présent guide sera complété par une autre publication spécialement consacrée aux utilisations industrielles des déchets agricoles.

NOTES EXPLICATIVES

Les appellations employées dans cette publication et la présentation des données qui y figurent n'impliquent de la part du Secrétariat de l'Organisation des Nations Unies aucune prise de position quant au statut juridique des pays, territoires, villes ou zones, ou de leurs autorités, ni quant au tracé de leurs frontières ou limites.

Les publications énumérées dans le présent volume sont pour la plupart rédigées dans les langues officielles de l'Organisation des Nations Unies; toutefois, certains documents publiés dans d'autres langues ont aussi été mentionnés.

Les noms des organisations et les titres des publications sont donnés le plus souvent possible dans la langue originale; les noms des organisations et les titres des publications libellés dans des langues autres que les langues officielles de l'Organisation des Nations Unies ont été traduits en anglais.

Nous avons, aussi souvent qu'il était possible, précisé la date et le nombre de pages de l'édition la plus récente ainsi que l'adresse de l'éditeur ou de l'organisation qui a publié le document. Lorsqu'il s'agit de documents de l'Organisation des Nations Unies, l'année de publication est indiquée avec le numéro de vente.

Les documents de l'Organisation des Nations Unies et des organismes qui lui sont rattachés qui ne portent pas de numéro de vente doivent être demandés directement à l'organisation qui les a publiés. Ceux qui portent un numéro de vente peuvent être commandés à un distributeur autorisé ou à l'une des adresses suivantes, en mentionnant le numéro :

Nations Unies Section des ventes Service des publications New York, N.Y. 10017 (Etats-Unis d'Amérique)	ou	Office des Nations Unies Section des ventes Palais des Nations CH-1211 Genève 10 (Suisse)
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Organisation des Nations Unies pour le développement industriel
Groupe de la documentation industrielle
Boîte postale 300
A-1400 Vienne
(Autriche)

ПРЕДИСЛОВИЕ

Организация ООН по промышленному развитию (ЮНИДО) содействует использованию промышленной информации в развивающихся странах путем обеспечения руководства в улучшении местных информационных служб. Одной из мер такого содействия является составление ЮНИДО справочников и руководств по отдельным источникам информации по отраслям промышленности, представляющим первоочередной интерес для развивающихся стран. Настоящее руководство по биопереработке сельскохозяйственных отходов является тридцать третьим в серии *UNIDO Guides to Information Sources* (UNIDO/LIB/SER.D) (Руководства ЮНИДО по источникам информации). Список руководств, опубликованных до настоящего времени, приведен в конце настоящего руководства; планируется дополнительное издание руководств данной серии.

Эти справочники и руководства не ставят своей целью быть исчерпывающими или служить в качестве пособий для проведения исследований, а представляют собой источники, которые могут иметь практическую ценность для потребителей. Данные подобраны таким образом, чтобы облегчить доступ к необходимым материалам и приобретение имеющихся изданий.

Энергетический кризис и мировая нехватка химических удобрений выдвигают на первый план экономические возможности использования сельскохозяйственных отходов в развивающихся странах. Биопереработка отходов животного и растительного происхождения путем биогазификации и компостирования может позволить производить дешевую энергию, удобрения и почвоулучшители в сельских районах. Помимо того, что оба эти процесса содействуют решению санитарной проблемы ликвидации отходов, они также представляют особый интерес, поскольку основаны на восстановлении исходных материалов. Это означает, что сельскохозяйственный сектор обладает возможностями удовлетворять большую часть своих потребностей в энергии и удобрениях.

Комpostingование давно практикуется в традиционных системах сельского хозяйства, и заводы по производству биогаза успешно используются в Индии и других странах. Оба процесса являются примерами соответствующих агротехнических методов, для эффективного применения которых не требуется значительных инвестиций или квалифицированной рабочей силы. При соответствующей управленческой и организационной структурах их можно было бы использовать на более широкой основе в сельских общинах. Для оптимизации производства энергии и удобрений и для улучшения технологии применения требуется проведение дальнейших исследований.

Вслед за настоящим руководством будет издано другое руководство, специально посвященное промышленному использованию сельскохозяйственных отходов.

ПОЯСНИТЕЛЬНЫЕ ЗАМЕЧАНИЯ

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В зависимости от наличия указаны год издания и количество страниц самого последнего из известных изданий, а также адрес организации, выпускающей публикацию, или издателя. Если публикации Организации Объединенных Наций предназначены для продажи, год издания указывается как часть номера, под которым они продаются.

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United States of America

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United Nations Industrial Development Organization
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A-1400 Vienna
Austria

PREFACIO

La Organización de las Naciones Unidas para el Desarrollo Industrial (ONUDI) promueve la utilización de información industrial en los países en desarrollo proporcionando orientación para el mejoramiento de los servicios locales de información. Uno de los medios de promoción que emplea la ONUDI consiste en compilar guías de fuentes básicas de información sobre ramas de la industria de especial interés para los países en desarrollo. La presente guía, que trata de la transformación biológica de desechos agrícolas, es la trigésima tercera de la serie *Guías de Fuentes de Información* (UNIDO/LIB/SER.D) que publica la ONUDI. La lista de las guías publicadas hasta la fecha figura en el anverso de la contratapa de la presente guía; se prevé la publicación de muchas guías más en esta serie.

Estas guías no pretenden ser exhaustivas ni están destinadas a servir de instrumento de investigación; presentan, más bien, una selección de fuentes que se consideran de valor práctico para los usuarios. Los datos se han recopilado de un modo tal que faciliten el rápido acceso a las entidades mencionadas y la adquisición de las publicaciones que se indican.

La crisis de energía y la escasez mundial de fertilizantes químicos han destacado el potencial económico de la utilización de desechos agrícolas en los países en desarrollo. Con la transformación biológica de residuos animales y vegetales mediante la biogasificación y la producción de fertilizantes orgánicos (composte) se puede obtener energía barata, fertilizantes y acondicionadores de suelos en las propias poblaciones rurales. Ambos procesos, a más de contribuir a solucionar el problema sanitario de la eliminación de desechos, tienen particular interés porque se basan en la renovación de las materias originales. Esto significa que el sector agrícola tiene la posibilidad de satisfacer la mayor parte de sus necesidades en materia de combustibles y fertilizantes.

Se ha producido composte desde hace mucho tiempo en los sistemas tradicionales de agricultura, y las plantas de biogás han funcionado satisfactoriamente en la India y en otras partes. Ambos procesos son ejemplos de tecnologías rurales apropiadas que no requieren inversiones considerables ni mano de obra calificada para su aplicación eficaz. Con una gestión adecuada y estructuras orgánicas pertinentes, estos procesos podrían ser aplicados en mayor escala en comunidades rurales. Es preciso efectuar investigaciones ulteriores para optimizar la producción de combustibles y fertilizantes y mejorar las técnicas de aplicación.

A la presente guía seguirá otra que tratará concretamente de las aplicaciones industriales de los desechos agrícolas.

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(Estados Unidos de América)

o

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CH-1211 Ginebra 10
(Suiza)

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Grupo de Documentación Industrial
Organización de las Naciones Unidas para el Desarrollo Industrial
P.O. Box 300
A-1400 Viena
Austria

SECTION I

PROFESSIONAL, TRADE AND RESEARCH ORGANIZATIONS, LEARNED SOCIETIES AND SPECIAL INFORMATION SERVICES

A. United Nations and related organizations

1. ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)
ASIAN INDUSTRIAL DEVELOPMENT COUNCIL
Sala Santitham, Rájadamnern Avenue
BANGKOK 2, Thailand
2. ECONOMIC COMMISSION FOR AFRICA (ECA)
P.O. Box 3001
ADDIS ABABA, Ethiopia
3. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)
AGRICULTURAL SERVICES DIVISION
LAND AND WATER DEVELOPMENT DIVISION
Via delle Terme di Caracalla
I-00100 ROME, Italy
4. INTERNATIONAL TRADE CENTRE (UNCTAD/GATT)
DOCUMENTATION SERVICE
Palais des Nations
CH-1211 GENEVA 10, Switzerland
5. UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)
NATURAL RESOURCES RESEARCH DIVISION
DEPARTMENT OF ENVIRONMENTAL SCIENCE AND NATURAL RESOURCES RESEARCH
7, place de Fontenoy
F-75007 PARIS, France
6. UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)
P.O. Box 30552
NAIROBI, Kenya
7. UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)
AGRO-INDUSTRIES SECTION
INDUSTRIAL INFORMATION SECTION
P.O. Box 300
A-1400 VIENNA, Austria

8. WORLD BANK
1818 H Street, N.W.
WASHINGTON, D.C. 20433, United States of America
9. WORLD HEALTH ORGANIZATION (WHO)
WASTES DISPOSAL SECTION
20, avenue Appia
CH-1211 GENEVA 27, Switzerland

B. Other organizations

1. Organizations of international or regional scope

10. ASIAN INSTITUTE OF TECHNOLOGY
P.O. Box 2754
Paholyothin Highway
PATHUM THANI, Thailand
11. ASSOCIATION FOR THE ADVANCEMENT OF AGRICULTURAL SCIENCES IN AFRICA
P.O. Box 30087
ADDIS ABABA, Ethiopia
12. CENTRAL AMERICAN RESEARCH INSTITUTE FOR INDUSTRY/
INSTITUTO CENTROAMERICANO DE INVESTIGACION Y TECNOLOGIA INDUSTRIAL (ICAITI)
Apartado postal 1552
Avenida la Reforma 4-47, zona 10
GUATEMALA CITY, Guatemala
13. COMMISSION OF THE EUROPEAN COMMUNITIES
DIRECTORATE GENERAL FOR AGRICULTURE
200, rue de la Loi
B-1049 BRUSSELS, Belgium
14. COMMITTEE OF AGRICULTURAL ORGANIZATIONS IN THE
EEC/COMITE DES ORGANISATIONS PROFESSIONNELLES AGRICOLES DE LA CEE
8, rue de Spa
B-1040 BRUSSELS, Belgium
15. COMMONWEALTH AGRICULTURAL BUREAUX
Farnham House, Farnham Royal
SLOUGH SL2 3BN, Buckinghamshire, England
16. EAST AFRICAN AGRICULTURE AND FORESTRY RESEARCH
ORGANIZATION
P.O Box 30148
NAIROBI, Kenya
17. EUROPEAN FEDERATION FOR THE PROTECTION OF WATERS
Kubergstrasse
CH-8049 ZURICH, Switzerland

18. INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES OF THE OAS/INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS DE LA OEA
Apartado 10281
SAN JOSE, Costa Rica
19. INTERNATIONAL AGRICULTURAL CENTRE (IAC)
P.O. Box 88
WAGENINGEN, Netherlands
20. INTERNATIONAL ASSOCIATION OF WATER POLLUTION RESEARCH
156-170 Newhall Street
BIRMINGHAM 3, Warwickshire, England
21. INTERNATIONAL CENTER FOR TROPICAL AGRICULTURE/CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL
Apariado aéreo 67.13
CALI, Colombia
22. INTERNATIONAL CENTRE FOR INDUSTRY AND ENVIRONMENT
P.O. Box 30643
NAIROBI, Kenya
23. INTERNATIONAL COMMISSION FOR AGRICULTURAL INDUSTRIES/COMMISSION INTERNATIONALE DES INDUSTRIES AGRICOLES
24, rue de Teheran
F-75008 PARIS, France
24. INTERNATIONAL COMMISSION OF AGRICULTURAL ENGINEERING/COMMISSION INTERNATIONALE DU GENIE RURAL
17-21, rue de Javel
F-75015 PARIS, France
25. INTERNATIONAL CONFEDERATION OF TECHNICAL AGRICULTURISTS/CONFEDERATION INTERNATIONALE DES INGENIEURS ET TECHNICIENS DE L'AGRICULTURE
Beethovenstrasse 24
CH-8002 ZURICH, Switzerland
26. INTERNATIONAL FEDERATION OF AGRICULTURAL PRODUCERS (IFAP)/FEDERATION INTERNATIONALE DES PRODUCTEURS AGRICOLES
1, rue d'Hauteville
F-75010 PARIS, France
27. INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (IIASA)
A-2361 LAXENBURG, Austria
28. INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (IITA)
P.O. Box 5320
IBADAN, Nigeria

29. INTERNATIONAL REFERENCE CENTRE ON WASTES DISPOSAL
c/o Federal Institute of Water Supply, Sewage and Water Pollution Control
Ueberlandstrasse 133
CH-8600 DUEBENDORF, Switzerland
30. INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)
AGRICULTURAL ENGINEERING DEPARTMENT
P.O. Box 933, Los Banos
MANILA, Philippines
31. INTERNATIONAL SOCIETY OF SOIL SCIENCE
c/o Royal Tropical Institute
Mauritskade 63
AMSTERDAM, Netherlands
32. INTERNATIONAL SOLAR ENERGY SOCIETY
P.O. Box 52
PARKVILLE, Victoria 3052, Australia
33. INTERNATIONAL SOLID WASTE AND PUBLIC CLEANSING ASSOCIATION
28 Portland Place
LONDON W1N 4DE, England
34. INTERNATIONAL SYSTEM OF SCIENTIFIC AND TECHNICAL INFORMATION IN AGRICULTURE AND FORESTRY
Slezská 7
12056 PRAGUE 2, Czechoslovakia
35. ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)
JOINT POLICY ISSUES GROUP ON WASTE DISPOSAL
2, rue André Pascal
F-75775 PARIS, cedex 16, France
36. WORLD ENVIRONMENT AND RESOURCES COUNCIL (WERC)
Piazzale R. Morandi 2
I-20121 MILAN, Italy
37. WORLD OFFICE FOR INFORMATION ON PROBLEMS OF THE ENVIRONMENT/OFFICE MONDIAL D'INFORMATION SUR LES PROBLEMES D'ENVIRONNEMENT
115, rue de la Pompe
F-75116 PARIS, France

2. Organizations of more restricted scope

For convenience, organizations are listed in this subsection according to the country or area in which they are most active or from which they draw most of their members. The style in which addresses are presented is in accordance with postal requirements. See also the explanatory notes on page vi.

Argentina

38. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA
ESTACION EXPERIMENTAL AGROPECUARIA
Casilla de Correo 25
CATAMARCA
39. UNIVERSIDAD DE BUENOS AIRES
FACULTAD DE AGRONOMIA
BIBLIOTECA CENTRAL
Avenida San Martin 4453
I417 BUENOS AIRES

Australia

40. AGRICULTURAL ENGINEERING SOCIETY
191 Royal Parade
PARKVILLE, Victoria 3052
41. AUSTRALIAN AGRICULTURAL COUNCIL
314 Albert Street
EAST MELBOURNE, Victoria 3002
42. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH
ORGANIZATION (CSIRO)
DIVISION OF PLANT INDUSTRY
P.O. Box 1600
CANBERRA, ACT 2601
43. DEPARTMENT OF AGRICULTURE
DIVISION OF AGRICULTURAL CHEMISTRY
5 Parliament Place
MELBOURNE, Victoria 3002
44. QUEENSLAND AGRICULTURAL COLLEGE
LAWES, Queensland 4345
45. UNIVERSITY OF NEW SOUTH WALES
SCHOOL OF CHEMICAL ENGINEERING
DEPARTMENT OF FUEL TECHNOLOGY
Anzac Parade
KENSINGTON, New South Wales 2033
46. UNIVERSITY OF QUEENSLAND
CENTRAL ANIMAL BREEDING HOUSE
St. Lucia
BRISBANE, Queensland 4067
47. UNIVERSITY OF SYDNEY
FACULTY OF ENGINEERING
SYDNEY, New South Wales 2006
48. WESTERN INSTITUTE OF TECHNOLOGY
ENVIRONMENT STUDIES GROUP
BENTLEY, Western Australia 6102

Austria

49. AGRARWIRTSCHAFTLICHES INSTITUT DES BUNDESMINISTERIUMS FUER LAND- UND FORSTWIRTSCHAFT (Agricultural economics institute of the federal ministry of agriculture and forestry)
Schweizentalstrasse 36
Ober St. Veit
A-1133 VIENNA
50. TECHNISCHE UNIVERSITAET WIEN (Vienna technical university)
INSTITUT FUER BIOCHEMISCHE TECHNOLOGIE UND MIKROBIOLOGIE (Biochemical technology and microbiology institute)
Getreidemarkt 9
A-1060 VIENNA

Bangladesh

51. BANGLADESH COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH
Mirpur Road, Dhanmandi
DACCA
52. NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY
ECOLOGY DIVISION
P.O. Box 158, Ramna
DACCA 2
53. UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CHEMICAL ENGINEERING
DACCA

Belgium

54. ADMINISTRATION DE LA RECHERCHE AGRONOMIQUE
1, place Madou, Tour Madou
BRUSSELS 3
55. FACULTE DES SCIENCES AGRONOMIQUES DE L'ETAT
GEMBLOUX

Brazil

56. MINISTERIO DE AGRICULTURA (Ministry of agriculture)
BIBLIOTECA CENTRAL (Central library)
Avenida W3 Norte, quadro 515, lote 3
70000 BRASILIA D.F.
57. MINISTERIO DE AGRICULTURA (Ministry of agriculture)
DIVISAO DE TECNOLOGIA AGRICOLA E ALIMENTAR (Division of agricultural and food technology)
Rua Jardim Botanico 1024
RIO DE JANEIRO

Bulgaria

58. BULGARSKA AKADEMIJA NA SELSKOSTOPANSKITE NAUKI
(Academy of agriculture)
Dragan Tsankov 6
SOFIA
59. CENTR ZA NAUCHNO-TEHNICHESKA IKONOMICHESKA INFORMACIJA SELSKO I GORSKO STOPANSTVO (Centre for scientific, technological and economic information on agriculture and forestry)
Dragan Tasankov 6
SOFIA

Canada

60. AGRICULTURAL INSTITUTE OF CANADA
151 Slater Street, suite 907
OTTAWA, Ontario K1P 5H4
61. BIOMASS ENERGY INSTITUTE
P.O. Box 129, Postal Station C
WINNIPEG, Manitoba R3M 3S7
62. CANADIAN HUNGER FOUNDATION
75 Sparks Street
OTTAWA, Ontario K1P 5A5
63. DEPARTMENT OF THE ENVIRONMENT
ADVANCED CONCEPTS CENTRE
OFFICE OF THE SCIENCE ADVISOR
OTTAWA, Ontario K1A 0H3
64. FEDERATION OF ASSOCIATIONS ON THE CANADIAN ENVIRONMENT
P.O. Box 895
PETERBOROUGH, Ontario K9J 7A2
65. MACDONALD COLLEGE OF MACGILL UNIVERSITY
BRACE RESEARCH INSTITUTE
STE ANNE DE BELLEVUE 8000, Quebec H0A 1C0
66. NATIONAL RESEARCH COUNCIL
TECHNICAL INFORMATION SERVICE
CANADA INSTITUTE FOR SCIENTIFIC AND TECHNICAL INFORMATION
OTTAWA, Ontario K1A 0S2
67. QUEEN'S UNIVERSITY
DEPARTMENT OF CHEMICAL ENGINEERING
2250 Reeves Crescent
KINGSTON, Ontario K1H 7HS

China

68. CHUNG-KUO NUNG-YEH K'O-HSUEH-YUAN (Chinese academy of agricultural sciences)
PEKING
69. NEI-MENG-KU TZU-CHIH-CH'U NUNG-MU-HSU K'O-HSUEH-YUAN (Inner Mongolian academy of agricultural sciences and animal husbandry)
HUHEHOT (Kuei-sui), Inner Mongolia

Colombia

70. INSTITUTO DE INVESTIGACIONES TECNOLOGICAS
Apartado aéreo 7031
Avenida 30, 52 A-77
BOGOTA
71. UNIVERSIDAD NACIONAL DE COLOMBIA
Apartado aéreo 1537
BOGOTA D.E.

