BOOK REVIEWS

Diagnostics of the Requirement of Plants for Fertilizer

This book is in Russian and is basically a compilation of research reports given at a conference on plant diagnostics in the U.S.S.R. There are three main subdivisions: (i) general and methodological problems (13 chapters); (ii) diagnostics of the nutrition of perennials (35 chapters); and (iii) diagnostics of the nutrition of field crops (21 chapters). The large number of chapters on highly specialized topics do not blend easily into a book of general interest. Over one-half of the book is concerned with horticultural crops, with emphasis on apples and grapes. Agronomic crops covered are mainly small grains, cotton, and flax. Both macro- and micronutrient requirements of plants are discussed. These requirements were studied over a wide range of soil and climatic conditions in the U.S.S.R. There are no color illustrations of nutrient deficiency symptoms of plants. Literature citations consist of 110 Soviet and 35 non-Soviet publications. The book was intended for use by scientific workers, agronomists, geneticists, teachers, and agriculturalists in the Soviet Union. In the USA, it would be of interest primarily to specialists concerned with the "state of the art" of plant diagnostics in the U.S.S.R.—J. O. LEGG, Research Soil Scientist, US Soils Laboratory, Soil & Water Conservation Research Division, ARS, USDA, Beltsville, Maryland.

Practical Turfgrass Management

In this the second volume of two comprehensive books written by Professor Madison on the subject of turf, the author devotes the first half to a discussion of turfgrass varieties, their seed and sod selection, planting, mowing and other related management practices (such as, aerifying, renovating, and overseeding). In the second half of this volume, he deals with the important subject of plant protection, with chapters on pesticides, disease and weed control in turfgrass.

While one would be hard put to think of a better topic organization for his two books than that chosen by Dr. Madison, it is unfortunate that he has felt compelled to divide his writings. This is especially true for a writer whose style emphasizes the interrelationships between principle and practice, as well as those which exist among the various cultural practices themselves. There can be no doubt in this ecological approach that if the reader is to achieve the most from each book, he must have access to the other. For example, while the author emphasizes the point that fertilizer is the most important or number one management tool, only six references to it (some less than a paragraph in length) are cited in the subject index of Vol. 2, whereas an entire chapter in Vol. 1 is devoted to fertilizers and plant nutrition.

The book contains a glossary and an appendix which cover such important topics to the practical turfgrass manager as how to calibrate sprayers and spreaders, directions for measuring the area of an irregular green, instructions for testing the water hardness, and many other subjects. The book is the successor to the previous book and includes some new topics. The book deals with the role of climate, especially the microclimate, and physiology of turfgrass. The next section deals with the importance of soils, plant nutrition and fertility of the turf culture. The last four chapters in the book are devoted to a discussion of the soil-plant-water factors in irrigation design, drainage, and salinity.

While the emphasis in this volume is placed on plant patholo- gies: I, Introduction; II, Population Dynamics of Pathogens in Soil; III, Genetical Aspects of Pathogenic and Saprophytic Behavior in Root-Infecting Fungi; IV, Effects of Soil Moisture and Aeration on Fungal Activity with Root Diseases; V, Effect of Root Exudates on Root Infection; VI, Root-Forest Crops; VII, Root Diseases of Tropical Plants; VIII, Crop Growth Responses to Soil Fungi. Each general topic is divided into several related parts and gives an excellent treatment of the subject. The book is the successor to Ecology of Soil-Borne Pathogens: Prelude to Biological Control, and includes some new topics. The book deals with the role of climate, especially the microclimate, and physiology of turfgrass. The next section deals with the importance of soils, plant nutrition and fertility of the turf culture. The last four chapters in the book are devoted to a discussion of the soil-plant-water factors in irrigation design, drainage, and salinity.

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