BOOK REVIEWS

Permafrost Terminology

This book has assembled a list of terms presently in use in the literature in an attempt to standardize current permafrost terminology. The terms were chosen with special considerations given to Canadian conditions, and represent only the most commonly used periglacial terms.

Besides a listing and defining of terms, the book is helpful because definitions often are followed by comments of clarification where differences of opinion on the exact definition exist. Definitions are also often followed by references for the reader who wishes further clarification, or who wishes to trace back to original sources. Pictures and line figures are used as aids to some definitions.

The book contains 184 terms, 146 defined and 38 cross-referenced to the defined terms. Fifty three of the terms are also listed in inverse word order, which facilitates use of the manual.

Land as a Waste Management Alternative
Edited by Raymond C. Loehr, Ann Arbor Science Publishers Inc., P. O. Box 1425, Ann Arbor, MI 48106. 1977. 811 p. $29.50.

This volume is the eighth in a series of proceedings resulting from waste management conferences sponsored primarily by the Cornell University College of Agricultural and Life Sciences. It covers a wide variety of topics on the opportunities and problems related to adding municipal, industrial, and agricultural sludges and effluents, and other wastes to the land. Regulatory aspects, transformations and reactions of nitrogen, phosphorus, and heavy metals, health aspects, and case histories are the general areas treated by more than 100 authors. Many of the authors are well known and respected in their fields of expertise; therefore, as would be expected, the thoroughness of coverage and soundness of principles is generally excellent. Notably lacking is appreciable information on the problems of toxic organic compounds added to soil with various wastes. These are mentioned only very briefly by a couple of authors. Although much work is reported on contamination and toxicities of metals in soils, plants, and ground water, there was a paucity of work reported on the effects of high metal additions to soil on humans and animals. Only the Illinois paper on the transfer of cadmium from sludge amended soil to corn plants and then to pheasant tissue, provides data on this overall topic.

Most of the papers were written for practical application of those planning or evaluating waste management systems such as agricultural, environmental and engineering consultants, government agencies and conservation planners. Other papers are of a more theoretical nature, less easily understood and applied by most planners.

The high quality of printing resulted in excellently reproduced black and white line drawings and illustrations. However, the reproduction of the photographs is of less than excellent quality. A minimal index is included in the volume.

The volume contains much useful and needed information for evaluating the general concept and practice of using land as a waste utilization and treatment system.—B. R. SABEY, Department of Agronomy, Colorado State University, Fort Collins, CO.

Thesaurus of Agricultural Terms

This thesaurus is the source of all agricultural terms used in the Subject Index of the Bibliography of Agriculture, and contains over 25,000 entries. The entries are conveniently arranged so that singular and plural forms, along with different spellings of the same word are placed together. The book’s usefulness is further enhanced by the inclusion of cross-referenced terms that follow the main term. A new edition of the thesaurus is tentatively planned for 1978.

Land Application of Waste Materials
Soil Conservation Society of America, 7515 Northeast Ankeny Road, Ankeny, IA 50021. 313 p. 1976. $16.00.

This book contains 22 papers presented in March 1976 at a national symposium sponsored by the Soil Conservation Society of America. The book is intended to be used as a basic reference for further research, for practical management guidelines, and for design of new treatment facilities and methods.

The book contains nine sections: the Introduction—one paper; Consideration of soils for accepting wastes—three papers; Agricultural and forestry wastes—four papers; Municipal wastes—three papers; Industrial wastes—five papers; Sediment—two papers; Economics of land disposal—one paper; and Unresolved problems and future outlook—three papers.

Some of the specific soil-waste problems considered in the book are: the potential of soil for accepting plant nutrients and toxic elements; the fate of pesticides in soil and water; and the use of soil in disposing of animal and food processing wastes, plant and forest residues, mine and chemical wastes, and power generation and petroleum residues. The potential of agricultural lands for the acceptance of sewage sludge and effluent, trash and garbage, and dredging, construction, and demolition waste materials is also considered.

The papers contain numerous helpful tables, graphs, and figures. Many contain extensive reference sections for those wishing to pursue further specific areas of interest.

Pesticides in the Environment, Volume 3

Pest problems and practical control methods of these pests are discussed for three varied areas of pest management. Pesticide use areas included are weed science, forest management, and stored grain insects. The book should prove most useful to pest management consultants and those individuals interested in a condensed review of any one of the three areas covered. Data on the pest problems in the three areas will be valid for some years, but practical control suggestions, especially pesticide control procedures which are stressed, will become outdated due to the many research and regulatory programs underway. However, rapid changes in control procedures for pest management fields require periodic updates, progress reports, or analyses of the state of the science as provided in this book.

The first chapter includes background data on weed losses, diversity among weed species, weed control procedures, and herbicide properties and uses. Emphasis is on chemical control procedures with only a terse mention of other control methods. Herbicides are classified as to application methods, selectivity, use in various crops and noncrop situations, and chemical structure and properties. There is a short discussion of factors influencing herbicide performance. The author has given a condensed review of herbicial control of weeds selective in cropland situations. The active field of weed science will undergo numerous changes during the next decade which will require constant updating of knowledge by the practicing weed control specialist. This chapter is an excellent treatise of present chemical weed control procedures.

Pest management in forests is reviewed in an interesting, informative, and well-illustrated chapter. It provides excellent background discussion for those interested in pest management methods and needs in forests, and cites numerous references for those readers interested in additional information on specific topics. Many illustrative examples of forest management problems are given as control methods are being discussed. Insect control problems occupy the bulk of the discussion. The many factors influencing pest control in forests are discussed, and pros and cons of control methods are analyzed as part of the decision making process in forestry management. As greater recreational and lumber demands are experienced, the need for pest management in forests will become more intense and compromises must be made.

Losses from grain storage pests and conditions favoring their introduction, increase, and development are discussed. The authors concentrate their discussion on insect pests with an occasional mention of such pests as molds, rodents, and birds. Insect control procedures in stored grain are outlined and discussed with chemical control procedures being emphasized. This informative chapter would be excellent reading for individuals responsible for grain storage and care.—ORVIN C. BURNSIDE, Department of Agronomy, University of Nebraska, Lincoln, NE.