Czechoslovakia

72. CZECHOSLOVAK RESEARCH AND DEVELOPMENT CENTRE FOR ENVIRONMENTAL POLLUTION CONTROL
Tr. Laca, Novomestkeho 2
CS-81643 BRATISLAVA
73. USTREDNI KONTROLNI A ZKUSEBNI USTAV ZEMEDELSKY (Central agricultural control and testing institute)
Sokolovska I
PRAGUE 8
74. VYZKUMNY USTAV ZEMEDELSKI TECHNIKI (Research institute of agricultural engineering)
Zelanského 50
PRAGUE 6

Denmark

75. BIOTEKNISK INSTITUT (Biotechnical institute)
Hobergsvej 10
DK-6000 KOLDING
76. KONGELIGE VETERINAER-OG LANDBOHØJSKOLE (The royal veterinary and agricultural university)
Bülowsgade 13
DK-1870 COPENHAGEN V

Egypt

77. ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY
ENVIRONMENTAL RESEARCH COUNCIL
101 Sharia, Kasr el Ainy
CAIRO
78. CENTRAL AGRICULTURAL COOPERATIVE UNION
132 Tahrir Street
Dokky
CAIRO

Ethiopia

79. INSTITUTE OF AGRICULTURAL RESEARCH
P.O. Box 32003
ADDIS ABABA

Finland

80. HELSINKI UNIVERSITY
LIBRARY OF AGRICULTURE
Viikki
SF-00710 HELSINKI 71
81. MAATALOUDEN AUTKIMUSKESKUS (Agricultural research centre)
Erottajankatu 15-17
SF-00130 HELSINKI 13

France

82. CENTRE DE DOCUMENTATION DES INDUSTRIES UTILISATRICES
DE PRODUITS AGRICOLES
Avenue des Olympiades
F-91305 MASSY
83. CENTRE DE DOCUMENTATION SUR LES DECHETS SOLIDES
14, Avenue du Général Leclerc
F-92200 NEUILLY
84. CENTRE DE FORMATION DES COOPERANTS CULTURELS ET
TECHNIQUES INTERNATIONAUX
GROUPE DE RECHERCHE SUR LES TECHNIQUES RURALES
34, rue Dumont d'Urville
F-75116 PARIS
85. CENTRE NATIONAL D'ETUDES ET D'EXPERIMENTATION DU
MACHINISME AGRICOLE (CNEEMA)
Parc de Tourvoie
F-92160 ANTONY

86. INSTITUTE DE RECHERCHES AGRONOMIQUES TROPICALES ET
DES CULTURES VIVRIERES (IRAT)
110, rue de l'Université
F-75340 PARIS, cedex 7
87. INSTITUT FRANCAIS DES COMBUSTIBLES ET DE L'ENERGIE
3, rue Henri Heine
F-75016 PARIS
88. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE
(INRA)
CENTRE NATIONAL DE RECHERCHES AGRONOMIQUES (CNRA)
SERVICE D'EXPERIMENTATION ET D'INFORMATION
Route de Saint Cyr
F-78000 VERSAILLES
89. GROUPEMENT D'ETUDES ET DE RECHERCHES POUR LE
DEVELOPPEMENT DE L'AGRONOMIE TROPICALE
45 bis, avenue de la belle Gabrielle
F-94130 NOGENT-SUR-MARNE

German Democratic Republic

90. DEUTSCHE AKADEMIE DER LANDWIRTSCHAFTSWISSENSCHAFTEN ZU BERLIN (German academy of agricultural sciences)
Krausenstrasse 38-39
DDR-1080 BERLIN
91. HUMBOLDT UNIVERSITAET ZU BERLIN (Humboldt university,
Berlin)
Unter den Linden 6
DDR-1080 BERLIN

Germany, Federal Republic of

92. BUNDESSTELLE FUER AUSSENHANDELSINFORMATION (Federal
bureau of foreign trade information)
Postfach 108007
Blaubach 13
D-5000 COLOGNE 1
93. BUNDESVERBAND DER AGRARINGENIEURE (Federal association
of agricultural engineers)
Postfach 1160
Haselnussweg 4
D-6277 CAMBERG/TAUNUS
94. DEUTSCHE LANDWIRTSCHAFTSGESELLSCHAFT (German agricultural society)
Zimmerweg 16
D-6000 FRANKFURT/MAIN

95. DEUTSCHE STIFTUNG FUER ENTWICKLUNGLAENDER (German foundation for developing countries)
Simrockstrasse
D-5300 BONN
96. DOKUMENTATIONSSTELLE DER UNIVERSITAET HOHENHEIM (Documentation centre of Hohenheim university)
Paracelsusstrasse 2
D-7000 STUTTGART 70
97. FORSCHUNGSANSTALT FUER LANDWIRTSCHAFT BRAUNSCHWEIG-VOELKENRODE (Agricultural research centre, Brunswick-Völkenrode)
Bundesallee 50
D-3300 BRUNSWICK
98. FORSCHUNGSSTELLE FUER INTERNATIONALE AGRARENTWICKLUNG (Research centre for international agricultural development)
Kurfürsten-Anlage 59
D-6900 HEIDELBERG 1
99. KURATORIUM FUER TECHNIK IN DER LANDWIRTSCHAFT (Council for agricultural engineering)
Zeil 65-69
D-6000 FRANKFURT/MAIN

Ghana

100. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH
P.O. Box M32
ACCRA
101. ENVIRONMENTAL PROTECTION COUNCIL
Parliament House
ACCRA
102. FARMERS' FEDERATION OF GHANA
P.O. Box 7129
ACCRA
103. UNIVERSITY OF GHANA
FACULTY OF AGRICULTURE
ACCRA
104. UNIVERSITY OF SCIENCE AND TECHNOLOGY
TECHNOLOGY CONSULTANCY CENTER
KUMASI

Guinea

105. MINISTERE DES GRANDS AMENAGEMENTS, PECHE ET ELEVAGE
CONAKRY

Hungary

106. HUNGARIAN CENTRAL TECHNICAL LIBRARY AND DOCUMENTATION CENTRE
P.O. Box 12
H-1428 BUDAPEST

Iceland

107. RANNSLOKNAS OFNUN LANDBUNADARINS (Agricultural research institute)
Keldnaholt
I 10 REYKJAVIK

India

108. APPROPRIATE TECHNOLOGY DEVELOPMENT ASSOCIATION
Gandhi Bhawan
LUCKNOW, Uttar Pradesh
109. ASPEE AGRICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION
P.O. Box 7602
Adarsh Housing Society, Cross Road 1
Malad
BOMBAY 400 064
110. ASSOCIATION OF VOLUNTARY AGENCIES FOR RURAL DEVELOPMENT
A/1 Kailash Colony
NEW DELHI 110 048
111. CENTRAL VILLAGE INDUSTRIES RESEARCH INSTITUTE
WARDHA
112. COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR)
DIVISION OF RESEARCH COORDINATION AND INDUSTRIAL LIAISON
Rafi Marg
NEW DELHI
113. GHANDIAN INSTITUTE OF STUDIES
APPROPRIATE TECHNOLOGY DEVELOPMENT UNIT
P.O. Box 116
RAJGHAT, Varanasi 221 001
114. GOBAR GAS RESEARCH STATION
Ajitmal
ETAWAH, Uttar Pradesh
115. INDIAN AGRICULTURAL RESEARCH INSTITUTE
AGRICULTURAL ENGINEERING DIVISION
Dairy Road
NEW DELHI 110 012

116. INDIAN COUNCIL OF AGRICULTURAL RESEARCH (ICAR)
Krishi Bhavan
NEW DELHI 110 001
117. INDIAN INSTITUTE OF TECHNOLOGY
DEPARTMENT OF CHEMICAL ENGINEERING
KANPUR, Uttar Pradesh 208 016
118. KHADI AND VILLAGE INDUSTRIES COMMISSION
Gramodaya, 3 Irla Road
Vile Parle West
BOMBAY 400 056
119. NATIONAL COMMITTEE ON SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
New Mehrauli Road
NEW DELHI 110 029
120. NATIONAL DAIRY RESEARCH INSTITUTE
Aarey Milk Colony
KARNAL 132 001, Haryana

Indonesia

121. BADAN URUSAN TENAGA KERJA SUKATELA INDONESIA/
INDONESIAN BOARD FOR VOLUNTEER SERVICE, VILLAGE
TECHNOLOGY UNIT
Jalan Pacar
A67 YOGYAKARTA

Ireland

122. AGRICULTURAL INSTITUTE
19 Sandymount Avenue
Ballsbridge
DUBLIN 4

Israel

123. BEN GURION UNIVERSITY OF THE NEGEV
RESEARCH AND DEVELOPMENT AUTHORITY
P.O. Box 1025
BEERSHEBA 84110
124. THE HEBREW UNIVERSITY OF JERUSALEM
SCHOOL OF APPLIED SCIENCE AND TECHNOLOGY
JERUSALEM
125. MINISTRY OF THE INTERIOR
ENVIRONMENTAL PROTECTION SERVICE
P.O. Box 6158
JERUSALEM

Italy

126. ACADEMIA NAZIONALE DI AGRICOLTURA (National academy of agriculture)
Via Farini 14
BOLOGNA
127. LABORATORIO PER LA MECCANIZZAZIONE AGRICOLA (Laboratory of agricultural mechanics)
Via Onorato Vigliani 104
I-10135 TURIN
128. UNIVERSITA DEGLI STUDI BOLOGNA (University of Bologna)
ISTITUTO DI INDUSTRIE AGRARIE (Institute of agricultural industries)
BOLOGNA

Jamaica

129. NATURAL RESOURCES CONSERVATION DEPARTMENT
P.O. Box 367
KINGSTON 6

Japan

130. AGENCY FOR INDUSTRIAL SCIENCE AND TECHNOLOGY
BIOCONVERSION COMMITTEE
TOKYO
131. JAPAN CONSULTING INSTITUTE
Hibiya Park Building
Yuraku-cho
Chiyoda-ku
TOKYO 100
132. JAPAN INFORMATION CENTER OF SCIENCE AND TECHNOLOGY
5-2, 2-chome
Nagat-cho
Chiyoda-ku
TOKYO 100
133. NATIONAL FOOD RESEARCH INSTITUTE
4-12 Shiohama 1
Koto-ku
TOKYO
134. NATIONAL GRASSLAND RESEARCH INSTITUTE
PASTURE PLANTS DIVISION
NISHINASUNOMACHI, Tochigi-ken
135. NATIONAL INSTITUTE OF AGRICULTURAL SCIENCES
1-7 Nishigahara 2
Kita-ku
TOKYO

136. NATIONAL INSTITUTE OF ENVIRONMENTAL STUDIES
Tateno Yatabe
Tsukuba-gun
IBARAKI 300-21
137. SHIZUOKA PREFECTURE AGRICULTURAL EXPERIMENT STATION
27-1, 4-chome
Kita Ando
SHIZUOKA
138. TAMAGAWA UNIVERSITY
FACULTY OF AGRICULTURE
6-1 Tamagawa Gakuen
Machida-shi
TOKYO 194
139. TOHOKU NATIONAL AGRICULTURAL EXPERIMENT STATION
SOIL AND FERTILIZER LABORATORY
OMAGARI-SHI, Akita-ken
140. TOKYO INSTITUTE OF TECHNOLOGY
RESEARCH LABORATORY OF RESOURCES UTILIZATION
2-12-1 Okayama
Meguro-ku
TOKYO

Kenya

141. NATIONAL AGRICULTURAL RESEARCH STATION
P.O. Box 450
KITALE
142. NATIONAL ENVIRONMENT SECRETARIAT
Office of the President
P.O. Box 30510
NAIROBI

Madagascar

143. MINISTÈRE DU DEVELOPPEMENT RURAL ET DE LA REFORME
AGRAIRE
B.P. 243
TANANARIVE

Malaysia

144. AGRICULTURAL DEPARTMENT
SARAWAK
145. MALAYSIAN AGRICULTURAL RESEARCH AND DEVELOPMENT
INSTITUTE
P.O. Box 208, Sungai Besi
SERDANG, Selangor

Mauritius

- 146 MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND THE ENVIRONMENT
Government House
PORT LOUIS

Mexico

147. SUBSECRETARIA DE MEJORAMIENTO DEL AMBIENTE
Chatapultepec 284
MEXICO CITY 7

Morocco

148. MINISTRE DE L'AGRICULTURE ET DE LA REFORME AGRAIRE
Avenue Mohamed V
RABAT

Netherlands

149. BUREAU OF INTERNATIONAL PROJECTS TNO
P.O. Box 778
21 Koningin Marialaan
THE HAGUE
150. CENTRUM VOOR LANDBOUWPUBLIKATIES EN DOCUMENTATIE
(Centre for agricultural publications and documentation)
P.O. Box 4
Marykeweg 17
WAGENINGEN
151. EINDHOVEN UNIVERSITY OF TECHNOLOGY
CHEMICAL ENGINEERING DEPARTMENT
P.O. Box 513
EINDHOVEN
152. INSTITUTE OF BIOLOGICAL AND CHEMICAL RESEARCH ON
FIELD CROPS AND HERBAGE
WAGENINGEN
153. KONINKLIJK INSTITUUT VOOR DE TROPEN (Royal tropical
institute)
Mauritskade 63
AMSTERDAM
154. RESEARCH INSTITUTE FOR PUBLIC HEALTH ENGINEERING
P.O. Box 314
DELFT

155. STICHTING VERWIJDERING AFVALSTOFFEN (Institute of waste disposal)
P.O. Box 184
Utrechtsweg 223
AMERSFOORT
156. TECHNISCHE ONTWIKKELING ONTWIKKELINGSLANDEN: STICHTING TOOL (Technical development in developing countries: foundation tool)
P.O. Box 525
EINDHOVEN

New Zealand

157. LINCOLN COLLEGE
DEPARTMENT OF AGRICULTURAL ENGINEERING
CANTERBURY
158. NEW ZEALAND DAIRY RESEARCH INSTITUTE
Private Bag
PALMERSTON NORTH

Niger

159. INSTITUT DE RECHERCHES AGRONOMIQUES TROPICALES ET DES CULTURES VIVRIERES (IRAT)
B.P. 150
NIAMEY
160. UNION NIGERIENNE DE CREDIT ET DE COOPERATION
B.P. 296
NIAMEY

Nigeria

161. AGRICULTURAL SOCIETY OF NIGERIA
c/o University of Ibadan, Department of Agricultural Botany
IBADAN
162. UNIVERSITY OF IBADAN
DEPARTMENT OF AGRONOMY
IBADAN

Norway

163. NORGES LANDBRUKSHØGSKOLE (Agricultural college of Norway)
N-1432 AAS-NLH

Pakistan

164. PAKISTAN COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH LABORATORIES
P.P.I. Building
Kemal Ataturk Road
KARACHI 39

Philippines

165. ECONOMIC DEVELOPMENT FOUNDATION
J.M.T. Building
6764 Ayala Avenue
MAKATI, Rizal
166. UNIVERSITY OF THE PHILIPPINES AT LOS BANOS
COLLEGE OF AGRICULTURE
LAGUNA

Poland

167. CENTRALNA BIBLIOTEKA ROLNIZCA (Central agricultural library)
Krakowskie Przedmiescie 66
Skrytka Pocztowa 360
PL-00950 WARSAW
168. INSTITUTE OF SOIL SCIENCE AND CULTIVATION OF PLANTS
Ul. Gorskiego 7
WARSAW
169. INSTYTUT KSZTALTOWANIA SRODOWISKA (Institute for environmental development)
Ul. Krzywickiego 9
PL-02078 WARSAW

Portugal

170. DIRECCAO GENERAL DOS SERVICOS AGRICOLAS (Directorate general of agricultural services)
SERVICO DE INFORMACAO AGRICOLA (Agricultural information service)
Avenida Antonio Augusto de Aguiar 104-7
LISBON 1

Republic of Korea

171. MINISTRY OF AGRICULTURE
OFFICE OF RURAL DEVELOPMENT
INSTITUTE OF PLANT ENVIRONMENT
SUWON

Romania

172. ACADEMIA DE STIINTE AGRICOLE SI SILVICA (Academy of agricultural and forestry sciences)
Bulevardul Marasti 61, sectorul 1
BUCHAREST
173. INSTITUTUL NATIONAL DE INFORMARE SI DOCUMENTARE STIINTIFICA SI TEHNICA (National institute of scientific and technical information and documentation)
Str. Cosmonautilor 27-29
BUCHAREST 1

Senegal

174. CENTRE NATIONAL DE DOCUMENTATION SCIENTIFIQUE ET TECHNIQUE
B.P. 3218
DAKAR
175. CENTRE NATIONAL DE LA RECHERCHE AGRONOMIQUE
BAMBEY

Singapore

176. PIG AND POULTRY RESEARCH AND TRAINING INSTITUTE
Sembawang Field Experimental Station
102 M.S. Sembawang Road
SINGAPORE 26

Spain

177. INSTITUTO NACIONAL DE INVESTIGACIONES AGRARIAS
SECCION DE DOCUMENTACION, BIBLIOTECA Y PUBLICACIONES
Fernando VI, 2
MADRID 4
178. INSTITUTO NACIONAL DE INVESTIGACIONES AGRONOMICAS
Avenida Puerta de Hierro
MADRID

Sri Lanka

179. CEYLON INSTITUTE FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CISIR)
P.O. Box 787
363 Baudhaloka Mawata
COLOMBO 7
180. NATIONAL AGRICULTURAL SOCIETY OF CEYLON
UNIVERSITY OF SRI LANKA
FACULTY OF AGRICULTURE
PERADENIYA

Sudan

181. AGRICULTURAL RESEARCH CORPORATION
Gesira Research Station
WAD MEDANI
182. NATIONAL COUNCIL OF RESEARCH
INSTITUTE OF SOLAR ENERGY AND RELATED ENVIRONMENTAL RESEARCH
KHARTOUM

Sweden

183. LANTBRUKSHOEGSKOLAN (Agricultural college of Sweden)
JORDBRUKSTEKNISKA INSTITUTET (Institute of agricultural engineering)
S-75007 UPPSALA 7
184. MINISTRY OF AGRICULTURE
SWEDISH COUNCIL OF ENVIRONMENTAL INFORMATION
Fack
S-10320 STOCKHOLM
185. STATENS LANTBRUKSINFORMATION (National agricultural information office)
S-55183 JOENKOEPING
186. STATENS LANTBRUKSKEMISKA LABORATORIUM (National laboratory of agricultural chemistry)
S-75007 UPPSALA 7
187. TEKNISKA HOEGSKOLAN I LUND (Lund institute of technology)
DEPARTMENT OF CHEMICAL TECHNOLOGY
Fack
S-22007 LUND

Switzerland

188. EIDGENOESSISCHE FORSCHUNGSSANSTALT FUER AGRIKULTUR-CHEMIE UND UNWELTHYGIENE (Swiss federal research station for agricultural chemistry and environmental hygiene)
Scharzenburgstrasse 155
CH-3097 LIEBEFELD-BERNE
189. EIDGENOESSISCHE FORSCHUNGSSANSTALT FUER BETRIEBS-WIRTSCHAFT UND LANDTECHNIK (Swiss federal research station for farm management and agricultural engineering)
CH-8355 TAENIKON TG

