avoiding or minimizing runoff. Description of P release and loss from soils including runoff using indicators are discussed. These indicators provide a potential alternative to the widely known dilemma that those extractants currently used provide differing answers on the soil P content level, not to mention that these P content values are hardly related to P losses into drainage water.

As pointed out by the editors in the synthesis it was erroneous to believe, that soils strongly retain P. That false assumption caused soil P recommendations that were too high leading to rather careless use of P as a fertilizer. Instead, it is mentioned that already small losses of P that are insignificant for plant nutrition can be limnologically highly relevant. However, at this point the editor addresses the essential need that agricultural land management systems and fertilizer regimes that would potentially reduce nonpoint-source P losses to a limnologically acceptable level still have to be identified.

Although according to the authors nonpoint-sources are the dominant P losses, high loads of P still derive from relatively small areas within catchments. The only major omissions in the book are discussions of how to identify vulnerable locations and areas in catchments that are predestinated for P losses, and how to representative monitor P status in catchments.

Overall, the book Phosphorus Loss from Soil to Water is well written and provides a succinct overview of the current state of knowledge with gaps and diverging views clearly identified. The book should stimulate researchers to fill those knowledge gaps, and to eventually align present-day divergent views. Additionally, the book would serve as an objective reference for the interested agricultural administrator.—O. WENDROTH, Centre for Agricultural Landscape and Land Use Research (ZALF), Institute for Soil Landscape Research, Eberswalder Str. 84, 15374 Muencheberg, Germany (owendroth@zalf.de).

Bioremediation: Principles and Applications

Each chapter of this book examines a different aspect of bioremediation, and while these are individually self-contained reviews they collectively offer the reader a broad overview of the field. The book’s first two chapters address basic aspects of soil science and engineering relevant to bioremediation. Subsequent sections examine biodegradation and bioremediation of petroleum, “BTEX” (benzene, toluene, ethylbenzene, xylenes), polynuclear aromatic hydrocarbons, nitroaromatics, polychlorinated biphenyls, chlorophenols, chloroaliphatics, and metals. The book concludes with a section on the applications of molecular biology in bioremediation. The book also offers and would find it a solid addition to their personal or laboratory libraries. As a whole, the book is highly recommended.—WILLIAM J. HICKEY, Department of Science, 1525 Observatory Drive, Madison, WI 53706 (wjhickey@facstaff.wisc.edu).

Integrated Weed and Soil Management

Weeds and weed management influence agricultural production, often dictating crop rotations and tillage systems. Weed management technologies, especially herbicides, represent significant inputs to production costs as well as environmental contamination that have raised public concern. Decades of weed management focused simply on controlling weed populations, instead of control terminologies that could be used to control them. Therefore, this book offers a different and refreshing approach to weed problems by examining the connection between weed and soil management.

This unique volume is based on a long-term soil management workshop sponsored by the National Laboratory in Ames, IA. The book uses the terminology, which encompasses all manner of farm—especially soil—management practices, instead of control terminologies that could be used to control them. Chapters were written by accomplished scientists whose research has focused on topic areas that link weed and soil management. These chapters have done an excellent job in pulling together expertise from disparate disciplines. There is still a fairly clear demarcation of expertise between weed-focused and soil-focused contributors, but the information is valuable, up-to-date, and well presented.

The structure of the book makes it an excellent reference, as each chapter begins with an overview, introduction, and concludes with a discussion of future research needs. The chapter subjects range from basic to economic information that forms the basis of weed science. As such, the book is well-suited as a supplemental reading in weed management for weed-focused and soil-focused chapters, and would help the reader appreciate key issues or current and future research needs in bioremediation.