The book is well produced. It is also a pleasure to read a book that is well-bound with properly stitched pages. —KEITH PORTER, NYS Water Resources Institute, 473 Hollister Hall, Cornell University, Ithaca, NY 14853.

The Literature of Soil Science


The Literature of Soil Science assesses the influence of soil science literature. Although there is no preface or foreword that states the overall objective, the frontmatter shows that this is one of a series of books that reviews the literature of the agricultural sciences.

The volume begins with a review of trends and developments in soil science by B.P. Warkentin. He states that the first period in soil science ended about 1850 because of a large number of changes that occurred during that period. Before 1850, scientists from disciplines such as chemistry and geography contributed most of the knowledge about soils. The second period from about 1850 to 1910 was a time of more intensive experimentation. The third period, from approximately 1910 to 1945, featured the soil of land as an extensive resource. The period from 1945 to 1980 was marked by a vastly increased number of experimental studies in soil science. The present era of soil science asks questions on sustainability of natural resources.

Jean Boulaine, a French scholar, reviews early soil science and trends. Soil science had its beginnings in prehistory when humans began to accumulate knowledge about the soils, and Greek, Carthaginian, and Roman authors compiled this knowledge and added to it. Boulaine states that the 18th century saw a few interesting texts, but the first important modern publication on soils (1804) was written by the Swiss T. de Saussure (1767–1845) concerning plant nutrition.

The editor, Peter McDonald, wrote an informative chapter on the characteristics of the literature today, as well as listing current monographs and journals. Other major chapters include Contributions to pre-1960’s Soil Science Literature in Third World Countries,” Armand Van Wambke; “Soil Science Societies and Their Publishing Influence,” W. E. Larson; “Present-Day Soil Information Systems,” David L. Anderson and J. Dumanski; “Soil Surveys and Maps,” Ralph J. McCracken.

Soil and Water Quality: An Agenda for Agriculture


Intensification and specialization in agriculture concerns about its impact on natural resources, such as air, water, plants, animals, and ecosystems. The period from 1945 to about 1980 was marked with erosion and sedimentation formed the main focus. These long-standing eras are now supplemented with other processes that related to the protection of soil and water quality. This hardcover book provides a report by the Committee on Long-Range Soil and Water Conservation in Agriculture of the National Research Council, addressing the science, technical tools, and policy issues related to the protection of soil and water quality in association with food and fiber production in the USA.

This book can be read in its entirety or through selected chapters. It contains two parts. Part 1 provides technical, economic, and policy issues related to soil and water quality. Part 2 provides the scientific background on resource conservation objectives: (i) to conserve soil quality as a fundamental first step to environmental improvement; (ii) to increase nutrient, pesticide, and water use efficiencies in farming systems; (iii) to increase the resistance of farming systems to erosion and runoff; and (iv) to use of field and landscape buffer zones. Part II related to these objectives. The concept of soil quality and its linkage to water quality are strongly presented and give recognition to the fact that trade-offs and degradation processes related to the chemical, biological functioning of soils therefore have a significant impact on the environment. It is also considered information exists on the extent of some soil degradation processes such as compaction, acidification, and erosion.

A systems approach to management of land and water resources is proposed, giving recognition to the fact that erosion control and nutrient runoff control, and the sources of pollution to the environment. This book is well produced. It is also a pleasure to read a book that is well-bound with properly stitched pages.