Thailand

190. KASETSART UNIVERSITY
DEPARTMENT OF AGRICULTURE
University Grounds, Bangkhen
BANGKOK 9

191. MINISTRY OF NATIONAL DEVELOPMENT
DEPARTMENT OF LAND DEVELOPMENT
SOIL AND WATER CONSERVATION GROUP
Bangkhen
BANGKOK
192. NATIONAL RESEARCH COUNCIL
Paholyothin Road, Bangkhen
BANGKOK

Togo

193. INSTITUT DE RECHERCHES AGRONOMIQUES TROPICALES ET
DES CULTURES VIVRIERES (IRAT)
Station de Lomé
B.P. 1163
LOME

Trinidad and Tobago

194. UNIVERSITY OF THE WEST INDIES
FACULTY OF AGRICULTURE
ST. AUGUSTINE, Trinidad

Tunisia

195. UNION NATIONALE DES AGRICULTEURS
6, avenue Habib Thameur
TUNIS

Turkey

196. SCIENTIFIC AND TECHNICAL RESEARCH COUNCIL OF TURKEY
DOCUMENTATION CENTER
Atatürk Bulvari 221, Kavaklidere
ANKARA
197. UNION OF TURKISH CHAMBERS OF AGRICULTURE
Izmir cad 24, Yaprak kat 4-5
Yehisehir
ANKARA

Uganda

198. MAKERERE UNIVERSITY
DEPARTMENT OF RURAL ECONOMY AND EXTENSION
P.O. Box 7062
KAMPALA

Union of Soviet Socialist Republics

199. ACADEMY OF SCIENCES OF THE USSR
INSTITUTE OF PLANT PHYSIOLOGY
Botanicheskaiia 35
MOSCOW I-273
200. ACADEMY OF SCIENCES OF THE USSR
INSTITUTE OF SCIENTIFIC INFORMATION
Baltiiskaia ul. 14
MOSCOW A-219
201. ALL-UNION V.I. LENIN ACADEMY OF AGRICULTURAL SCIENCES
Bolshoi Kharitonovski Pereulok 21
MOSCOW
202. LENINGRAD AGRICULTURAL INSTITUTE
Ulitsa Komsololskaia 14
PUSHKINO
203. MINISTRY OF AGRICULTURE OF THE USSR
Orlikov Pereulok 1/11
MOSCOW I-189

United Kingdom of Great Britain and Northern Ireland

204. AGRICULTURAL ENGINEERS ASSOCIATION
6 Buckingham Gate
LONDON SW1
205. AGRICULTURAL RESEARCH COUNCIL (ARC)
160 Great Portland Street
LONDON WIN 6DT
206. ASSOCIATION OF JOINT SEWAGE BOARDS
Tame Valley House
156-170 Newhall Street
BIRMINGHAM 3, Warwickshire
207. COUNCIL OF SMALL INDUSTRIES IN RURAL AREAS
INFORMATION SECTION
P.O. Box 717
35 Camp Road, Wimbledon Common
LONDON SW19 4UP
208. DEPARTMENT OF THE ENVIRONMENT
2 Marsham Street
LONDON SW1P 3EB
209. INSTITUTE OF SOLID WASTES MANAGEMENT
29 Portland Place
LONDON W1N 4DE

210. INSTITUTE OF WATER POLLUTION CONTROL
Ledson House
53 London Road
MAIDSTONE, Kent ME16 8JH
211. INSTITUTION OF AGRICULTURAL ENGINEERS
West End Road
SILSOE, Bedford MK45 4DV
212. INSTITUTION OF GAS ENGINEERS
17 Grosvenor Crescent
LONDON SW1 7ES
213. INSTITUTION OF MECHANICAL ENGINEERS
1 Birdcage Walk
LONDON SW1H 9JJ
214. INTERMEDIATE TECHNOLOGY DEVELOPMENT GROUP (ITDG)
Parnell House
25 Wilton Road
LONDON SW1V 1JS
215. MINISTRY OF AGRICULTURE
THE NATIONAL FARM WASTE SPECIALIST
GUILDFORD, Surrey
216. MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
Whitehall Place
LONDON SW1A 2HH
217. MINISTRY OF TECHNOLOGY
WATER POLLUTION RESEARCH DIVISION
Whitehall Place
LONDON SW1A 2HH
218. NATIONAL AGRICULTURAL CENTRE
FARM BUILDINGS INFORMATION CENTRE
KENILWORTH, Warwickshire CV8 2LG
219. NATIONAL FARMERS' UNION
Agriculture House
Knightsbridge 25
LONDON SW1
220. NATIONAL INSTITUTE OF AGRICULTURAL ENGINEERING
(NIAE)
Wrest Park
SILSOE, Bedford MK45 4HS
221. NATIONAL INSTITUTE OF RESEARCH IN DAIRYING
SHINFIELD, Reading RG2 9AT
222. NATURAL ENVIRONMENTAL RESEARCH COUNCIL
Alhambra House
27-33 Charing Cross Road
LONDON WC2H 0AX

223. PIPWRLLYD RURAL TECHNICAL COLLEGE
DEPARTMENT OF MICROBIOLOGY
PIPWRLLYD, South Wales
224. POULTRY ADVISORY BOARD
Albion Wharf
ERITH, Kent
225. POULTRY RESEARCH CENTRE
King's Building
West Main Road
EDINBURGH EH9 3JS
226. THE SOIL ASSOCIATION
Walnut Tree Manor, Haughley
STOWMARKET, Suffolk IP14 3RS
227. TROPICAL PRODUCTS INSTITUTE
56-62 Gray's Inn Road
LONDON WC1X 8LU
228. UNIVERSITY COLLEGE
SCHOOL OF ENVIRONMENTAL STUDIES
LONDON
229. UNIVERSITY COLLEGE OF CARDIFF
DEPARTMENT OF MECHANICAL ENGINEERING
SOLAR ENERGY UNIT
P.O. Box 97
CARDIFF CF1 1XL
230. UNIVERSITY COLLEGE OF CARDIFF
WOLFSON LABORATORY
P.O. Box 78
CARDIFF CF1 1XL
231. UNIVERSITY OF ASTON IN BIRMINGHAM
DEPARTMENT OF BIOLOGICAL SCIENCES
BIODETERIORATION INFORMATION CENTRE
Gosta Green
BIRMINGHAM B4 7ET, Warwickshire

United Republic of Cameroon

232. CHAMBRE D'AGRICULTURE, DE L'ELEVAGE ET DES FORETS
B.P. 287
YAOUNDE

United States of America

233. ALTERNATIVE SOURCES OF ENERGY LENDING LIBRARY
Route 2, Box 90A
MILACA, Minnesota

234. AMERICAN ASSOCIATION OF CEREAL CHEMISTS
3340 Pilot Knob Road
ST. PAUL, Minnesota 55121
235. AMERICAN GAS ASSOCIATION LIBRARY
1515 Wilson Boulevard
ARLINGTON, Virginia 22209
236. AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS
P.O. Box 229
2950 Niles Road
ST. JOSEPH, Michigan 49085
237. AMERICAN SOCIETY OF AGRONOMY
677 South Segoe Road
MADISON, Wisconsin 53711
238. AMERICAN SOCIETY OF ANIMAL SCIENCE
425 Illinois Building
113 North Neil Street
CHAMPAIGN, Illinois 61820
239. BIO-DYNAMIC FARMING AND GARDENING ASSOCIATION
c/o Michael Scully
1019 South Sixth Street
SPRINGFIELD, Illinois 62704
240. CLARKSON COLLEGE OF TECHNOLOGY
ENERGY AND ENVIRONMENTAL STUDIES INSTITUTE
POTSdam, New York 13676
241. COLORADO STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL ENGINEERING AND ECO-
NOMICS
ENVIRONMENTAL RESOURCES CENTER
FORT COLLINS, Colorado 80521
242. CONNECTICUT AGRICULTURAL EXPERIMENT STATION
NEW HAVEN, Connecticut 06504
243. CORNELL UNIVERSITY
NEW YORK COLLEGE OF AGRICULTURE AND LIFE SCIENCES
ITHACA, New York 14853
244. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
(ERDA)
TECHNICAL INFORMATION CENTER
P.O. Box 62
OAK RIDGE, Tennessee 37830
245. ENVIRONMENT INFORMATION CENTER
124 East 39th Street
NEW YORK, New York 10016

246. GEORGIA INSTITUTE OF TECHNOLOGY
ENGINEERING EXPERIMENT STATION
ATLANTA, Georgia 30332
247. IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY
AGRICULTURAL ENGINEERING DEPARTMENT
DEPARTMENT OF ANIMAL SCIENCE
AMES, Iowa 50010
248. KANSAS STATE UNIVERSITY
AGRICULTURAL EXPERIMENT STATION
MANHATTAN, Kansas 66506
249. MICHIGAN STATE UNIVERSITY
AGRICULTURAL ENGINEERING DEPARTMENT
DEPARTMENT OF ANIMAL HUSBANDRY
POULTRY SCIENCE DEPARTMENT
EAST LANSING, Michigan 48823
250. MISSISSIPPI STATE UNIVERSITY
ANIMAL SCIENCE DEPARTMENT
CENTER FOR ENVIRONMENTAL STUDIES
MISSISSIPPI STATE, Mississippi 39762
251. NATIONAL ACADEMY OF SCIENCES
NATIONAL RESEARCH COUNCIL
BOARD ON SCIENCE AND TECHNOLOGY FOR INTERNATIONAL
DEVELOPMENT
ADVISORY COMMITTEE ON TECHNOLOGY INNOVATION
2101 Constitution Avenue
WASHINGTON, D.C. 20418
252. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
(NASA)
BIOCONVERSION PROGRAMME
300 Seventh Street, S.W.
WASHINGTON, D.C. 20546
253. NATIONAL ENVIRONMENTAL CENTER
200 S.W. 35th STREET
CORVALLIS, Oregon 97330
254. NEW ALCHEMY INSTITUTE EAST
P.O. Box 432
WOODS HOLE, Massachusetts 02543
255. NEW ALCHEMY INSTITUTE WEST
P.O. Box 376
PESCADERO, California 94060
256. OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
AGRICULTURAL ENGINEERING DEPARTMENT
WOOSTER, Ohio 44691

257. OKLAHOMA STATE UNIVERSITY
ANIMAL WASTE TECHNICAL INFORMATION CENTER
ADA, Oklahoma 74074
258. PORTLAND STATE UNIVERSITY
ENVIRONMENTAL EDUCATION CENTER
PORTLAND, Oregon 97221
259. PORTOLA INSTITUTE
558 Santa Cruz Avenue
MENLO PARK, California 94025
260. POULTRY SCIENCE ASSOCIATION
c/o Texas A and M University
COLLEGE STATION, Texas 77843
261. SOIL SCIENCE SOCIETY OF AMERICA
677 South Segoe Road
MADISON, Wisconsin 53711
262. SOUTH DAKOTA STATE UNIVERSITY
ENGINEERING EXPERIMENT STATION
BROCKINGS, South Dakota 57006
263. TECHNICAL ASSISTANCE INFORMATION CLEARING HOUSE
(TAICH)
200 Park Avenue South
NEW YORK, New York 10003
264. TEXAS A and M UNIVERSITY
TEXAS AGRICULTURAL EXPERIMENT STATION
COLLEGE STATION, Texas 77843
265. UNIVERSITY OF CALIFORNIA
SANITARY ENGINEERING RESEARCH LABORATORY
Richmond Field Station
1301 South 46th Street
RICHMOND, California 94804
266. UNIVERSITY OF CALIFORNIA AT DAVIS
DEPARTMENT OF BACTERIOLOGY
DAVIS, California 95616
267. UNIVERSITY OF FLORIDA
AGRICULTURAL RESEARCH CENTER
GAINESVILLE, Florida 32611
268. UNIVERSITY OF ILLINOIS
DEPARTMENT OF ANIMAL SCIENCE
URBANA, Illinois 61801
269. UNIVERSITY OF IOWA
PROJECT DEVELOPMENT OFFICE
201 Gilmore Hall
IOWA CITY, Iowa 52242

270. UNIVERSITY OF MASSACHUSETTS
INSTITUTE FOR MAN AND HIS ENVIRONMENT
Blaisdell House
AMHERST, Massachusetts 01002
271. UNIVERSITY OF NEBRASKA
NEBRASKA AGRICULTURAL EXPERIMENT STATION
LINCOLN, Nebraska 68503
272. UNIVERSITY OF NORTH CAROLINA
WATER RESEARCH INSTITUTE
124 Riddich Building
RALEIGH, North Carolina 27607
273. UNIVERSITY OF WISCONSIN
WATER RESOURCES INFORMATION PROGRAMME
215 North Randall Avenue
MADISON, Wisconsin 53706
274. UNITED STATES BUREAU OF MINES LABORATORY
PITTSBURGH, Pennsylvania 15213
275. UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
AGRICULTURAL ENVIRONMENTAL QUALITY INSTITUTE
ANIMAL SCIENCE AND RESEARCH DIVISION
BIOLOGICAL WASTE MANAGEMENT LABORATORY
BELTSVILLE, Maryland 20705
276. UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTHERN REGIONAL RESEARCH LABORATORY
PEORIA, Illinois 61604
277. UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
SOUTHERN REGIONAL RESEARCH CENTER
1100 Robert E. Lee Boulevard
NEW ORLEANS, Louisiana 70179
278. UNITED STATES DEPARTMENT OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
10301 Baltimore Boulevard
BELTSVILLE, Maryland 20705
279. UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE (NTIS)
5285 Port Royal Road
SPRINGFIELD, Virginia 22151
280. UNITED STATES DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT (AID)
OFFICE OF SCIENCE AND TECHNOLOGY
WASHINGTON, D.C. 20523

281. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL ENVIRONMENTAL RESEARCH CENTER
OFFICE OF RESEARCH AND DEVELOPMENT
CINCINNATI, Ohio 45268
282. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY
P.O. Box 1198
ADA, Oklahoma 74270
283. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SOLID WASTE MANAGEMENT INFORMATION RETRIEVAL SERVICE
401 M Street
WASHINGTON, D.C. 20460
284. VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
DEPARTMENT OF ANIMAL SCIENCE
BLACKBURG, Virginia 24061
285. VOLUNTEERS IN ASIA
P.O. Box 4543
STANFORD, California 94305
286. VOLUNTEERS IN TECHNICAL ASSISTANCE (VITA)
3706 Rhode Island Avenue
MT. RAINIER, Maryland 20822
287. WATER POLLUTION CONTROL FEDERATION
2900 Wisconsin Avenue, N.W.
WASHINGTON, D.C. 20016

Upper Volta

288. ECOLE INTER-ETATS DE L'EQUIPEMENT RURAL
B.P. 7023
OUAGADOUGOU
289. MINISTERE DU DEVELOPPEMENT RURAL
OUAGADOUGOU

Uruguay

290. MINISTERIO DE GANADERIA Y AGRICULTURA: PLAN AGRO-PECUARIO
Ciudadela 1477
MONTEVIDEO

Viet Nam

291. VIETNAMESE SANITARY ENGINEERS AND SANITARIANS ASSOCIATION
26-35 Nguyen Binh Khiem Street
HO CHI MINH CITY

Yugoslavia

292. INSTITUT ZA MEHANIZACIJU POLJOPRIVREDE (Institute of agricultural mechanization)
Batajnički drum 12
ZEMUN
293. JUGOSLOVENSKI POLJOPRIVREDNO- SUMARSKI CENTAR (Yugoslav centre for agriculture and forestry)
Bulevar Revolucije 84/II
BELGRADE
294. POLJOPRIVREDNI INSTITUT (Agricultural institute)
Juzno Predgradje 17
YU-5400 OSIJEK

Zambia

295. AGRICULTURAL RESEARCH COUNCIL OF CENTRAL AFRICA
P.O. Box 2218
LUSAKA

SECTION II

DIRECTORIES

List of manufacturers, firms, organizations, materials, products, equipment and other similar data, arranged in alphabetical or classified order

A. General, regional and national directories¹

Manufacturers and export directories covering many branches of industry and giving information on industrial and commercial firms of one country or a group of countries

296. ABC EUROP. PRODUCTION 1972
2 vols. In English, French, German, Italian, Portuguese and Spanish.
Universal register of European exports. Index of products. See:
Individual headings under agricultural equipment (composting installations, digesters, manure installations, pumps).
- Publ.: Europ. Export Edition GmbH
Postfach 4034
D-6100 DARMSTADT, Federal Republic of Germany
297. CONOVER-MAST INDUSTRIAL PURCHASING DIRECTORY
Annual. Covers the United States. Alphabetical list of products and firms.
See: Waste disposal and recovery
Digester
- Publ.: Cahners Publishing Company, Inc.
95 East Putnam Avenue
GREENWICH, Connecticut 06830, United States of America
298. KELLY'S MANUFACTURERS AND MERCHANTS DIRECTORY
Annual. 2 vols. plus index vol.
Vol.1: Lists products and services for the United Kingdom, with special section on London
Vol.2: Lists international products and services, arranged by continent, in French, German and Spanish.
- See: Sewage pumps
Sludge pumps
- Publ.: Kelly's Directories
Neville House, Eden Street
KINGSTON-UPON-THAMES, Surrey KT1 1BY, England

¹ As biogas installations have not been developed on an industrial scale, they do not appear as such in most standard directories. Part A therefore includes only directories that list waste-handling equipment suitable for agricultural purposes.

299. **THOMAS' REGISTER OF AMERICAN MANUFACTURERS**
Annual. 6 vols. plus index vol. Product classification, including names and addresses of manufacturers, trade marks and brand names.
See: Waste-handling equipment
Digesters
Methane
Publ.: Thomas Publishing Company
461 Eighth Avenue
NEW YORK, New York 10001, United States of America
300. **WER BAUT MASCHINEN? (Who makes machinery?)**
Prepared by the Association of German Machine Manufacturers. Annual. In English, French, German and Spanish. Special buyer's guide for machinery, apparatuses and precision tools in Federal Republic of Germany and Berlin (West). Alphabetical and classified guides. See: Agricultural machinery (garbage-composting plants and compost- and humus-processing machines), Section 16.
Publ.: Hoppenstedt Wirtschaftsverlag GmbH
Havelstrasse 9
D-6100 DARMSTADT, Federal Republic of Germany

B. Branch directories²

301. **AGRICULTURAL ENGINEERS YEARBOOK**
Information about the membership, consultants and educational programmes of the Society. Alphabetical list of products, including environmental control systems. Also lists standards.
Publ.: American Society of Agricultural Engineers
P.O. Box 229
2950 Niles Road
ST. JOSEPH, Michigan 49085, United States of America
302. **APPROPRIATE TECHNOLOGY SOURCE-BOOK**
K. DARROW and K. PAM. 1976. 304 p. Guide to practical plans and books for small community technology. Contains critical reviews of selected publications on alternative sources of energy, including methane gas production; list of publishers, sources and bookstores.
Publ.: Volunteers in Asia
P.O. Box 4543
STANFORD, California 94305, United States of America
303. **CANADA ANIMAL WASTE MANAGEMENT GUIDE**
1974. (Publication No. 1534)
Publ.: Canada Department of Agriculture
OTTAWA, Ontario K1A 0T6, Canada

² Part B also includes guides to institutions involved in research and development in the field of bioconversion of organic wastes as well as reference books describing applications.

