Book Reviews


The purpose of the Fifth Easter School was to bring together researchers in various fields for discussion of problems relating to the nutrition and growth of legumes. Attendance by agronomists, physiologists, bacteriologists, botanists, biochemists, horticulturists, and geneticists indicated the wide range of interests in the school. The Proceedings of this school, a book of 359 pages and 25 chapters, deals with a wide range of experimental data presented by 53 plant and soil scientists on nutrition of legumes in relation to growth, survival, and nitrogen fixation. For convenience the editor has divided the subject matter into six parts: the plant component, the rhizobial component, the symbiotic system, biochemical aspects, field aspects, and demonstrations. In the last part a number of demonstrations are described that relate to various phases of nutrition and growth of legumes. These represent the results of recent experiments in various parts of the world that deal with the effects of soil pH and supplies of both major and micronutrient elements on growth and development of the plant as a whole and initiation and growth of nodules. One chapter deals with the harmful effects of aluminum on growth in both solution and soil cultures, a second with the effects of pH, calcium and light intensity on the toxicities of aluminum, and a third on the interaction of aluminum and phosphorus.

A number of chapters is devoted to subjects that are not directly or mainly concerned with plant nutrition. They include botanical and microbiological aspects as indicated by the following: classification of legumes, classification of Rhizobia, physiology of nodulation, survival of root nodules bacteria, legume-rhizobia symbiosis, some factors affecting nodulation in the tropics, and symbiotic nitrogen fixation by nonlegumes and recent Belgian studies on symbiosis.

At the end of several chapters a record is given of the discussion that followed the presentation. The book is easy reading, informative and presents a wide range of interesting and pertinent data.—O. J. Atloe. University of Wisconsin.


The nineteen years which have elapsed since the third edition of this book was published have seen great strides taken by the pest control industry in developing a host of new organic chemicals for all aspects of crop protection. During this period Dr. Martin has been in a singularly good position to evaluate the progress that has been made in the field. As in the previous editions the author has provided, to the extent possible, a background and framework of "Scientific Principles" upon which to weave the information about the various methods of pest control. There is a brief discussion of resistance in plants to pathogens and to insects, of the influence of environment (in the broadest sense) on host development, and of the current status of biological control of plant pests. The final chapter deals with "The treatment of centres and vectors of infection". The major portion of the book, however, is devoted to the various groups of pesticidal chemicals themselves with the object of presenting to the biologist a survey of the physico-chemical factors involved in the use of the various types of chemical crop protectants as insecticides, fungicides, herbicides, fumigants and as seed and soil treatments.

The consideration of each type of chemical includes a discussion of the interaction between the chemical and the pest and between the chemical and the host plant. The author has attempted to bring together from widely scattered sources and to evaluate the fundamental information concerning the physico-chemical factors relating to the use of crop protection chemicals that are important now or that have been important in the past. In doing the omission of certain specific materials is virtually inevitable, but appears to be at a minimum in this book. The relatively brief coverage of weed killers seems out of proportion to the current importance of and interest in herbicides.

The information is presented in a manner that will be informative to anyone concerned with the protection of crops whether they are trained in biology or in the physical sciences. For this reason, and despite the rather high cost, the book will be welcomed by those who need an authoritative treatise covering the very broad field of crop protection.—J. E. Mitchell, University of Wisconsin.

Agronomic Affairs

POSITIONS WANTED

Plant Breeder, Ph.D., desires position with university or industry. Has 13 years research experience, working with several field and forage crops, and 8 years administrative experience. Has several years experience in seed production and public relations work. Enjoys working with people and likes teaching. Age 36, married, 3 children. Available on reasonable notice to present employer. Write AJ 9–1.

Agronomist-Statistician, Ph.D., foreign and U.S. educated, specialized in tropical crops, soil management, experimental design, quality control and correlation analysis. Experience as research agronomist on tropical plantations; in field, greenhouse, and laboratory research; statistical research; and administration. Desires challenging and responsible position in research and administration in U.S. or abroad. American citizen, speaks German, French, Spanish, English. Age 35, married, 4 children. Available on one month’s notice. Write AJ 9–2.


POSITION AVAILABLE

Soils Chemist and/or Plant Physiologist, MS or Ph.D., for Research Department of national wholesale seed firm with headquarters in Midwest. Major assignments in plant-soil relationships in laboratory and field. Salary negotiable. Include summary of major academic accomplishments in initial application. Write AJ 9–4.