



Project Summary

Livestock and the Environment: A Bibliography with Abstracts—Volume VII

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M. L. Rowe, Linda Merryman, and Darla Stettler

Management and research information on animal waste has expanded in recent years. This material has appeared in such diverse sources as journal articles, conference papers, university publications, government publications, magazine articles, books and book chapters, and theses. This bibliography was compiled in order to speed the flow of information on findings in one segment of the livestock industry to other segments that could benefit from this technology.

This bibliography contains 601 abstracts, which is Volume VII of a seven volume set. The abstracts are published in the following indexes: (1) author; (2) animal information categories; and (3) keyword index.

This Project Summary was developed by EPA's Robert S. Kerr Environmental Research Laboratory, Ada, OK, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

Introduction

Evolving regulations and aims pertaining to pollution control and abatement have necessitated a timely and well dispersed flow of pertinent information concerning animal waste management so that capital investments in the animal production industry can be made on the basis of the most recent

research and operational findings. In many activities, industrial and manufacturing organizations or associations provide the linkage channels through which such information may flow. The wide range in operation sizes and makeup, the geographic factors, and the dictates of the local or regional markets make widespread dissemination difficult even through the established communication networks such as breed associations, farm organizations, and the popular agricultural press. Common properties and characteristics of animal wastes enable technological transfers to occur in the production operations from one species to another. Publicizing practices of findings in one segment of the livestock production industry can spread new ideas and techniques to other segments of the industry.

The objective of this project is to facilitate the dissemination and technological transfer of information on the management and disposal of animal wastes throughout the livestock industry. Identification and location of pertinent information generated in the production operations of poultry, swine, cattle, fish, and other animals of economic interest raised in open or confined systems is accomplished through searches of technical journals, books, theses, reports from private, state, and federal agencies, papers given at meetings of professional societies or symposiums, and articles appearing in the trade or production-oriented "farm" magazines.

The search topics of specific interest include: (1) the environmental impact of animal production activities on water, groundwater, air, soil systems, health, and aesthetics, (2) feedlot, confinement pen, rangeland, and pasture land management, including animal waste management; the use of chemical fertilizers, manures, green manures, and sewage sludge in conjunction with animal production areas or animal production-related areas; and pollution effects of crop residues, soil losses and sediments production from animal production areas to animal production-related areas, (3) legal, economic, and social constraints, (4) research and development.

The entries in this bibliography have been assigned a specific cross reference code. The code number consists of nine digits arranged in the sequences of a three-digit class code, a two-digit number representing the year of publication or presentation; and a four-digit accession number identifying each article brought into the animal waste information collection. The first grouping identifies the class code of the document according to the following format:

Class Code Index

Code	Class
100	Technical journal paper
200	Conference proceeding paper
300	University or government publication
400	Magazine article
500	Book or chapter from a book
600	Unpublished paper
700	Thesis

This publication consists of five sections: Class Code Index, Animal Information Category Index, Keyword Index, Author Index, and Abstracts.

Author Index

This index lists all the authors cited in the bibliography in alphabetical order. To the right of each author entry is the cross reference code of the article or articles with which he is identified. An example of the format is as follows:

Abe RK	200 77 5351
Abeles T	300 78 5766
Adams A	100 76 5511
Adolph R	400 71 5826
Aglira T	300 71 5545

Animal Information Category Index

To provide a quick entry into the abstract holdings of the collection, an animal information code was developed. This code utilizes an alphabetical entry to signify a broad interest area and a numerical digit to designate a more specific topic under the broad interest area. Each abstract in the collection is classified according to this code and could be listed under the most relevant categories. This provides the user with an easy entry into the abstract holdings pertaining to his information needs.

The entries in the Animal Information Category Index appear by accession number under the code number as found in the following example.

A1
5318
5319
5320

Keyword Index

The index consists of an alphabetical listing of significant words in an article or in the title of an article. To the right of the keyword are the first 85 characters

Categories of Animal Information

<u>Interest Area</u>	<u>Topic Area</u>
<i>A. Environmental Effects</i>	<ol style="list-style-type: none"> 1. General 2. Surface Runoff from Animal Production 3. Surface Runoff from Agricultural Watersheds 4. Surface Water Pollution 5. Groundwater Pollution 6. Odor 7. Air 8. Soil Systems 9. Biocides 10. Vectors 11. Animal Health 12. Public Health 13. Aesthetics
<i>B. Management of Animal Production and Related Operations</i>	<ol style="list-style-type: none"> 1. General 2. Liquid Systems 3. Solid Systems 4. Storage 5. Pasture Land and Cropland Management
<i>C. Characteristics of Animal Wastes</i>	<ol style="list-style-type: none"> 1. Physical 2. Chemical 3. Biological
<i>D. Treatment Processes</i>	<ol style="list-style-type: none"> 1. Physical 2. Chemical 3. Biological
<i>E. Utilization and Disposal</i>	<ol style="list-style-type: none"> 1. General 2. Land Disposal or Reuse 3. Recycling 4. By-Product Recovery
<i>F. General</i>	<ol style="list-style-type: none"> 1. Economics 2. Legalities 3. Policy Needs 4. Overviews

contained in the title or the title and a listing of keywords, if the title is short. To the left of the keyword is the nine-digit cross reference code of the article ascribed to by the keyword. The cross reference code allows the user to look up the abstract for additional information about the title. An example of this index format is:

100 79 5812	Aeration	Flocculation of Animal Slurries
100 79 5870	Aeration	Runoff Control Comparisons for
300 79 5908	Aeration	Odor Control Chemicals Fail Illinois
200 77 5347	Aerobic	Thermophilic Aerobic Digestion of
400 75 5392	Aerobic	Waste Treatment-Where Does It Fit In

Abstracts

This section contains the abstracts of the information entries contained in the bibliography. Each entry includes the title of the informational material, the author or authors, the bibliographic citation, keywords, and the abstract. The abstracts are arranged sequentially by an assigned accession number which specifically identifies the article in the collection. To the right of the accession number are the animal information category code numbers assigned to the abstract entry.

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M. L. Rowe is with the School of Environmental Science, and Linda Merryman and Darla Stettler are with the Animal Waste Technical Information Center, East Central State University, Ada, OK 74820.

R. Douglas Kreis is the EPA Project Officer (see below).

The complete report, entitled "Livestock and the Environment: A Bibliography with Abstracts—Volume VII," (Order No. PB 82-108 341; Cost: \$15.50, subject to change) will be available only from:

*National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Telephone: 703-487-4650*

The EPA Project Officer can be contacted at:

*Robert S. Kerr Environmental Research Laboratory
U.S. Environmental Protection Agency
P.O. Box 1198
Ada, OK 74820*

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