304. **DIRECTORY OF AGRICULTURAL RESEARCH SERVICE**
1968. 135 p. Describes the main divisions and functions of the United States Agricultural Research Service and lists scientific personnel.
Order from:
Superintendent of Documents
Government Printing Office
WASHINGTON, D.C. 20402, United States of America
305. **DIRECTORY OF APPROPRIATE TECHNOLOGY: MACHINES, TOOLS, PLANTS AND EQUIPMENT FOR RURAL DEVELOPMENT**
1976. 500 p. Covers about 30 pieces of equipment, including biogas installations. Gives descriptions, drawings and information on construction.
Publ.: Appropriate Technology Development Association
Gandhi Bhawan
LUCKNOW, Uttar Pradesh, India
306. **ENVIRONMENTAL ENGINEERING DESKBOOK**
Annual. June issue of *Chemical Engineering*, giving an up-to-date list of suppliers of equipment, materials and services for pollution control.
Publ.: McGraw-Hill, Inc.
330 West 42nd Street
NEW YORK, New York 10036, United States of America
307. **ENVIRONMENTAL WASTES CONTROL MANUAL AND CATALOG FILE**
Annual. Reviews design, construction and operation of pollution control facilities and lists products used in the field.
Publ.: Public Works Journal Corporation
200 South Broad Street
RIDGEWOOD, New Jersey 07450, United States of America
308. **FARM AND GARDEN EQUIPMENT GUIDE**
Annual. Provides information on manufacturers and suppliers of farm and garden machinery and equipment in Europe. Alphabetical list of products; index of manufacturers and products.
Publ.: Agricultural Press Ltd
161-166 Fleet Street
LONDON EC4P 4AA, England
309. **FARM EQUIPMENT MANUFACTURERS DIRECTORY**
Annual. Lists manufacturers and distributors of farm equipment and allied products.
Publ.: NRFEA Publications, Inc.
2340 Hampton Avenue
ST. LOUIS, Missouri 63139, United States of America
310. **INSTITUTION OF AGRICULTURAL ENGINEERS YEARBOOK**
Annual.
Publ.: Institution of Agricultural Engineers
West End Road
SILSOE, Bedford MK45 4DV, England

311. **INTERNATIONAL DIRECTORY OF AGRICULTURAL ENGINEERING INSTITUTIONS**
H. S. HOPFEN, 1968. 462 p. Provides names and addresses of central government services, international and national institutes dealing with land and water development, farm power and machinery, farm buildings and organization of work. Lists national associations of farm machinery manufacturers and periodicals, textbooks and films dealing with agricultural engineering. (FAO agricultural series: Misc/68/2)
- Publ.: Food and Agriculture Organization of the United Nations (FAO)
Agricultural Engineering Service
Via delle Terme di Caracalla
I-00100 ROME, Italy
312. **MODERN AGRICULTURE BUYERS GUIDE AND DIRECTORY**
Every two years.
- Publ.: Prestige Journals of India
Narottam Moraijee Marg
Ballard Estate
BOMBAY 1, India
313. **SOLAR DIRECTORY**
C. DESKO, ed. 1975. List of academic institutions, government agencies, companies and individuals concerned with solar energy, bioconversion and other non-conventional sources of energy in the United States and abroad. Description of applications. Annotated bibliography; index of organizations and of individuals.
- Publ.: Ann Arbor Science Publishers, Inc.
P.O. Box 1425
ANN ARBOR, Michigan 48106, United States of America
314. **SOLAR ENERGY INDUSTRIES DIRECTORY AND BUYERS' GUIDE**
1977. 276 p. Guide to manufacturers and service organizations.
- Publ.: Solar Energy Industries Association, Inc.
1001 Connecticut Avenue, N.W.
WASHINGTON, D.C. 20036, United States of America
315. **SURVEY OF SOLAR ENERGY PRODUCTS AND SERVICES**
Prepared for the Committee on Science and Technology of the United States House of Representatives. 1975. 545 p. Gives alphabetical list, by company, of projects in 21 categories. See: Bioconversion, Category 15.
- Order from:
Superintendent of Documents (see entry 304)
316. **WASTE WATER CLEANUP EQUIPMENT**
1973. 569 p. Describes commercial equipment used for water pollution control. Concerns mainly urban, solid waste. Includes a section on anaerobic processing.
- Publ.: Noyes Data Corporation
Noyes Building
PARK RIDGE, New Jersey 07656, United States of America

317. **WHOLE EARTH EPILOG**

1974. 768 p. Source-book for tools, hardware and information on a variety of subjects including alternative energy sources. Epilog lists are revised. See: soft technology (biogas installations, p. 526-545).

Order from:

Whole Earth Truck Store

Santa Cruz

MENLO PARK, California 94025, United States of America

318. **WORLD ENVIRONMENTAL DIRECTORY**

Annual. Lists companies, agencies and organizations dealing with the environment, including the management of solid waste. Mainly concerns the United States but also mentions government agencies, educational institutions and product manufacturers in other countries, as well as international organizations dealing with environmental problems.

Publ.: Business Publishers, Inc.

P.O. Box 1067

Blair Station

SILVER SPRING, Maryland 20910, United States of America

SECTION III

SOURCES OF STATISTICS, MARKETING AND OTHER ECONOMIC DATA

319. ANNUAL REVIEW OF ENERGY

J. M. HOLLANDER, ed. 1976. 793 p. Concerns the United States. One chapter discusses the economics and technologies of waste-materials conversion, including methane producing systems.

Publ.: Annual Review, Inc.
4139 El Camino Way
PALO ALTO, California 94306, United States of America

320. BENEFIT COST ANALYSIS OF BIOGAS PLANTS IN INDIA

K. S. PARIKH. 1963.

Publ.: Massachusetts Institute of Technology
CAMBRIDGE, Massachusetts 02138, United States of America

321. BIOCONVERSION OF AGRICULTURAL WASTES FOR POLLUTION CONTROL AND ENERGY CONSERVATION

W. J. JEWELL *et al.* Comprehensive study of the feasibility of generating a substitute natural gas in United States dairies and beef feedlots using anaerobic fermentation of plant residues and animal wastes. Considers technical and economic aspects.

Order from:
National Technical Information Service
United States Department of Commerce
SPRINGFIELD, Virginia 22161, United States of America

322. BIOGAS, ACHIEVEMENTS AND CHALLENGES

M. A. SATHIANATHAN. 1975. 192 p. Surveys the performance of present biogas plants in India and appraises the economic value of biogas. Stresses the need for research and development and for appropriate infrastructure and financing.

Publ.: Sagar Printers and Publishers
1880 Udaichand Marg
Kotla Mubarakpur
NEW DELHI 110003, India

323. BIOGAS PLANTS: PROSPECTS, PROBLEMS AND TASKS

C. R. PRASAD *et al.* Special issue of Economic and Political Weekly, vol. IX, Nos. 32-34, August 1974. Detailed study of whether biogas plants will fulfil the demand for decentralized energy and fertilizer production.

- Publ.: Economic and Political Weekly
Skylark Building
284 Frere Road
BOMBAY 400 001, India
324. THE ECONOMICS OF COW-DUNG PLANTS
(ICAR research series)
Publ.: Indian Council of Agricultural Research (ICAR)
Krishi Bhavan
NEW DELHI, 110 001, India
325. ENERGY, AGRICULTURE AND WASTE MANAGEMENT
W. J. JEWELL, ed. 540 p. Proceedings of the Cornell Agricultural Waste Management Conference, held at Ithaca, New York, 1975. Several chapters deal with the potential for controlling organic wastes using processes that generate energy, including anaerobic fermentation.
Publ.: Ann Arbor Science Publishers
P.O. Box 1425
ANN ARBOR, Michigan 48108, United States of America
326. THE ENERGY CONSERVATION PAPERS
R. L. WILLIAMS, ed. 1975. One chapter deals with the potential for recovering energy from organic wastes.
Publ.: Ballinger Publishing Company
Harvard Square
CAMBRIDGE, Massachusetts 02138, United States of America
327. ENERGY POTENTIAL FROM ORGANIC WASTES: A REVIEW OF THE QUANTITIES AND SOURCES
L. ANDERSON. 1972. Covers the United States (Bureau of Mines information circular No. 8549)
Order from:
Superintendent of Documents
Government Printing Office
WASHINGTON, D.C. 20402, United States of America
328. ENERGY R & D
1975. 243 p. Analyses the problems of formulating and implementing a scientific and technological research policy. Part 2 examines the prospects for new sources of energy, including organic wastes. Covers member countries of OECD.
Publ.: Organisation for Economic Co-operation and Development (OECD)
Château de la Muette
2, rue André Pascal
F-75775 PARIS, cedex 16, France
329. GOBAR GAS: WHY AND HOW
1972. Studies the costs and benefits of a 1.7 m³ (60 ft³) gas plant.
Publ.: Khadi and Village Industries Commission
Gramodaya, 3 Irla Road
Vile Park West
BOMBAY 400 056, India

330. **METHANE: FUEL OF THE FUTURE. AN ASSESSMENT**
C. BELL *et al.* 1973. 85 p. Technological and economic assessment of the potential for methane production and utilization in the United Kingdom and developing countries.
Publ.: Prism Press
Stable Court, Chalmington
DORCHESTER, Dorset DT2 0HB, England
331. **METHANE GENERATION FROM HUMAN, ANIMAL AND AGRICULTURAL WASTES**
Report of an *ad hoc* panel of the Advisory Committee on Technology and Innovation of the National Academy of Sciences. In preparation.
Order from:
Agency for International Development (AID)
Office of Science and Technology
WASHINGTON, D.C. 20523, United States of America
332. **MOBILIZATION AND IMPACT OF BIOGAS TECHNOLOGIES**
J. K. PARIKH and K. S. PARIKH. 1977. 455 p. Taking India as a case study, examines the option of utilizing local resources efficiently through biogas plants. Evaluates the economic benefits to a family of using a biogas plant and what effect it would have if biogas plants were accepted throughout the country. (Research memorandum RM 77-26)
Publ.: International Institute for Applied Systems Analysis (IIASA)
A-2361 LAXEMBURG, Austria
333. **MONTHLY BULLETIN OF AGRICULTURAL ECONOMICS AND STATISTICS**
Prepared by the Food and Agriculture Organization of the United Nations. Commodity notes, statistical data on production, trade and prices. The lead article, devoted to a special feature of agriculture, occasionally deals with energy problems.
Publ.: Food and Agricultural Organization of the United Nations (FAO)
Via delle Terme di Caracalla
I-00100 ROME, Italy
334. **ORGANIC FERTILIZERS: PROBLEMS AND POTENTIAL FOR DEVELOPING COUNTRIES**
J. J. C. VAN VOORHOEVE. 1974. Studies the economics of organic fertilizer use. (World Bank fertilizer study: background paper No. 4)
Publ.: World Bank
1818 H Street, N.W.
WASHINGTON, D.C. 20433, United States of America
335. **ORGANIC MATERIALS AS FERTILIZERS**
1975. 395 p. Includes chapter on the economic aspects of using organic materials as fertilizers, especially in developing countries. (FAO soils bulletin No. 27)
Publ.: Food and Agriculture Organization of the United Nations (FAO)
(see entry 333)

336. SOLID WASTES, SOLAR ENERGY AND THE PRODUCTION OF METHANE GAS. AN APPROACH TO A PROBLEM IN ENERGY
T. R. SCHNEIDER and J. D. KENAN. 1973. 13 p.
Publ.: National Center for Energy Management and Power
University of Pennsylvania
PHILADELPHIA, Pennsylvania 19174, United States of America
337. THE STATE OF FOOD AND AGRICULTURE
Prepared by the Food and Agriculture Organization of the United Nations. Annual. Reviews developments in the world food and agricultural situation and reports on future outlook. Includes developments in energy supplies and fertilizers. (FAO agricultural series No. 1).
Publ.: Food and Agriculture Organization of the United Nations (FAO)
(see entry 333)
338. WHY SOFT TECHNOLOGY? ALTERNATIVE SOLUTIONS TO THE ENERGY CRISIS
A. MACKILLOP. 1975. Discusses the philosophy of soft technology and examines the potential of non-conventional energy resources, including methane, for meeting future energy needs, also in agriculture.
Publ.: Methuen Ltd
11 New Fetter Lane
LONDON EC4P 4EE, England

SECTION IV

BASIC HANDBOOKS, TEXTBOOKS AND MANUALS

339. A. G. ENGINEERS NOTEBOOK. Ithaca, New York, Cornell University, 1969.
340. ANAEROBIC SLUDGE DIGESTION. Washington, D.C. [n.d.]. (Water pollution control federation manual No. 16)
341. ANIMAL WASTE TREATMENT AND DISPOSAL, ADVANCED SYSTEMS
Fort Lauderdale, Florida, Associated Naval Architects of Fort Lauderdale, [n.d.]. (Booklet No. 22.)
342. AUERBACH, L. A homesite power unit: methane generator. Madison, Connecticut, Les Auerbach, 1973. 50 p.
343. AZEVEDO, J. and P. R. STOUT. Farm animal manures: an overview of their role in the agricultural environment. Berkeley, University of California Agricultural Publications, [n.d.]. 109 p. (California Agricultural Experiment Station manual No. 44.)
344. BARKER, H. A. Bacterial fermentations. New York, Wiley, 1956.
345. BELL, C. et al. Methane: fuel of the future. An assessment. Dorchester, Dorset, Prism Press, 1973. 85 p.
346. BOLTON, R. L. and L. KLEIN. Sewage treatment, basic principles and trends. Ann Arbor, Michigan, Ann Arbor Science Publishers, 1971.
347. BOSHOFF, W. H. The application of methane installations in the tropics. Fort Terhan, Kenya, Tunnel Company Ltd (Hutchinson methane plants), 1963.
348. BOYLE, G. and P. HARPER. Radical technology. Uley, Gloucester, Undercurrent Books, 1976.
349. BURNS, J. and L. J. CLARK. Liquid methane. London, Institute of Gas Engineers, 1956. (Publication No. 484.)
350. CANALE, R. P. Biological waste treatment. New York, Wiley, 1971. 177 p.
351. CONSIDINE, D. M., ed. Handbook of energy technology. New York, McGraw-Hill, 1977.

352. CONVERTING ORGANIC WASTES TO OIL. Washington, D.C., Bureau of Mines, 1971.
353. DANIELS, F. Direct use of the sun's energy. New York, Ballantine Books, 1974.
354. DARROW, K. and K. PAM. Appropriate technology source-book: a guide to practical plans and books for villages and small community technology. Stanford, Volunteers in Asia, 1976. 304 p.
355. DUGAS, D. J. Fuel from organic matter. Santa Monica, California, Rand Corporation, 1973. 24 p.
356. ELIASSEN, R. Solid waste management: a comprehensive assessment of solid waste problems, practices and needs. Washington, D.C., United States Government Printing Office, 1969.
357. ENERGY PRIMER: SOLAR, WATER, WIND AND BIOFUELS. Menlo Park, California, Portola Institute, 1975. 200 p.
358. THE FERTILIZER HANDBOOK. Washington, D.C., National Plant Food Institute, 1963. 264 p.
359. FRY, L. J. Practical building of methane power plants for rural energy independence. Santa Barbara, California, 1974. 96 p. Order from 1223 North Nopal Street, Santa Barbara, California 93103.
360. FRY, L. J. and R. MERRIL. Methane digesters for fuel gas and fertilizer. Woods Hole, Massachusetts, New Alchemy Institute East, 1973.
361. FUEL GAS FROM AGRICULTURAL WASTES. Makati, Rizal, Philippines, Economic Development Foundation, [n.d.]. 30 p.
362. GAS ENGINEERS' HANDBOOK. New York, Industrial Press, [n.d.].
363. GOBAR GAS ON THE MARCH. Bombay, Khadi and Village Industries Commission, 1974.
364. GOBAR GAS WHY AND HOW. Bombay, Khadi and Village Industries Commission, 1972.
365. GOLDSTEIN, J. Garbage as you like it. Emmaus, Pennsylvania, Rodale Press, 1970.
366. GOLUEKE, C. G. Composting: a study of the process and its principles. Emmaus, Pennsylvania, Rodale Press, 1973. 110 p.
367. GOTAAKS, H. B. Composting: sanitary disposal and reclamation of organic wastes. Geneva, World Health Organization, 1971. 205 p. (WHO monograph series No. 31).
368. GOWAN, D. Slurry and farm waste disposal. Ipswich, Suffolk, Farming Press, 1972. 244 p.
369. GROUT, A. R. Methane gas generation from manure. Harrisburg, Pennsylvania, Department of Agriculture, 1973.

370. HANDBOOK OF CHEMISTRY. Washington, D.C. American Chemical Society.
371. A HANDBOOK ON APPROPRIATE TECHNOLOGY. Ottawa, Ontario, Canadian Hunger Foundation, 1976. 200 p.
372. HOUSTON, D. F. Rice chemistry and technology. St. Paul, Minnesota, American Society of Cereal Chemists. 519 p.
373. IDNANI, M. A. and C. N. ACHARYA. Biogas plants: their installation, operation, maintenance and use. New Delhi, Indian Council of Agricultural Research, [n.d.].
374. IMHOFF, K. and G. FAIR. Sewage treatment. 2nd ed. New York, Wiley, 1956.
375. IMHOFF, K., W. MULLER and D. THISTLETHWAYLE. Disposal of sewage and other water-borne wastes. Ann Arbor, Michigan, Ann Arbor Publishers, 1971.
376. JACKSON, D. F. Algae, man and the environment. Syracuse, New York, Syracuse University Press, [n.d.].
377. JEWELL, W. J., M. W. HALL and R. SWAN. Rural environment engineering. Hanover, New Hampshire, University Press of New England, 1974.
378. JOHNSON, J. E. The production of methane by the anaerobic decomposition of garbage and waste. Washington, D.C., United States Bureau of Mines [n.d.].
379. LAW, J. P. Nutrient removal from enriched waste effluent by the hydroponic culture of cool season grasses. Washington, D.C., United States Government Printing Office, [n.d.].
380. LAWRIE, J. Methane, its production and uses. London, Chapman and Hall, 1940.
381. LECKIE, J. *et al.* Other homes and garbage. Menlo Park, California, Whole Earth Truck Store, 1975.
382. LESAGE, E. and P. ABEIT. Gas de fumier. Soissons, France, Diffusion Nouvelle du livre, 1952. 132 p.
383. LEWIS, G. *et al.* Fundamentals of methane combustion. London, Institution of Gas Engineers, [n.d.].
384. LOEHR, R. C. Agricultural waste management: problems, processes and approaches. New York, Academic Press, 1974. 576 p.
385. LOEHRY, C. Pollution implications of animal wastes. Ithaca, New York, Cornell University Press, 1968.
386. MAKHIJANI, A. and A. POOLE. Energy and agriculture in the third world. Cambridge, Massachusetts, Ballinger, 1975. 168 p.

