Agricultural Management and Water Quality


This book is the proceedings of a national conference held in Ames, Iowa in 1981 under the joint sponsorship of Iowa State University and the U.S. Environmental Protection Agency Experimental Research Laboratory, Athens, Ga. The proceedings include 22 chapters dealing with water quality concerns, 3 chapters of conference conclusions viewed from agricultural and environmental perspectives, and an overall conference evaluation. The book does not represent a series of research reports; rather, it is a well-rounded compilation of water-related topics by established scientists from around the United States. The photographs, figures, and tables found within the book are of high quality, and the abundant references are current and in a standard format.

The general content of the book includes a brief section on the evaluation of water quality legislation and activities of related agencies, followed by a statement of national nonpoint-source pollution problems and concerns. The next part is devoted to the major sources and behavior of nitrogen, phosphorus, pesticides, animal waste, and sediment in the environment, including some discussion of groundwater. The third area deals with concepts, prediction capabilities, and evaluation of several current models that simulate the hydrologic, sediment loss, and chemical characteristics of agricultural runoff. The next group of chapters deals with best management practice evaluation, not only from a nutrient and sediment standpoint, but from the standpoint of the impact on biological habitats, economic consideration, and social and institutional factors related to adoption of these practices. The final chapters address regional and nationwide economic and policy issues related to management practices and future production.

The broad-spectrum approach to water quality and agricultural management practices makes the book of interest to economists, engineers, agronomists, and environmental scientists for its references and comprehensive review of nonpoint-source pollution. Environmental planners and managers will also find the book a valuable resource in that it integrates water quality concerns from a number of different disciplines and agencies.

Fluoride Emissions: Their Monitoring and Effects on Vegetation and Ecosystems


This volume comprises the proceedings of the First Australasian Fluoride Workshop held in Sidney, Australia on 31 Aug. and 1 Sept. 1981. The 16 chapters are arranged under three broad headings: Fluoride Emissions, Fluoride Monitoring, and Fluoride Effects on Plants and Ecosystems.


A variety of information and misinformation exists about atmospheric processes in North America and Europe about the phenomenon of acid deposition. Although it is common knowledge that, with the exception of areas near point sources that receive dry deposition, absolute calculation of the relationships between acid deposition and changes in agriculture, forest productivity and aquatic biology have not yet been resolved. Recent publicity on the effect of acid rain on ecosystems has resulted in a number of studies that have confused the general public with problems surrounding this environmental issue.

This book is a report of the committee organized under the auspices of the Environmental Studies Board, National Research Council to assess current scientific evidence about atmospheric processes that might be used to develop a scientific evidence concerning the relationships between dry or acid-forming precursor gases and deposition of potential pollutants. The main objective was to determine what can be and should be drawn from the state of knowledge late in 1982 about the relationship between emissions and deposition. Essential background and study background are presented in general.