The greenhouse sand-culture experiment probably demonstrated the "worst" effect that might be anticipated with a long time and/or heavy application of sludge to soil.

BOOK REVIEWS

Proceedings of the Summer Institute on Biological Control of Plant Insects and Diseases

Edited by Fowden G. Maxwell and F. A. Harris. University Press of Mississippi, 3825 Ridgewood Road, Jackson, MS 39211. 1974. 647 pages, illus. $12.50, cloth bound; $5.00, paper bound.

This important publication represents the proceedings of the Institute held at Mississippi State University in 1972, sponsored by the Southern Regional Education Board. The Institute was established for university and college professors interested in an intensive short course on biological control. This publication includes the 46 papers presented at the Institute and, as a unit, represents a comprehensive, up-to-date (1972) review and basic reference on the subject.

The book is divided into five parts:
1) "Concepts of Pest Management" includes four articles on the history and progress of biological control, ecological principles, population dynamics, and practical problems in sampling, analysis, and management. The tone of the volume is set in this section, with biological control placed as an integral part of pest management systems.
2) "Parasites and Predators of Arthropods" includes 12 articles covering various subjects in three areas: introduction, augmentation, and conservation of natural enemies. There are also articles on identification and classification in pest management, use of economic thresholds and scouting as bases for using natural enemies in integrated control, and a brief chapter on selective use of insecticides. The articles dealing with introduction of beneficial organisms were of special interest to me. They included topics on selection of target pests and the choice of biological control agents, foreign exploration, quarantine procedures, and methodology and problems associated with rearing, release, establishment, and ultimate field evaluation of the introduced insects.
3) "Biological Control of Weeds" includes only two articles; a good general discussion on the history, theory, and practical application of biological weed control, and a second article limited to biological control of aquatic weeds. I believe this area to be of significant importance to the subject matter of biological control and was somewhat disappointed in the small part relegated to it in this volume. Certainly the subject deserves mention in the title of the publication through the simple addition of the word weeds.
4) There are 17 articles in "Host Plant Resistance for Control of Plant Pathogens and Insects", which is the largest of the five parts. Plant resistance has long been included in the terminology of biological control such as Sweetman, 1958; DeBach and Schlinger, 1964; Hufnacker, 1971; and DeBach, 1974. It is hoped that this new addition to biological control literature will be examined by students, teachers, and workers in the field of control.---JACK R. COULSON, Chief, Beneficial Insect Introduction Laboratory, USDA, ARS, Beltsville, Md.

Biological Control by Natural Enemies


Ten years ago a book entitled Biological Control and Weeds was published under the editorship of R. I. Bean and has since served as the font of biological control. It has been paraphrased and permuted form the contents of this book appeared in numerous papers and books. When I saw this other book on biological control had rolled off the press, my reaction was "and what else is new." Nonetheless, as a book authored by one of the world's leading authorities, I felt obliged to purchase a copy. A few days after my copy arrived, I placed my nameplate on the back of the front cover and glanced at the table of contents. I was brought up short by the title of the first chapter--"Fostering pests through misuse of chemicals." A fascinating title and biological control was the chapter's contents. It contains a series of "cookies" for precipitating insect outbreaks, backed up by experimental evidence that the recipes work. In eliminating the natural enemy component of an agroecosystem will unleash the full reproductive potential of the pests you thought you had a problem--brace yourself.

But time moves on. Few, except the most intruder, will dispute De Bach's views regarding the use of pesticides as a backlash. Through regulatory action and application of pest management, substantial progress has been made toward more prudent use of insecticides. It does take pains to point out that he is not opposed to the use of insecticides--only their misuse. But it is clear that they can be used correctly.

As the title of the book indicates, it concerns the use of natural enemies for pest control. There are 323 pages packed with information on the subject, with a list of 101 references. The author also takes the time to detail the history of biological control, the definition, and the practical aspects. The book is divided into five parts: an introduction, population dynamics, and practical problems in sampling, analysis, and management. The tone of the volume is set in this section, with biological control placed as an integral part of pest management systems.

Parasites and Predators of Arthropods includes 12 articles covering various subjects in three areas: introduction, augmentation, and conservation of natural enemies. There are also articles on identification and classification in pest management, use of economic thresholds and scouting as bases for using natural enemies in integrated control, and a brief chapter on selective use of insecticides. The articles dealing with introduction of beneficial organisms were of special interest to me. They included topics on selection of target pests and the choice of biological control agents, foreign exploration, quarantine procedures, and methodology and problems associated with rearing, release, establishment, and ultimate field evaluation of the introduced insects.

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Host Plant Resistance for Control of Plant Pathogens and Insects is the largest of the five parts. Plant resistance has long been included in the terminology of biological control such as Sweetman, 1958; DeBach and Schlinger, 1964; Hufnacker, 1971; and DeBach, 1974. It is hoped that this new addition to biological control literature will be examined by students, teachers, and workers in the field of control.---JACK R. COULSON, Chief, Beneficial Insect Introduction Laboratory, USDA, ARS, Beltsville, Md.