387. MANUAL OF INSTRUCTION FOR SEWAGE TREATMENT PLANT OPERATORS. Albany, New York, New York Department of Health, 1965.
388. MAYALL, S., ed. Farming organically, Stowmarket, Suffolk, Soil Association, 1976. 30 p.
389. McCALLUM, B. Environmentally appropriate technology. Ottawa, Ontario, Advanced Concepts Center, Department of the Environment, 1975. 160 p.
390. McVICKAR, M. H. *et al.*, eds. Fertilizer technology and usage. Madison, Wisconsin, Soil Science Society of America, [n.d.]. 464 p.
391. MERRIL, R., ed. Radical agriculture. New York, Harper and Row, 1973.
392. MERRIL, R. and J. L. FRY. Methane digesters for fuel gas and fertilizer. Pescadero, California, New Alchemy Institute West, 1973. 44 p.
393. METCALFE AND EDDY, INC. Wastewater engineering. New York, McGraw-Hill, 1973.
394. METHANE GAS GENERATORS. Sarawak, East Malaysia, Agricultural Department, [n.d.].
395. METHANE PRODUCTION OF ANAEROBIC FERMENTATION. London, Intermediate Technology Publications, 1975.
396. MEYNELL, P. J. Planning a digester. Dorchester, Dorset, Prism Press, 1975. 160 p.
397. ORGANIC FERTILIZERS. WHICH ONES AND HOW TO USE THEM. Emmaus, Pennsylvania, Rodale Press, 1973.
398. PERRY, R. H. and C. H. CHILTON, eds. Chemical engineers handbook. 5th ed. New York, McGraw-Hill, 1973.
399. POULTRY MANURE AND ITS DISPOSAL. Erith, Kent, Poultry Advisory Board, 1964.
400. PRENIS, J., ed. Energy book No. 1. Natural sources and backyard applications. Philadelphia, Pennsylvania, Running Press, 1975. 112 p.
401. ROCKWELL, H. Compost heap. New York, Doubleday, 1975.
402. RODALE, J. I. Complete book of composting. Emmaus, Pennsylvania, Rodale Press. [n.d.].
403. SAOLAPURKAR, V. K. and S. V. BALKUNDI. Rice. New Delhi, Fertilizer Association of India, 1969.
404. SATHIANATHAN, M. A. Biogas: achievements and challenges. New Delhi, Association of Voluntary Agencies for Rural Development, 1975. 192 p.

405. SATRIANA, M. J. Large scale composting. Park Ridge, New Jersey, Noyes Data Corporation, 1974. 269 p.
406. SAUBOLLE, B. R. Fuel gas from cow dung. Mt. Rainier, Maryland, Volunteers in Technical Assistance, 1976. 19 p.
407. SCOTT, J. Health and agriculture in China. London, Faber and Faber, 1952.
408. SHEWELL-COOPER, W. E. Compost gardening. London, Sphere Books, 1977. 160 p.
409. SHUTTLEWORTH, J. The mother earth news handbook of homemade power. New York, Bantam Books, 1974. 367 p.
410. SINGH, RAM BUX. Biogas plant: Generating methane from organic wastes. Etawah, India, Gobar Gas Research Station, 1971. 70 p.
411. ————— Biogas plant designs with specifications. Etawah, India, Gobar Gas Research Station, 1973. 49 p.
412. ————— Some experiments with biogas. Etawah, India, Gobar Gas Research Station, 1971.
413. SPROUSE, J. Methane. Berkeley, California, Stone-Marow Press, [n.d.]
414. STEADMAN, P. Energy, environment and building. Cambridge, Cambridge University Press, 1975. 287 p. (Cambridge urban and architectural studies No. 2).
415. STONER, C., ed. Producing your own power. Emmaus, Pennsylvania, Rodale Press, 1975. 283 p.
416. WAGNER, E. G. and J. N. LANOIX. Excreta disposal for rural areas and small communities. Geneva, World Health Organization, 1958. (WHO monograph series No. 39.)
417. WAKSMAN, S. Humus: origin, chemical composition and importance in nature. New York, William and Wilkins, 1938.
418. WEBSTER, C. C. and P. N. WILSON. Agriculture in the tropics. London, Longmans, 1966.
419. ZAGRORUCHENKO, V. A. *et al.* Thermophysical properties of gaseous and liquid methane. Chichester, Sussex, Wiley, 1970. 252 p.

SECTION V

MONOGRAPH SERIES

420. ADVANCES IN BIOLOGICAL WASTE TREATMENT
Irregular.
Publ.: Pergamon Press, Inc.
395 Saw Mill River Road
ELMSFORD, New York 10523, United States of America
421. ADVANCES IN ENVIRONMENTAL SCIENCES AND TECHNOLOGY
Irregular.
Publ.: John Wiley and Sons, Inc.
605 Third Avenue
NEW YORK, New York 10016, United States of America
422. AGRICULTURAL RESEARCH COUNCIL: TECHNICAL COMMUNICATIONS
Irregular.
Publ.: Agricultural Research Council
160 Great Portland Street
LONDON WIN 6DT, England
423. AMERICAN CHEMICAL SOCIETY: PAPERS
Irregular. The *Advancement in Chemistry* series includes several technical papers on processes of anaerobic biological treatment.
Publ.: American Chemical Society
1155 Sixteenth Street, N.W.
WASHINGTON, D.C. 20036, United States of America
424. ASAE PAPERS
Irregular.
- No. 74-107: Methane generation from agricultural wastes: review of concept and future applications. By W. J. Jewell *et al.* 1974.
- No. 70-907: Gas production from beef cattle wastes. By G. F. Meenaghan *et al.* 1970.
- No. 75.4040: Energy and nutrient conservation in swine waste management. By C. L. Bartz and D. T. Hill. 1975.
- Publ.: American Society of Agricultural Engineers (ASAE)
P.O. Box 229
2950 Niles Road
ST. JOSEPH, Michigan 49085, United States of America

425. BRACE RESEARCH INSTITUTE: TECHNICAL REPORTS
Usually in English and French. Many reports deal with power and waste management.
Publ.: MacDonald College of MacGill University
Brace Research Institute
STE ANNE DE BELLEVUE 800, Quebec HOA 1CO, Canada
426. CONNECTICUT AGRICULTURAL EXPERIMENT STATION: BULLETIN
Irregular.
No. 272: Poultry manure. By S. Papandos and B. Brown. 1950.
No. 754: The biochemistry and methodology of composting. By R. Poincelot. 1972.
Publ.: Connecticut Agricultural Experiment Station
NEW HAVEN, Connecticut 06504, United States of America
427. CORNELL UNIVERSITY AGRICULTURAL ENGINEERING BULLETIN
Irregular.
No. 397/1/74: Energy from agricultural waste: methane generation. By W. J. Jewell. 1974.
Publ.: State University at Cornell University
Department of Agricultural Engineering
ITHACA, New York 14853, United States of America
428. ENVIRONMENTAL PROTECTION TECHNOLOGY SERIES
Prepared by various scientific institutions for the United States Environmental Protection Agency.
No. EPA-660/2-74.00P: Demonstration of three recirculating swine waste management systems. By J. R. Miner *et al.* 1973. 164 p.
No. EPA-530/SW-58d: Dairy waste management. By S. L. Senn. 1973. 167 p.
No. EPA-670/2-74-027: The chemical conversion of solid wastes to useful products. By J. F. Barbour *et al.* 1974. 177 p.
No. EPA-660/2-74-090: Conversion of cattle feedlot wastes to ammonia synthesis gas. By J. E. Halligan *et al.* 1974. 55 p.
No. EPA-670/2-74-016: Reclamation of energy from organic waste. By J. T. Pfeffer. 1974. 143 p.
No. EPA-660/2-74-034: Liquid aerobic composting of cattle wastes and evaluation of by-products. By F. Grant and F. Brommenschenkel. 1974. 59 p.
No. EPA-430/9-74-003: Study of current and proposed practices in animal waste management. By G. A. Whetstone *et al.* 1974. 573 p.
No. EPA-530/SW-159: Anaerobic digestion of solid waste and sewage sludge to methane. By S. J. Hitte. 1975. 17 p.
No. EPA-660/2-76-238: Conversion of cattle manure into useful products. By B. S. Dunn *et al.* 1975.

Order from:
Superintendent of Documents
Government Printing Office
WASHINGTON, D.C. 20402, United States of America

429. ETUDES DU CNEEMA

Ten to 12 issues a year. Studies occasionally deal with energy problems in the agricultural sector.

Publ.: Centre national d'études et d'expérimentation du machinisme agricole (CNEEMA)
Parc de Tourvoie
F-92160 ANTONY, France

430. FAO AGRICULTURAL DEVELOPMENT PAPERS
Irregular. In English, French and Spanish.

No. 75: Processing and utilization of animal by-products.
By I. Mann. 1972.

Publ.: Food and Agriculture Organization of the United Nations (FAO)
Via delle Terme di Caracalla
I-00100 ROME, Italy

431. FAO AGRICULTURAL STUDIES

Irregular. In English, French and Spanish.

No. 43: Efficient use of fertilizers. By V. Ignatieff and H. Page, eds. 1968. 367 p.

Publ.: Food and Agriculture Organization of the United Nations (FAO)
(see entry 430)

432. GEORGIA INSTITUTE OF TECHNOLOGY, ENGINEERING EXPERIMENT STATION: REPORTS
Irregular.

No. PB-259: Utilization of agricultural, forestry and animal waste for the production of clean fuels. By J. W. Tatom *et al.* 1975.

Publ.: Georgia Institute of Technology
Engineering Experiment Station
ATLANTA, Georgia 30332, United States of America

433. GOBAR GAS SCHEME: INFORMATION LEAFLETS
Irregular.

Gobar gas why and how
Gobar gas; manure for farm and fuel for cooking
History of the development of the gobar gas scheme in India
Details of efficient gas appliances used for gobar gas
Set of four-dimensional drawings

Publ.: Khadi and Village Industries Commission
Gramodaya, 3 Irla Road
Vile Parle West
BOMBAY 400 056, India

434. INDIA AGRICULTURAL RESEARCH INSTITUTE: PAPERS
Irregular.
Developments in the uses of gobar gas. By M. A. Idnani and O. P. Chawla. 1962.
Publ.: Indian Agricultural Research Institute
Dairy Road
NEW DELHI 110 012, India
435. INDIAN COUNCIL OF AGRICULTURAL RESEARCH: FARM BULLETINS
Irregular. The bulletins deal with various agricultural projects. Biogas plants. 1963.
Publ.: Indian Council of Agricultural Research (ICAR)
Krishi Bhavan
NEW DELHI 110 001, India
436. INDIAN COUNCIL OF AGRICULTURAL RESEARCH: ICAR SERIES
Irregular.
No. 115: Preparation of fuel gas and manure by anaerobic fermentation of organic materials. By I. C. N. Acharya. 1958.
Publ.: Indian Council of Agricultural Research (ICAR) (see entry 435)
437. INDIAN COUNCIL OF AGRICULTURAL RESEARCH: TECHNICAL BULLETINS
Irregular.
No. 32: Organic manures. By M. A. Idnani *et al.* 1971.
Publ.: Indian Council of Agricultural Research (ICAR) (see entry 435)
438. INSTITUTE OF WATER POLLUTION CONTROL: PAPERS
The problem of disposal of farm wastes with particular reference to maintaining soil fertility. By C. Berryman.
Farm wastes: problems off the farm. By T. H. C. Bartrop.
Origin and nature of farm wastes. By K. B. C. Jones and C. T. Riley.
Treatment of farm wastes. By H. M. J. Scheltinga and H. R. Poelma.
Publ.: Institute of Water Pollution Control
Ledson House, 53 London Road
MAIDSTONE, Kent ME16 8JH, England
439. INTERNATIONAL CENTRE OF TROPICAL AGRICULTURE: BULLETINS
Irregular. In English and French.
Publ.: International Centre of Tropical Agriculture
Apartado Aéreo 67.13
CALI, Colombia

440. IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY: SPECIAL REPORTS
Irregular.
- Report 67: Farm animal waste management. By J. R. Miner. 1971.
No. 13040/EYX: Farm wastes. By H. M. J. Scheltinga. 1969.
- Publ.: Iowa State University of Science and Technology
Publications Distribution Center
AMES, Iowa 50010, United States of America
441. MINISTRY OF AGRICULTURE, FISHERIES AND FOOD: BULLETIN SERIES
Irregular.
- No. 210: Organic manures. 1976.
Nitrogen and soil organic matter. 1964.
- Order from:
Her Majesty's Stationery Office
49 High Holborn
LONDON WC1V 6HB, England
442. MINISTRY OF AGRICULTURE: FARM WASTE DOCUMENTS
Irregular.
- No. 67: Farm waste disposal. 1969.
Farm waste disposal; research and development needs.
- Publ.: Ministry of Agriculture
The National Farm Waste Specialist
GUILDFORD, Surrey, England
443. NEW ALCHEMY INSTITUTE/WEST: NEWSLETTER
Irregular. Occasionally deals with theoretical and practical aspects of bioconversion.
- No. 3: Methane digesters for fuel gas and fertilizer. 1973.
- Publ.: New Alchemy Institute West
P.O. Box 376
PESCADERO, California 94060, United States of America
444. NOTES: WATER POLLUTION
Irregular.
- No. 64: Anaerobic treatment processes and methane production. 1974.
- Publ.: Water Pollution Research Laboratory
STEVENAGE, Hertfordshire SG1 2EW, England
445. UNIVERSITY OF CALIFORNIA, SANITARY ENGINEERING RESEARCH LABORATORY: REPORTS
Irregular.
- No. 70-1: The photosynthetic reclamation of agricultural solid and liquid wastes. By G. G. Golueke and W. J. Oswald. 1970.
(Second progress report)
- No. 70-2: Anaerobic digestion. By S. A. Klein. 1970.

- Publ.: University of California
Sanitary Engineering Research Laboratory
1301 South 46th Street
RICHMOND, California 94804, United States of America
446. UNIVERSITY OF MISSOURI: ENGINEERING SERIES BULLETIN
Irregular.
- No. 57: Aerobic and anaerobic digestion characteristics of
livestock wastes. By E. A. Jeffrey *et al.* 1963.
115 p.
- Publ.: University of Missouri
Engineering Experiment Station
Engineering Building, room 0033,
COLUMBIA, Missouri 65201, United States of America
447. UNITED STATES DEPARTMENT OF AGRICULTURE, AGRICULTURAL RESEARCH SERVICE: AGRICULTURAL INFORMATION BULLETIN
Irregular.
- No. 274: Farmstead sewage and refuse disposal. By
J. W. Rockey.
- Order from:
Superintendent of Documents (see entry 428)
448. UNITED STATES DEPARTMENT OF AGRICULTURE: MISCELLANEOUS PUBLICATIONS
Irregular.
- No. 1065: Wastes in relation to agriculture and forestry. By
C. H. Wadleigh.
- Order from:
Superintendent of Documents (see entry 428)
449. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:
REPORTS
Irregular.
- No. SW-2r: American composting concepts. By
P. H. McGauhey. 1969.
- No. SW-16 rg: Aerobic treatment of livestock wastes. By
D. D. Jones *et al.*
- Publ.: United States Environmental Protection Agency
WASHINGTON, D.C. 20523, United States of America

SECTION VI

CURRENT PERIODICALS³

- 450. ADVANCES IN APPLIED MICROBIOLOGY**
Annual.

Publ.: Academic Press
111 Fifth Avenue
NEW YORK, New York, United States of America

- 451. AGRICULTURAL ENGINEERING**
Monthly. Focuses on agricultural equipment.

Publ.: American Society of Agricultural Engineers
P.O. Box 229
2950 Niles Road
ST. JOSEPH, Michigan 49085, United States of America

- 452. AGRICULTURAL ENGINEERING AUSTRALIA**
Quarterly.

Publ.: Agricultural Engineering Society
National Science Centre
191 Royal Parade
PARKVILLE, Victoria 3052, Australia

- 453. AGRICULTURAL RESEARCH**
Monthly. Prepared by the Agricultural Research Service of the United States Department of Agriculture.

Order from:
Superintendent of Documents
Government Printing Office
WASHINGTON, D.C. 20402, United States of America

- 454. AGRICULTURAL SCIENCE REVIEW**
Quarterly.

Publ.: Cooperative State Research Service
United States Department of Agriculture
WASHINGTON, D.C. 20402, United States of America

³ The periodicals listed in this section, while not dealing exclusively with the use of agricultural wastes, frequently carry articles about the scientific, technological or economic aspects of the anaerobic fermentation of agricultural residues.

455. **AGRICULTURAL WASTE RESEARCH HIGHLIGHTS**
Twice a year. Scientific aspects of agricultural wastes management.
Publ.: United States Environmental Protection Agency
Robert S. Kerr Environmental Research Laboratory
P.O. Box 1198
ADA, Oklahoma 74820, United States of America
456. **L'AGRONOMIE TROPICALE**
Quarterly. Text in French; summaries in English and Spanish. Reports, news, book reviews.
Publ.: Institut de recherches agronomiques tropicales et des cultures vivrières
110, rue de l'Université
F-75340 PARIS, cedex 7, France
457. **AGRONOMY JOURNAL**
Every two months. Reports on research in agronomy, crop and soil science. Book reviews.
Publ.: American Society of Agronomy
677 South Segoe Road
MADISON, Wisconsin 53711, United States of America
458. **ALTERNATIVE SOURCES OF ENERGY**
Quarterly. Focuses on alternative, environmentally sound technologies in all basic fields. Attempts to foster self-sufficiency in energy in small communities.
Publ.: Alternative Sources of Energy
Route 2, Box 90
MILACA, Minnesota 56353, United States of America
459. **ALTERNATIVES: PERSPECTIVES ON SOCIETY AND ENVIRONMENT**
(Formerly *Alternatives*)
Quarterly. Concerned with energy resource development, with focus on Canada.
Publ.: Alternatives, Inc.
Trent University
PETERBOROUGH, Ontario, Canada
460. **THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS: TRANSACTIONS**
Twice a month. Full-length technical articles on the application of engineering principles to solve specific problems in agriculture.
Publ.: American Society of Agricultural Engineers (see entry 451)
461. **APPLIED AND ENVIRONMENTAL MICROBIOLOGY**
(Formerly *Applied Microbiology*)
Monthly. Also deals with the bioconversion of energy.
Publ.: American Society for Microbiology
1931 I Street, N.W.
WASHINGTON, D.C. 20006, United States of America

462. **APPROPRIATE TECHNOLOGY**
Quarterly. Intended as a medium of communication for people involved in the development and dissemination of intermediate-level appropriate technologies in developing countries. Covers methane generation from waste materials. Technical news, book reviews.
Publ.: Intermediate Technology Publications Ltd
9 King Street
LONDON WC2E 8HN, England
463. **ASIAN INSTITUTE OF TECHNOLOGY: NEWSLETTER**
Every two months. Covers experiences in anaerobic fermentation of organic wastes.
Publ.: ASIAN INSTITUTE OF TECHNOLOGY
P.O. Box 2754
Paholyothin Highway
PATHUM THANI, Thailand
464. **AUSTRALIAN JOURNAL OF EXPERIMENTAL AGRICULTURE AND ANIMAL HUSBANDRY**
Every two months.
Publ.: Australian Agricultural Council
314 Albert Street
EAST MELBOURNE, Victoria 3002, Australia
465. **BIODYNAMICS**
Quarterly. Deals with soil conservation and fertility and composting.
Publ.: Bio Dynamic Literature
P.O. Box 243
WYOMING, Rhode Island 02898, United States of America
466. **BIOGAS**
Irregular. Newsletter of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). Concentrates on biogas technology and use in the Asian region. Gives examples of plant designs with construction notes and treats economic aspects of biogas plants. Includes research reports.
Publ.: ESCAP/UNIDO Division of Industry Housing and Technology
United Nations Building
BANGKOK 2, Thailand
467. **BIOMASS ENERGY INSTITUTE: NEWSLETTER**
Three times a year. Covers developments in Canada.
Publ.: Biomass Energy Institute
P.O. Box 129, Postal Station C
WINNIPEG, Manitoba R3M 3S7, Canada
468. **BRITISH POULTRY SCIENCE**
Every two months. Also deals with waste treatment and utilization.
Publ.: Longman Group Ltd
43-45 Annandale Street
EDINBURGH EH7 4AJ, Scotland

469. **BULLETIN D'INFORMATION DU CNEEMA**
Monthly.
- Publ.: Centre national d'études et d'expérimentation du machinisme agricole (CNEEMA)
Parc de Tourvoie
F-92160 ANTONY, France
470. **CANADIAN AGRICULTURAL ENGINEERING**
Twice a year. Covers research and development in agricultural engineering.
- Publ.: Canadian Society of Agricultural Engineering
151 Slater Street, suite 907
OTTAWA, Ontario K1P 5H4, Canada
471. **CANADIAN JOURNAL OF ANIMAL SCIENCE**
Quarterly. In English and French. Papers and notes reporting original research relating to farm animals: genetics, breeding, handling of animal products, waste utilization etc.
- Publ.: Canadian Society of Animal Production
Agricultural Institute of Canada
151 Slater Street, suite 907
OTTAWA, Ontario K1P 5H4, Canada
472. **COMPOST SCIENCE**
Every two months. Journal of waste recycling, including agricultural wastes.
- Publ.: Rodale Press
33 East Minor Street
EMMAUS, Pennsylvania 18049, United States of America
473. **CORNELL AGRICULTURAL WASTE MANAGEMENT CONFERENCE: PROCEEDINGS**
Annual.
- Publ.: Cornell University
New York State College of Agriculture and Life Sciences
Riley Robb Hall
ITHACA, New York 14850, United States of America
474. **CSIRO REPORT**
Annual. Review of activities.
- Publ.: Commonwealth Scientific and Industrial Research Organization (CSIRO)
P.O. Box 26, Graham Road
HIGHETT, Victoria 3190, Australia
475. **DLG MITTEILUNGEN**
Twice a month. In German.
- Publ.: Deutsche Landwirtschafts-Gesellschaft (DLG) Verlag GmbH
Postfach 2674
Ruesterstrasse 13
D-6000 FRANKFURT/MAIN 1, Federal Republic of Germany

476. EAST AFRICAN AGRICULTURAL AND FORESTRY JOURNAL
Quarterly.
Publ.: East African Agricultural and Forestry Journal
Box 30148
NAIROBI, Kenya
477. EFFLUENT AND WATER TREATMENT JOURNAL
Monthly. Latest developments in the field of effluent control and water treatment, including new legislation.
Publ.: Thunderbird Enterprises Ltd
102 College Road
HARROW, Middlesex HA1 1BQ, England
478. ENERGY
Quarterly. Articles reviewing specific topics in order to give a concise survey of a particular aspect of energy. Includes bioconversion.
Publ.: Pergamon Press, Inc.
Headington Hill Hall
OXFORD OX3 0BW, England
479. ENERGY CONVERSION
(Formerly *Advanced Energy Conversion*)
Quarterly. In English, French and German. Articles on primary energy sources and direct and indirect conversion processes. Legislation and control.
Publ.: Pergamon Press, Inc. (see entry 478)
480. ENGINEERING RESEARCH AND DEVELOPMENT IN AGRICULTURE (ERDA)
Quarterly.
Publ.: Agriculture Canada
Engineering Research Service
OTTAWA, Ontario K1A 0C6, Canada
481. ENVIRONMENTAL SCIENCE AND TECHNOLOGY
Monthly. Reports on the scientific, engineering and political control of the environment. Book reviews, new products news, technical features. Annual index.
Publ.: American Chemical Society
1155 Sixteenth Street, N.W.
WASHINGTON, D.C. 20036, United States of America
482. EXPERIMENTAL AGRICULTURE
Quarterly. Concerned with the application of experimental work in agriculture, particularly in warmer climates.
Publ.: Cambridge University Press
32 East 57th Street
NEW YORK, New York 10022, United States of America

483. **FARMERS WEEKLY**
Covers the complete farming scene. Technical and economic reports, news on tropical agriculture.
Publ.: Agricultural Press Ltd
161-166 Fleet Street
LONDON EC4P 4AA, England
484. **FARMING FOR DEVELOPMENT**
Quarterly. International economic and technical news on production methods and agricultural practices.
Publ.: International Federation of Agricultural Producers
1, rue d'Hauteville
F-75010 PARIS, France
485. **FOREST PRODUCTS JOURNAL**
Monthly. Occasional articles on bioconversion of forest residues.
Publ.: Forest Products Research Society
2801 Marshall Court
MADISON, Wisconsin 53705, United States of America
486. **GENIO RURALE (Agricultural engineering)**
Monthly. In Italian.
Publ.: Gruppo Giornalistico Edagricole
Via Emilia Levante 31
I-40139 BOLOGNA, Italy
487. **GREEN REVOLUTION**
Every two months. Focuses on decentralized technologies applied to non-conventional production of energy.
Publ.: School of Living
P.O. Box 129, Route 1
FREELAND, Maryland 21053, United States of America
488. **INDIAN FARMING**
Monthly. Frequent reports on Indian experiences with biogas plants.
Publ.: Indian Council of Agricultural Research
Krishi Bhavan
NEW DELHI 110 001, India
489. **INDIAN JOURNAL OF AGRICULTURAL SCIENCE**
Monthly.
Publ.: Indian Council of Agricultural Research (see entry 488)
490. **INTERNATIONAL RICE RESEARCH INSTITUTE: SEMI-ANNUAL REPORT**
Twice a year. Deals with use of by-products.
Publ.: International Rice Research Institute
P.O. Box 933, Los Banos
MANILA, Philippines

491. INTERNATIONAL SUGAR JOURNAL
Monthly. Deals with utilization of by-products.
Publ.: International Sugar Journal Ltd
23a Easton Street
HIGH WYCOMBE, Buckinghamshire HP11 2JZ, England
492. ITDG ANNUAL REPORT
Publ.: Intermediate Technology Development Group (ITDG)
Parnell House, 25 Wilton Road
LONDON SW1V 1JS, England
493. JOURNAL OF AGRICULTURAL ENGINEERING RESEARCH
Quarterly. Results of research and development work at the International Institute of Agricultural Engineering.
Publ.: Academic Press Ltd
24 Oval Road
LONDON NW1 7DX, England
494. JOURNAL OF AGRICULTURAL SCIENCE
Every two months. Research in pure and applied sciences relating to agricultural problems. Includes papers on ecological and environmental subjects that bear on agricultural practices.
Publ.: Cambridge University Press
200 Euston Road
LONDON NW1 2BD, England
495. JOURNAL OF ANIMAL SCIENCE
Monthly. Reports on scientific research.
Publ.: American Society of Animal Science
311 Illinois Building
113 North Neil Street
CHAMPAIGN, Illinois 61820, United States of America
496. JOURNAL OF APPLIED BACTERIOLOGY
Quarterly. Covers aspects of bacteriology of interest to agricultural scientists. Abstracts, book reviews, annual index.
Publ.: Academic Press Ltd (see entry 493)
497. JOURNAL OF ENVIRONMENTAL QUALITY
Quarterly. Frequent articles on utilization of agricultural wastes.
Publ.: American Society of Agronomy
Crop Science Society of America
Soil Science Society of America
677 South Segoe Road
MADISON, Wisconsin 53711, United States of America
498. JOURNAL OF THE NEW ALCHEMISTS
Irregular. Deals with biological conversion and systems.
Publ.: New Alchemy Institute East
P.O. Box 432
WOODS HOLE, Massachusetts 02543, United States of America

499. **JOURNAL OF THE SANITARY ENGINEERING DIVISION OF ASCE**
Every two months. Covers a wide range of topics including waste management.
Publ.: American Society of Civil Engineers (ASCE)
345 East 47th Street
NEW YORK, New York 10017, United States of America
500. **JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE**
Monthly. Technical articles on new work in food science and agriculture.
Abstracts of the world literature.
Publ.: Academic Press Ltd (see entry 493)
501. **KAJIAN PENTANIAN MALAYSIA/MALAYSIAN AGRICULTURAL RESEARCH JOURNAL**
Three times a year. In English and Malay.
Publ.: University of Malaysia
Faculty of Agriculture
KUALA LUMPUR, Malaysia
502. **KHADI GRAMODYYOG** (Journal of the Khadi and Village Industries Commission)
Monthly. In English and Hindi. Reports on experiences with biogas plants.
Publ.: Khadi and Village Industries Commission
Department of Science and Technology
Gramodaya, 3 Irla Road
Vile Parle West
BOMBAY 400 056, India
503. **THE MACDONALD JOURNAL**
(Formerly *MacDonald Farm Journal*)
Monthly. Articles on applied agriculture, renewable resources, food and nutrition.
Publ.: MacDonald College of MacGill University
Box 237
STE ANNE DE BELLEVUE, Quebec H0A 1CO, Canada
504. **MECHANICAL ENGINEERING**
Monthly. Deals with design and production of original equipment, energy transmission and transformation.
Publ.: American Society of Mechanical Engineers
345 East 47th Street
NEW YORK, New York 10017, United States of America
505. **MOTHER EARTH NEWS**
Every two months. Focus on environmentally sound practices and technologies, including those related to the utilization of alternative sources of energy.
Publ.: Mother Earth News
P.O. Box 70
HENDERSONVILLE, North Carolina 28739, United States of America

506. **NATIONAL HOG FARMER**
Monthly. Frequent features on the utilization of swine waste.
Publ.: Webb Company
1999 Shepard Road
ST. PAUL, Minnesota 55102, United States of America
507. **NCRR BULLETIN**
Quarterly.
Publ.: National Center for Resources Recovery (NCRR)
1211 Connecticut Avenue, N.W.
WASHINGTON, D.C. 20036, United States of America
508. **ORGANIC GARDENING AND FARMING**
Monthly. Emphasis on composting.
Publ.: Rodale Press (see entry 472)
509. **POONA AGRICULTURAL COLLEGE MAGAZINE**
Irregular.
Publ.: Agricultural College
POONA, India
510. **POULTRY SCIENCE**
Every two months. Research papers on poultry science, physiology, nutrition, waste utilization.
Publ.: Poultry Science Association
Texas A and M University
COLLEGE STATION, Texas 77843, United States of America
511. **RENEWABLE ENERGY BULLETIN**
Quarterly.
Publ.: Multiscience Publishing Company Ltd
The Oil Mill, Dorset Place
STRATFORD E15 1DJ, England
512. **RESOURCE RECOVERY**
Quarterly. Deals with solid, liquid and gaseous waste processing and recycle systems for reclamation of resources.
Publ.: Wakeman-Walworth, Inc.
P.O. Box 1144
DARIEN, Connecticut 06820, United States of America
513. **RURAL DEVELOPMENT NEWSLETTER**
Quarterly. Devoted to appropriate technology in Africa.
Publ.: Economic Commission for Africa (ECA)
Voluntary Agencies Bureau
P.O. Box 3001
ADDIS ABABA, Ethiopia

514. **SOIL ASSOCIATION QUARTERLY REVIEW**
(Formerly *Soil Association Journal*)
Publ.: The Soil Association
Walnut Tree Manor, Haughley
STOWMARKET, Suffolk IP14 3RS, England
515. **SOIL SCIENCE**
Monthly. Deals with organic fertilizers and soil conditioners.
Publ.: Williams and Wilkins Company
428 East Preston Street
BALTIMORE, Maryland 21202, United States of America
516. **SOLAR ENERGY**
Quarterly. In English, French and Spanish. Official journal of the International Solar Energy Society. Covers the science and technology of solar energy applications.
Publ.: Pergamon Press, Inc. (see entry 478)
517. **SOLID WASTE REPORT**
Twice a month. Covers solid waste management, including collection, recycling and disposal. Reports on federal, state and local legislation.
Publ.: Business Publishers, Inc.
P.O. Box 1067, Blair Station
SILVER SPRING, Maryland 20910, United States of America
518. **TAICH NEWS**
Irregular. Reports on projects and on documents relating to the planning and execution of development assistance. Frequent articles on appropriate technology for agricultural development.
Publ.: Technical Assistance Information Clearing House (TAICH)
200 Park Avenue South
NEW YORK, New York 10003, United States of America
519. **TECHNOLOGY JOURNAL**
Quarterly. Reports on technological research with emphasis on appropriate technology in the Philippines.
Publ.: FORPRIDECOM
College
LAGUNA 3720, Philippines
520. **TROPICAL AGRICULTURE**
Quarterly. Published on behalf of the Faculty of Agriculture of the University of the West Indies. Original papers and research notes on agronomy, soil and animal science. Economic aspects of tropical agriculture.
Publ.: IPC Science and Technology Press
Oakfield House, Perrymount Road
HAYWARDS HEATH, Sussex, England

521. **TROPICAL SCIENCE**
Quarterly. Concerns the development of renewable resources. Scientific papers, book reviews, reports of the Tropical Products Institute.

Order from:
Her Majesty's Stationery Office
49 High Holborn
LONDON WCIV 6HB, England
522. **UNIVERSITY OF CALIFORNIA, SANITARY ENGINEERING RESEARCH LABORATORY: NEWS**
Quarterly. Environmental studies.

Publ.: University of California
Sanitary Engineering Research Laboratory
1301 South 46th Street
RICHMOND, California 94804, United States of America
523. **VITA NEWSLETTER**
Irregular. Occasional reports on biogas plant experiments.

Publ.: Volunteers in Technical Assistance (VITA)
3706 Rhode Island Avenue
MT. RAINIER, Maryland 20822, United States of America
524. **WASTE AGE**
Monthly. Devoted to waste collection, disposal and recycling. Technical features, book reviews, news on new products. Annual index.

Publ.: Three Sons Publishing Company
6311 Gross Point Road
NILES, Illinois 60648, United States of America
525. **WATER AND SEWAGE WORKS**
Monthly.

Publ.: Scranton Publishing Company
35 East Wacker Drive
CHICAGO, Illinois 60601, United States of America
526. **WATER AND WASTES ENGINEERING**
Monthly.

Publ.: Dun Donnalley Publishing Company
666 Fifth Avenue
NEW YORK, New York 10019, United States of America
527. **WATER AND WASTE TREATMENT**
Monthly. Technical journal dealing with sewage treatment and industrial effluent treatment and the prevention of water pollution. Describes new plants and equipment.

Publ.: DR Publications
103 Brigstock Road
THORNTON HEATH, Surrey, England

528. **WATER POLLUTION CONTROL**
Quarterly. Concerns the treatment of waste waters.
Publ.: Institute of Water Pollution Control
53 London Road
MAIDSTONE, Kent ME16 8JH, England
529. **WATER POLLUTION CONTROL FEDERATION: JOURNAL**
Monthly. Text in English; summaries in English, French, German, Portuguese and Spanish. Technical journal of fundamental and practical knowledge about the nature, collection, treatment and disposal of waste water.
Publ.: Water Pollution Control Federation
2900 Wisconsin Avenue, N.W.
WASHINGTON, D.C. 20016, United States of America
530. **WORLD AGRICULTURE/AGRICULTURE DANS LE MONDE**
Quarterly. In English and French. Concerns all aspects of agricultural production, including energy utilization on the farm.
Publ.: International Federation of Agricultural Producers (see entry 494)
531. **WORLD'S POULTRY SCIENCE JOURNAL**
Quarterly. Covers the use of poultry wastes.
Publ.: World's Poultry Science Association
12 Ware Lane, Wyton
HUNTINGDON PE17 2BZ, England

SECTION VII

CURRENT ABSTRACTING AND INDEXING PERIODICALS

Guide to the location of published works, mainly journal articles, giving either bibliographical information or summaries (abstracts)

532. **ABSTRACTS, EXCERPTS AND REVIEWS OF THE SOLID WASTE LITERATURE**
C. G. GOLUEKE. 1972.

Publ.: University of California
Engineering Research Laboratory
BERKELEY, California, United States of America

533. **ABSTRACTS ON TROPICAL AGRICULTURE**
(Formerly *Tropical Abstracts*)
Monthly. Annotated bibliography of articles in periodicals, papers, documents. International coverage.

Publ.: Koninklijk Instituut voor de Tropen
Maritskade 63
AMSTERDAM, Netherlands

534. **AGRICULTURAL ENGINEERING ABSTRACTS**
Monthly.

Publ.: Commonwealth Agricultural Bureaux
Farnham House, Farnham Royal
SLOUGH, Buckinghamshire SL2 3BN, England

535. **AGRINDEX**

Monthly. International information system for agricultural sciences and technology, published by arrangement with the Food and Agriculture Organization of the United Nations (FAO). Arranged alphabetically by author within categories.

See: Soil fertility, fertilizers
Farm equipment
Energy resources

Index No. F25
N20
P05

Order from:
Apimondia
Corso Vittorio Emanuele 101
I-00186 ROME, Italy

536. **AGRONOMY ABSTRACTS**
Annual.
Publ.: American Society of Agronomy
677 South Segoe Road
MADISON, Wisconsin 53711, United States of America
537. **ANIMAL BREEDING ABSTRACTS**
Quarterly. Informative and indicative abstracts covering livestock and poultry. Annual author index.
Publ.: Commonwealth Bureau of Animal Breeding and Genetics
Commonwealth Agricultural Bureaux (see entry 534)
538. **APPLIED SCIENCE AND TECHNOLOGY INDEX**
Monthly. Cumulative subject index to English-language periodicals on science and technology, including environmental engineering.
Publ.: H. W. Wilson Company
950 University Avenue, Bronx
NEW YORK, New York 10452, United States of America
539. **BIOLOGICAL AND AGRICULTURAL INDEX**
(Formerly *Agricultural Index*)
Monthly. Cumulative subject index to periodicals on biology, agriculture and related sciences.
Publ.: H. W. Wilson Company (see entry 538)
540. **BULLETIN BIBLIOGRAPHIQUE INTERNATIONAL DU MACHINISME AGRICOLE/INTERNATIONAL FARM MACHINERY ABSTRACTS**
Monthly, with quarterly supplements (subject index). In English, French, German and Spanish.
Publ.: Centre national d'études et d'expérimentation du machinisme agricole
Parc de Tourvoie
F-92160 ANTONY, France
541. **BULLETIN SIGNALTIQUE. 380: AGRONOMIE, ZOOTECHNIE, PHYTOPATHOLOGIE, INDUSTRIES ALIMENTAIRES**
Monthly.
Publ.: Centre national de la recherche scientifique
Centre de documentation scientifique et technique
26, rue Boyer
F-75971 PARIS, cedex 20, France
542. **CDIUPA: BULLETIN BIBLIOGRAPHIQUE**
Monthly. Abstracts of articles and book reviews.
Publ.: Centre de la documentation des industries utilisatrices de produits agricoles (CDIUPA)
Avenue des Olympiades
F-91305 MASSY, France

543. **ENERGY ABSTRACTS**
Composed of five monthly issues:
 Energy sources abstracts
 Energy production, transmission and distribution
 Energy utilization abstracts
 Energy conservation
 Energy conversion
Covers world literature on engineering aspects of energy resource development, production, transmission, distribution, conservation and conversion. Author index.
Publ.: The Engineering Index, Inc.
 345 East 47th Street
 NEW YORK, New York 10017, United States of America
544. **ENVIRONMENT ABSTRACTS**
Monthly. Concentrates on environmental aspects of energy development, use and policy. International coverage of journals and reports.
Publ.: Environment Information Center
 124 East 39th Street
 NEW YORK, New York 10016, United States of America
545. **ENVIRONMENTAL POLLUTION AND CONTROL**
Weekly. Summaries of classified research reports funded by the United States Government. The section on solid wastes pollution includes agricultural wastes management.
Order from:
 National Technical Information Service
 5285 Port Royal Road
 SPRINGFIELD, Virginia 22161, United States of America
546. **EPA QUARTERLY ABSTRACT BULLETIN**
Bibliography and abstracts of all reports of the United States Environmental Protection Agency (EPA). Author and subject index, report-number index.
Order from:
 National Technical Information Service (see entry 545)
547. **INDIAN AGRICULTURAL INDEX**
Monthly. Index of articles in English and Hindi published in agricultural periodicals.
Publ.: University of Agriculture and Technology
 PANTNAGAGAR (Naini Tal), Uttar Pradesh, India
548. **POLLUTION ABSTRACTS**
Every two months. Summarizes and indexes world literature on the environment, including agricultural wastes and compost.
Publ.: Pollution abstracts
 620 South Fifth Street
 LOUISVILLE, Kentucky 40202, United States of America

549. REFERATIVNYI ZHURNAL: 57. POCHVOVEDENIE I AGRO-KHIMIIA (Abstracting journal: soil science and agricultural chemistry)
Monthly. Indicative and informative abstracts.

Publ.: Vsesoiuznyi Institut Nauchnoi i Tekhnicheskoi Informatsii
Baltiiskaia ulitsa 14
MOSCOW A-219, Union of Soviet Socialist Republics

550. SOILS AND FERTILIZERS

Monthly. Covers world literature on soil physics, chemistry, soil formation, conservation and use of fertilizers.

Publ.: Commonwealth Agricultural Bureaux
Rothamsted Experimental Station
HARPENDEN, Hertfordshire H15 2IQ, England

SECTION VIII

PROCEEDINGS, PAPERS AND REPORTS

A. *United Nations and related bodies*

- 551. New sources of energy. Progress report. 1967, 54 p. (E/4303)
- 552. Non-conventional sources of energy for developing countries. Paper presented to the United Nations Advisory Committee on the Application of Science and Technology to Development. 1971. (E/AC.52/XX/CRP.T/Annex)
- 553. Proposal to the United Nations Environment Programme for a programme in non-polluting energy. Advisory Committee on the Application of Science and Technology to Development. (E/AC.52/XX/CRP.7)
- 554. Small-scale power generation: a study for pioneer electrification work. (Sales No. 67.II.B.7)
- 555. United Nations Conference on New Sources of Energy, Rome 21-31 August 1961. Proceedings. 7 vols. New York, 1964. Reprinted 1974 and 1976.
 - Vol. 1: General session
 - Vol. 2: Geothermal energy I
 - Vol. 3: Geothermal energy II
 - Vol. 4: Solar energy I
 - Vol. 5: Solar energy II
 - Vol. 6: Solar energy III
 - Vol. 7: Wind power

Economic and Social Commission for Asia and the Pacific (ESCAP)

- 556. Preparatory Mission on Biogas Technology and Utilization, Manila. Report. Bangkok, 1975.
- 557. Second session of the Committee on Natural Resources, Bangkok, 14-20 October 1975. Proceedings. New York, 1976. (Energy resources development series No. 15) (Sales No. E.76.II.F.11)
- 558. Workshops on Biogas Technology for Asia and the Pacific, Manila, 13-18 October 1975. Papers.

Economic Commission for Europe (ECE)

559. Current trends and possibilities of co-operation in the development of new technologies of energy production and utilization. Geneva. (SC/TECH/AC.2/R.1, Corr.1 and Add.1 and 2)
560. Energy of the future: a glance at some alternative technologies. Report by the Secretariat of the United Nations Economic Commission for Europe to the senior advisers to ECE Governments on environmental problems. Geneva, 1977.

Food and Agricultural Organization of the United Nations (FAO)

561. Consultation on the Establishment of the European Co-operative Network on Animal Waste Utilization, Solna, Sweden, 13-16 September 1976. Report. (No. 34260)
562. FAO/SIDA⁴ Expert Consultation on Organic Materials as Fertilizers, Rome, 2-6 December 1974. Report (FAO soils bulletin No. 27)
563. War on waste: environmental values and the use of natural resources. 1970. 7 p.

World Health Organization (WHO)

564. Composting: sanitary disposal and reclamation of organic wastes. Geneva, 1956. 205 p. Monograph series No. 31)
565. Exreta disposal in rural areas and small communities. Geneva, 1968. 187 p. (Monograph series No. 39)

Document issued jointly by the Food and Agricultural Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP)

566. FAO/UNEP Seminar on Residue Utilization: Management of Agricultural and Agro-industrial Wastes, Rome, 18 January 1977. Papers.

B. Miscellaneous

567. Agricultural wastes: principles and guidelines for practical solution. Proceedings of the 1971 Cornell Agricultural Waste Management Conference. Ithaca, New York, Cornell University, 1972. 575 p.
568. Annual Composting and Waste Recycling Conference, El Paso, Texas, 23 May 1974. Proceedings. In *Compost Science*, vol. 15, No. 3, 1974.
569. Bioconversion Energy Conference, Amherst, Massachusetts, 25-26 June 1973. Proceedings, Amherst, University of Massachusetts, 1973.

⁴ Swedish International Development Authority.

570. Conference on Rural Environmental Engineering: Water Pollution Control in Low Density Areas. Proceedings. By W. J. Jewell and R. Swan, eds. Hanover, New Hampshire, University Press of New England, 1975.
571. Cornell Agricultural Waste Management Conference, Ithaca, New York, 1975. Proceedings, Ann Arbor, Michigan, Ann Arbor Science Publishers, 1975. 540 p.
572. An inquiry into biological energy conversion. Report of a workshop held at Gatlinburg, Tennessee, 12-14 October 1972. Knoxville, Tennessee, University of Tennessee Press, 1972.
573. International Biomass Energy Conference, Winnipeg, Canada, 13-15 May 1973. Proceedings. Winnipeg, Manitoba, Biomass Energy Institute, 1973.
574. Livestock waste management and pollution abatement. Proceedings of the International Symposium on Livestock Wastes, Columbus, Ohio, Ohio State University. St. Joseph, Michigan, American Society of Agricultural Engineers, 1971. 360 p.
575. Methane: proceedings of a one-day seminar. London, Intermediate Technology Development Group, 1975. 51 p.
576. National Symposium on Animal Waste Management, Warrenton, Virginia, 28-30 September 1971. Proceedings. Washington, D.C., Council of State Government, 1972. 205 p.
577. Process feasibility study: the anaerobic digestion of dairy cow manure at the State Reformatory Honor Farm, Monroe, Washington. Snohomish, Washington, Ecology Group, 1975.
578. Seminar on Microbiological Energy Conversion, Göttingen, Federal Republic of Germany, 4-6 October 1976, organized by the United Nations Institute for Training and Research and the Government of the Federal Republic of Germany. Abstracts of lectures. Göttingen, Institute of Microbiology.
579. Symposium on Anaerobic Biological Treatment Processes, Houston, Texas, 26 February 1970. Papers. Washington, D.C., American Chemical Society, 1970. 196 p. (Advanced chemical series No. 105)
580. Symposium on Processing Agricultural and Municipal Wastes. Proceedings. By G. E. Inglett, ed. Westport, Connecticut, Avi, 1973.
581. Symposium on Use of Agricultural Wastes: Food, Fuel, Fertilizers. Proceedings. Regina, Saskatchewan, 1974.
582. Workshop on Bio-Solar Conversion, Bethesda, Maryland, 5-6 September 1973. Proceedings. Bloomington, Indiana, Indiana University Press.

SECTION IX

SPECIALIZED DICTIONARIES AND ENCYCLOPAEDIAS

583. **AGRICULTURAL ENGINEERING: A DICTIONARY AND HANDBOOK**
A. W. FARRAL and C. F. ALBRECHT. Danville, Illinois, Interstate Printers and Publishers, 1965. 435 p.
584. **AGRICULTURE: TERMINOLOGICAL MATERIAL**
Brussels, Terminology Bureau, 1967. In Dutch, English, French, German and Italian.
585. **DICTIONARY OF AGRICULTURE**
G. HAENSCHE and G. ANTON, eds. Amsterdam, Elsevier, 1975. 1,000 p. In English, French, German, Russian and Spanish.
586. **DICTIONARY OF FUEL TECHNOLOGY**
A. GILPIN. New York, Philosophical Library. 1969. 275 p.
587. **DICTIONARY OF INDIAN AGRICULTURE**
M. G. KAMATH. Bombay, Allied Publishers, 1973. 607 p.
588. **DICTIONARY OF WASTE DISPOSAL AND PUBLIC CLEANSING**
W. KAUPERT, ed. Amsterdam, Elsevier, 1966. 225 p. In English, French and German.
589. **DICTIONARY OF WATER AND SEWAGE ENGINEERING**
F. MEINCK and H. MOEHLER. Amsterdam, Elsevier, 1963. 449 p.
590. **ENCYCLOPEDIA OF CHEMICAL TECHNOLOGY**
R. E. KIRK and D. F. OTHMER. 2nd ed. New York, Interscience, 1963-1972. 22 vols.
591. **A GLOSSARY OF AGRICULTURAL TERMS**
Washington, D.C., American Language Center, 1960. 107 p. English-Spanish and Spanish-English.
592. **HANDBOOK OF AGRICULTURAL TERMS: ENGLISH-FRENCH and FRENCH-ENGLISH**
Waltham, Hampshire, J. W. A. Newhouse, 1972.
593. **MULTILINGUAL VOCABULARY OF SOIL SCIENCE**
G. V. JACKS *et al.* Rome, Food and Agricultural Organization of the United Nations, 1968. 430 p. In Dutch, English, French, German, Italian, Portuguese, Russian, Spanish and Swedish.

594. SOLID WASTES THESAURUS
Geneva, World Health Organization, International Reference Centre for Waste Disposal, 1973. 63 p.
595. TERMS ON ENVIRONMENT RELATED TO AGRICULTURE
Rome, Food and Agriculture Organization of the United Nations, 1972. 122 p. (Terminology bulletin No. 2)
596. VOCABULARY OF AGRICULTURAL AND OTHER TERMS IN USE BY FAO
H. ABDALLAH, comp. Rome, Food and Agriculture Organization of the United Nations, 1969. 625 p. In Arabic and English. (Terminology bulletin No. 21)
597. VOCABULARY OF ANIMAL HUSBANDRY TERMS
Rome, Food and Agriculture Organization of the United Nations, 1959. 685 p. In English, French, German, Portuguese and Spanish.

SECTION X

BIBLIOGRAPHIES

598. AGRICULTURAL UTILIZATION OF SEWAGE EFFLUENT AND SLUDGE: ANNOTATED BIBLIOGRAPHY
J. P. LAW. Prepared for the Federation of Water Pollution Control. Washington, D.C., 1968. Order from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.
599. ANAEROBIC DIGESTION OF LIVESTOCK WASTES TO PRODUCE METHANE: 1946 to 1975
G. SHADDUCK and J. MOORE. St. Paul, Minnesota, University of Minnesota, Department of Agricultural Engineering, 1975. 103 p. An annotated bibliography.
600. BIBLIOGRAPHIE SUR LA PRODUCTION DU METHANE PAR FERMENTATION DU FUMIER ET DES RESIDUS AGRICOLES EN VUE DE SON UTILISATION A LA FERME.
Paris, Commission internationale des industries agricoles, 1950. (B/2650)
601. BIBLIOGRAPHY OF LIVESTOCK WASTE MANAGEMENT
J. R. MINER *et al.* Ames, Iowa, Iowa State University, Department of Agricultural Engineering, 1972. 148 p. (EPA-R2-72-101)
602. BIBLIOGRAPHY ON THE DISPOSAL OF ORGANIC WASTES BY COMPOSTING
Berkeley, California, University of California, Sanitary Engineering Laboratory, 1950. (Technical bulletin No. 2)
603. COMPOSTING OF ORGANIC WASTES: AN ANNOTATED BIBLIOGRAPHY
J. S. WILEY. Springfield, Virginia, National Technical Information Service, 1958, 1959 and 1960. 3 vols.
604. DOCUMENTATION BIBLIOGRAPHIQUE SUR LE METHANE
Paris, Commission internationale des industries agricoles, 1951. (B/2941)
605. ENERGY, ENVIRONMENT AND BUILDING
P. STEADMAN. Cambridge, England, Cambridge University Press, 1975. 267 p. Contains bibliographies on solar space heating, wind power, small-scale water power, composting.
606. FOOD AND AGRICULTURAL INDUSTRIES: ANNOTATED BIBLIOGRAPHY
Rome, Food and Agriculture Organization of the United Nations, 1970. (DC/SP 17)

607. GENERAL REVIEW OF THE LITERATURE ON ANAEROBIC SEWAGE SLUDGE DIGESTION
F. D. POHLAND. Lafayette, Indiana, Purdue University, Engineering Extension Division, 1962.
608. INDEX 1945-1966 ANIMALS
Rome, Food and Agriculture Organization of the United Nations. 1967.
Includes references on animal-wastes utilization. (PU:DC/SP.6)
609. LIVESTOCK AND THE ENVIRONMENT: A BIBLIOGRAPHY WITH ABSTRACTS
M. L. Lowe *et al.* Ada, Oklahoma, East Central Oklahoma State College, Animal Waste Technical Information Center.
Vol. I: 1974. 364 p. (EPA/660/2-74/024)
Vol. II: 1975. 147 p. (EPA/660/2-75-003)
Vol. III: 1976. 319 p. (PB.259 942/1BE)
610. METHANE, FUEL OF THE FUTURE
C. BELL *et al.* Dorchester, Dorset, Prism Press, 1973. See: Classified bibliography on methane as a source of fuel, p. 65-77.
611. REFUSE COLLECTION AND DISPOSAL: AN ANNOTATED BIBLIOGRAPHY
Washington, D.C., United States Department of Health, Education and Welfare, 1951. 91 p. Supplements in 1954, 1956, 1958, and 1961.
612. WASTE MATERIALS BIODEGRADATION RESEARCH TITLES
Quarterly. Birmingham, Warwickshire, University of Aston, Department of Biological Sciences, Biodegradation Information Centre.

SECTION XI

OTHER POTENTIAL SOURCES OF INFORMATION

A. *Consulting and engineering services*⁵

Publications

613. THE CONSULTING ENGINEERS' WHO'S WHO AND YEARBOOK
Prepared by the Association of Consulting Engineers, Abbey House, Victoria Street, London. Annual directory. Lists members with biographies, firms and their specialities, services, engineering societies and other specialized service organizations.
Publ.: Northwood Publications Ltd
Elm House, Elm Street
LONDON WC1X 0BP, England
614. DIRECTORY OF MEMBERSHIP AND SERVICES
Every two years. Includes introductory text and standards of professional conduct and practice. Lists firms and services.
Publ.: Association of Consulting Management Engineers, Inc. (ACME)
347 Madison Avenue
NEW YORK, New York 10017, United States of America
615. ENGINEERING CONSULTING FIRMS ASSOCIATION, JAPAN
Annual Directory. Illustrated list of firms and services.
Publ.: Engineering Consulting Firms Association, Japan (ECFA)
Kasumigaseki Building, Kasumigaseki III
Chiyoda-ku
TOKYO 100, Japan
616. GENIE INDUSTRIEL: CATALOGUE DE L'ENGINEERING
Annual directory. Text in French; index and headings in English, French and German.
Publ.: Documentations industrielles et techniques (DIT)
11, rue de Madrid
F-75008 PARIS, France

⁵ For list of organizations, see entry 617.

617. **MANUAL ON THE USE OF CONSULTANTS IN DEVELOPING COUNTRIES**

Prepared by UNIDO. 1972. 165 p. Includes select list of professional consulting associations, both international and national. (Sales No. 72.II.B.10)

Publ.: United Nations
Sales Section
NEW YORK, New York 10017, United States of America

618. **UNION INTERNATIONALE DES LABORATOIRES INDEPENDANTS: REGISTER OF MEMBERS**

1975. 237 p. Lists private laboratories and independent consultants that are members of the Union. Products and fields of activities are listed in English, with equivalents in French and German. Members are listed geographically, with addresses and a short account of their activities.

Publ.: Union internationale des laboratoires indépendants
Ashbourne House, Alberon Gardens
LONDON NW1 0BN, England

B. Fairs and exhibitions

Organizations

619. **COMMITTEE OF COLLECTIVE NATIONAL PARTICIPATION IN INTERNATIONAL FAIRS: INTEREXPO WIRTSCHAFTS-FOERDERUNGSIINSTITUT DER BUNDESKAMMER**

Hoher Markt 3
A-1010 VIENNA, Austria

620. **UNION OF INTERNATIONAL FAIRS/UNION DES FOIRES INTERNATIONALES (UFI)**

10, rue la Boétie
F-75008 PARIS, France

Publications

621. **EXHIBITION BULLETIN**

Monthly. Advance information on shows, fairs and exhibitions taking place throughout the world.

Publ.: London Bureau
266-272 Kirkdale
LONDON SW26, England

622. **M/A KALENDER (Calendar of fairs and exhibitions)**

Annual. 1977. 456 p. Covers events from mid-1976 to mid-1977. Text in German; index in English, French and German. Issues monthly supplements with current information on fairs and exhibitions.

Publ.: Messe- und Austellungs-Kontor Otto Müller
P.O. Box 2605
Grosse Eschensheimerstrasse 16
D-6000 FRANKFURT/MAIN, Federal Republic of Germany

And/or announcement columns in current periodicals listed in Section VI

C. Financing and investing

Publications and documents

623. DIRECTORY OF EXTERNAL SOURCES OF FINANCING AVAILABLE FOR INDUSTRIAL PROJECTS IN DEVELOPING COUNTRIES
Prepared by UNIDO. 1969. 128 p. Reference material for selecting suitable sources of financing for industrial project in developing countries. (UNIDO/IPPD/6)
- Order from:
United Nations Industrial Development Organization (UNIDO)
P.O. Box 300
A-1400 VIENNA, Austria
624. A GLOBAL DIRECTORY OF DEVELOPMENT FINANCE INSTITUTIONS IN DEVELOPING COUNTRIES
J. D. NYHART and E. F. JANSSENS. 1967. 449 p. Lists development finance institutions and gives relevant information.
Publ.: Development Centre of the Organisation for Economic Co-operation and Development (OECD)
91, boulevard Exelmans
F-75016 PARIS, France
625. IL and T. INVESTING AND TRADING CONDITIONS ABROAD
Reference service covering all the countries of the world. "Current awareness service"—loose-leaf format with periodic issuing of updated chapters.
Publ.: Business International Corporation
757 Third Avenue
NEW YORK, New York 10017, United States of America
626. INVESTING IN DEVELOPING COUNTRIES
1970. 120 p. Lists facilities for the promotion of foreign private investment in developing countries.
Publ.: Organisation for Economic Co-operation and Development (OECD) Château de la Muette
2, rue André Pascal
F-75775 PARIS, cedex 161, France
627. LES INVESTISSEMENTS PRIVES AU SERVICE DU TIERS-MONDE
L. DURAND-REVILLE. 1970. 368 p. Covers investment policies in developing countries.
Publ.: Editions France-Empire
68, rue Jean-Jacques Rousseau
F-75001 PARIS, France
628. MANUAL ON INVESTMENT PROMOTION CENTRES
Prepared by UNIDO. 1973. 99 p. Provides information on existing investment promotion institutions in developing countries and guidelines for those who want to establish them. (Sales No. 73 II.B.3)
Publ.: United Nations (see entry 617)

629. PROSPECTUS PREPARATION FOR INTERNATIONAL PRIVATE INVESTMENT
H. J. ROBINSON. 1971. 103 p. Study of the flow of private investments across international boundaries; specifically designed as a guide for developing countries.
Publ.: Praeger Publishers
111 Fourth Avenue
NEW YORK, New York 10003, United States of America

D. Marketing, exporting and purchasing

Organizations

630. CENTRO INTERAMERICANO DE PROMOCION DE LAS EXPORTACIONES (CIPE)
Carrera 10a No. 14-22, pisos 10, 11 y 13
BOGOTA, D.E. 1, Colombia
631. INTERNATIONAL TRADE CENTRE (UNCTAD/GATT)
Villa le Bocage, Palais des Nations
CH-1211 GENEVA 10, Switzerland
632. WORLD TRADE CENTER'S INFORMATION CENTER
North Tower Building
111 Eighth Avenue
NEW YORK, New York 10011, United States of America

Publications

633. EXPORT PROMOTION BY PRIVATE SECTOR ORGANIZATIONS
1971. 280 p. In English, French and Spanish. Covers all aspects of export trade promotion; list of organizations and bibliographies.
Publ.: International Trade Centre (UNCTAD/GATT)
(see entry 631)
634. A GUIDE TO INDUSTRIAL PURCHASING
Prepared by UNIDO. 1972. 45 p. (Sales No. 72.II.B.19)
Publ.: United Nations (see entry 617)
635. INTERNATIONAL DIRECTORY OF MARKETING RESEARCH HOUSES AND SERVICES
Irregular. 1969. 108 p.
Publ.: Marketing Review
527 Madison Avenue
NEW YORK, New York 10022, United States of America
636. MARKETING AND MANAGEMENT: A WORLD REGISTER OF ORGANIZATIONS
Irregular. 1969. 228 p.
Publ.: CBD Research Ltd
154 High Street
BECKENHAM, Kent, BR3 1EA, England

637. NUEVOS MERCADOS: LA REVISTA DEL EXPORTADOR LATINO-AMERICANO
Monthly.
Publ.: Centro Interamericano de Promoción de las Exportaciones (CIPE)
(see entry 630)
638. WORLD-WIDE CHAMBER OF COMMERCE DIRECTORY
Annual. 1970. 177 p.
Publ.: Johnson Publishing Company
P.O. Box 445
LOVELAND, Colorado 80537, United States of America

E. Meetings and conferences

Publications

639. BIULLETEN' MEZHDUNARODNYKH NAUCHNYKH S'EZDOV, KONFERENTSII I KONGRESSOV (Bulletin of international scientific conferences and congresses)
Monthly. In English and Russian. Includes subject index.
Publ.: Mezhdunarodnaia Kniga
Smolenskaia Sennaia 32-34
MOSCOW G-200, Union of Soviet Socialist Republics
640. FORTHCOMING INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCES
Quarterly. Chronological list of forthcoming conferences in all fields of science and technology. Includes indexes by subject, location and sponsor of conference.
Publ.: ASLIB
3 Belgrave Square
LONDON SW1 8PL, England
641. WORLD MEETINGS: UNITED STATES AND CANADA
and
WORLD MEETINGS: OUTSIDE UNITED STATES AND CANADA
Quarterly journals. Two-year registries of important future scientific and technical meetings to be held in the geographical areas covered. Include keyword indexes, sponsor and address directories.
Publ.: MacMillan Publishing Company, Inc.
866 Third Avenue
NEW YORK, New York 10022, United States of America

And/or announcement columns in current periodicals listed in Section VI

F. Patents and licences

Organizations

642. INTERNATIONAL PATENT DOCUMENTATION CENTRE
 (INPADOC)/INTERNATIONALES PATENTDOKUMENTATIONS-
 ZENTRUM
 Postfach 163
 Möllwaldplatz 4
 A-1040 VIENNA, Austria
643. WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)
 32, chemin des Colombettes
 CH-1211 GENEVA 10, Switzerland

G. Standards and specifications

Organizations

644. COMITE EUROPEEN DE COORDINATION DES NORMES (CEN)
 Tour Europe, Courbevoie
 F-75092 PARIS-LA DEFENSE, France
645. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION/
 ORGANISATION INTERNATIONALE DE NORMALISATION/
 MEZHDUNARODNAIA ORGANIZATSIIA PO STANDARTIZATSII
 (ISO)
 Central Secretariat
 Case postale 56
 1, rue de Varembé
 CH-1211 GENEVA 10, Switzerland
 The international agency for standardization comprising the national bodies of some 70 countries.

And/or the national standards institutes of individual countries (the addresses of which can be obtained from the ISO Central Secretariat)

Publications

646. ASAE STANDARDS
 Recommendations, engineering practices.
 Publ.: American Society of Agricultural Engineers (ASAE)
 P.O. Box 229
 2950 Niles Road
 ST. JOSEPH, Michigan 49085, United States of America
647. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION:
 CATALOGUE
 Annual. List of all ISO standards published. Standards are arranged by technical committee and numerically. Subject index; Universal Decimal Classification (UDC) index.
 Publ.: International Organization for Standardization (ISO)
 (see entry 645)

648. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION: MEMENTO
Annual. Information on ISO activities, its member bodies, technical committees, subcommittees and working groups, with addresses.
Publ.: International Organization for Standardization (ISO)
(see entry 645)

H. Training

Documents

649. SELECTED TRAINING OPPORTUNITIES FOR INDUSTRIAL DEVELOPMENT
Prepared by UNIDO. 1975. 94 p. (PI/50)
Publ.: United Nations Industrial Development Organization (UNIDO)
(see entry 623)

I. Translation services

Organizations

650. EUROPEAN TRANSLATION CENTRE (ETC)
DELFT, Netherlands
651. NATIONAL LENDING LIBRARY FOR SCIENCE AND TECHNOLOGY
BOSTON SPA, Yorkshire, England
652. NATIONAL TRANSLATION CENTER
c/o Special Libraries Association
235 Park Avenue South
NEW YORK, New York 10003, United States of America

Publications

653. CATALOGUE MENSUEL DES TRADUCTIONS
Monthly list of translations into French, mostly of scientific and technical articles. A comprehensive card catalogue from 1953 onwards is available.
Publ.: Centre national de la recherche scientifique (CNRS)
15, quai Anatole-France
F-75007 PARIS, France
654. CONSOLIDATED INDEX OF TRANSLATIONS INTO ENGLISH
Compiled by the John Crerar Library. 1969. 948 p. Lists all translations prior to 1966.
Publ.: National Translation Center (see entry 652)

655. INDEX TRANSLATIONUM: INTERNATIONAL BIBLIOGRAPHY OF TRANSLATIONS
Annual. Multilingual bibliography of translations published all over the world. Introduction in English and French.
Publ.: United Nations Educational, Scientific and Cultural Organization (UNESCO)
7, Place de Fontenoy
F-75007 PARIS, France
656. TRANSLATIONS AND THEIR GUIDES
J. P. CHILLAG, ed. Survey of lists of translations. Table gives data on 31 translation-announcement bulletins.
Publ.: National Lending Library for Science and Technology (see entry 651)
657. WORLD INDEX OF SCIENTIFIC TRANSLATIONS
Quarterly. Lists translations, both compiled and in progress, of articles, patents, standards etc. concerned with science and technology. Translations are mostly into English from Russian and other Slavic languages, Chinese and Japanese. Lists about 10,000 translations a year.
Publ.: European Translations Centre (ETC) (see entry 650)

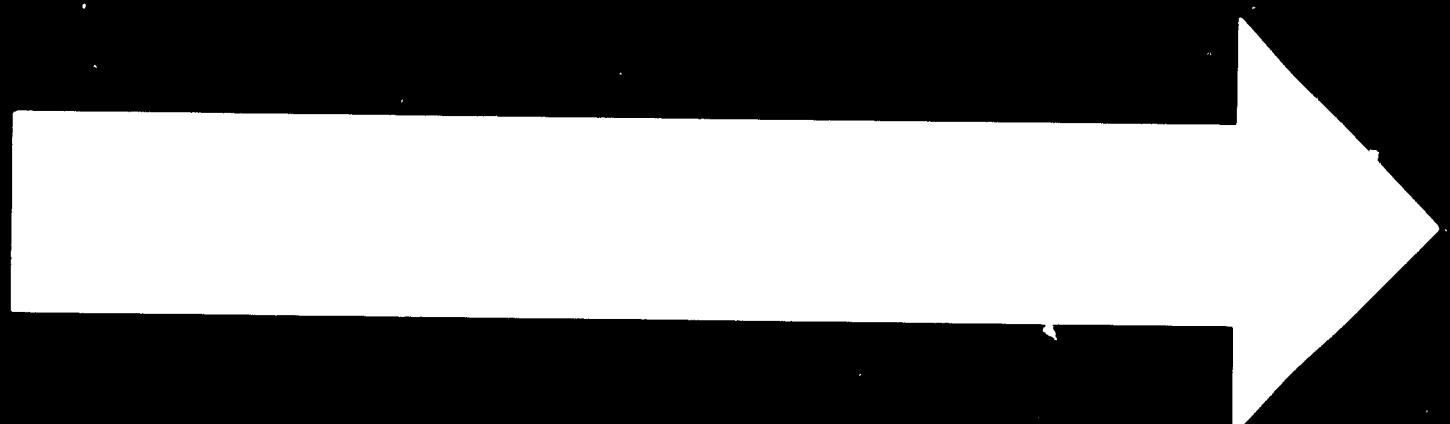
J. UNIDO activities

658. INDUSTRIAL DEVELOPMENT ABSTRACTS
Every two months. Prepared by Industrial Documentation Unit, UNIDO. Indexes and abstracts the following types of UNIDO documents: (1) printed publications of UNIDO, i.e. major studies and reports, recurrent publications and series and selected articles from INDUSTRIAL RESEARCH AND DEVELOPMENT NEWS and INDUSTRIALIZATION AND PRODUCTIVITY BULLETIN; (2) documents submitted to the Industrial Development Board; (3) documents of expert working groups, workshops and seminars; (4) internal studies and reports; (5) information sheets; (6) technical assistance reports, including feasibility studies and project reports. (UNIDO/LIB/SER.B)
Order from:
United Nations (see entry 617)
659. UNIDO NEWSLETTER
Monthly. In Arabic, English, French, Russian and Spanish. News on current activities of the organization. Available on request.
Order from:
United Nations Industrial Development Organization (UNIDO)
(see entry 623)

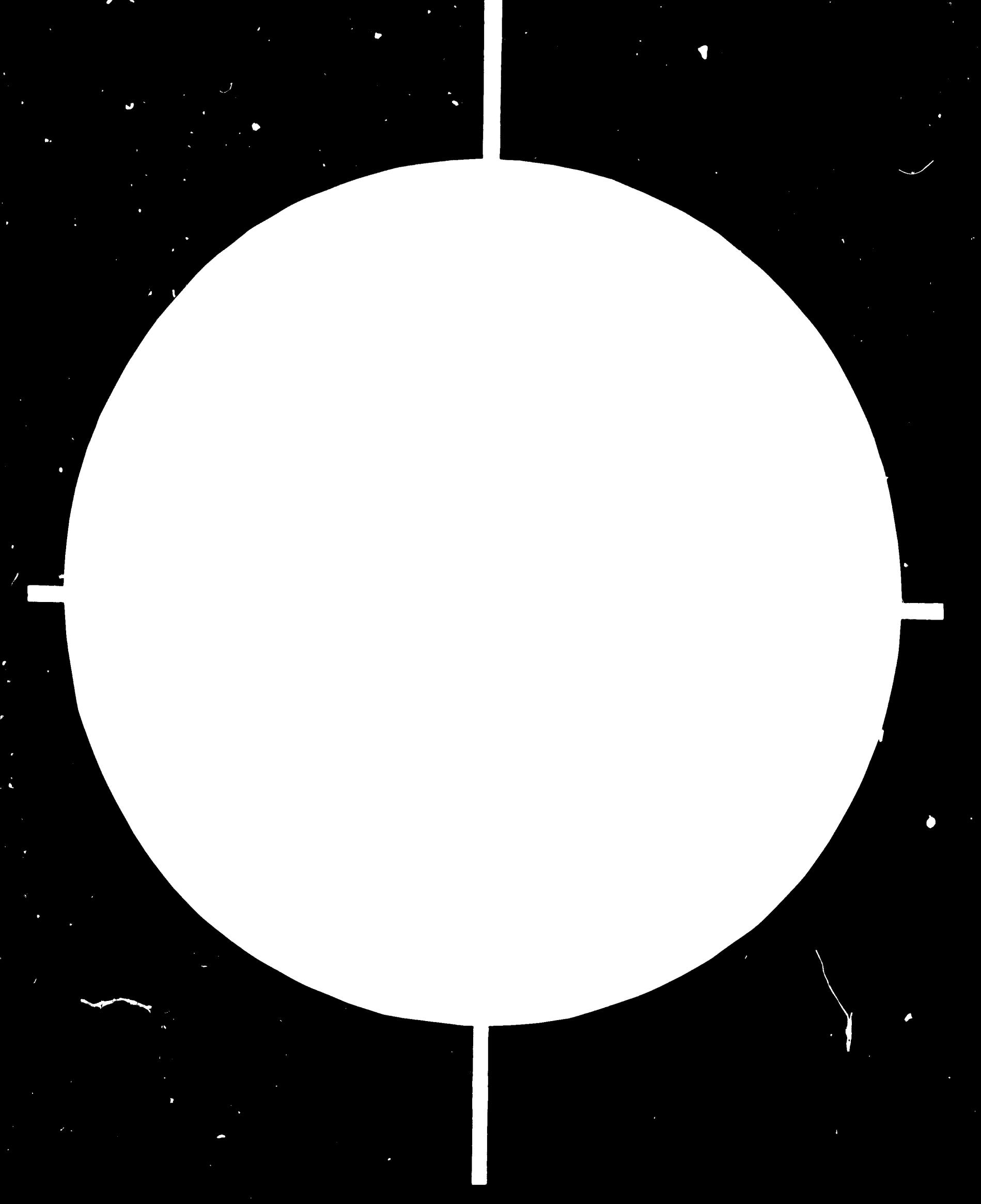
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- British books in print. London, Whitaker, 1975. 2 vols.
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- Directory of selected scientific institutions in Mainland China. Stanford, California, Hoover Institution Press, 1970.
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- Energy for rural development. Washington, D.C., National Academy of Sciences, 1976.
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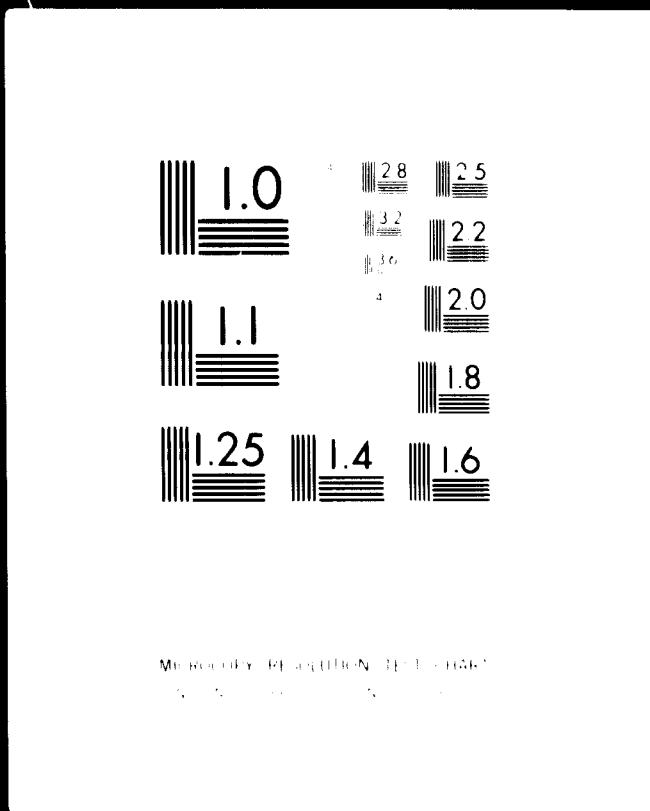
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_____ The human environment. A selected bibliography on its ecology, resources, deterioration and conservation. Rome, FAO Library, Bibliography Unit, 1973.

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- No. 22 Machine Tool Industry
- No. 23 Dairy Product Manufacturing Industry
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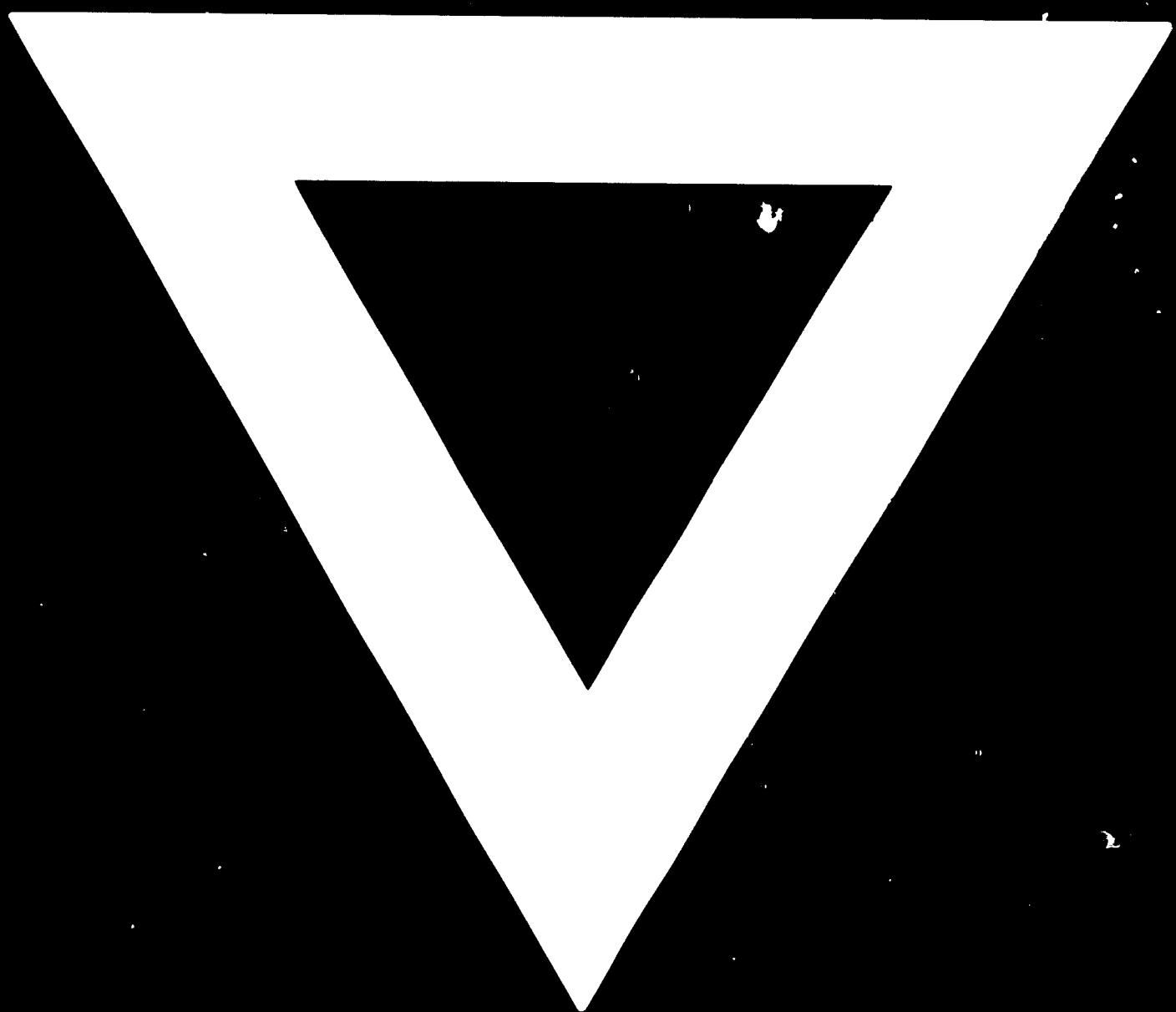
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