

New Books

Advances in Agronomy

Edited by A. G. NORMAN. viii + 431 pages. Academic Press Inc., 125 East 23rd St., New York 10, N. Y., 1955. \$8.50. Reviewed by M. S. ANDERSON, Agricultural Research Service, USDA, Beltsville.

VOLUME VII of the Advances in Agronomy Series consists of 10 chapters by different authors. Each author is a recognized specialist in his field. This volume is strongly slanted toward the subject of **nitrogen**. The enigma of soil nitrogen balance sheets is now much less an enigma than was the case a few years ago. Although the main mechanisms of nitrogen loss are probably known, quantitative data relating to each type of loss are certainly not adequately available.

About 100 pages are devoted to the topic "Mineralization of Organic Nitrogen in Soil." This chapter is essentially a monograph on the subject with a bibliography of more than 600 references. Methods of determining extent of mineralization are reviewed. These fall into three groups: field trials, pot experiments, and different procedures of incubation of soil samples under laboratory conditions.

Several chapters stemmed from presentations at the Soil Microbiology Conference of June 1954. These have to do in part with the biochemistry of the rhizosphere, which is as yet imperfectly understood.

Microbiological activities in soils are discussed by several authors from different standpoints. These organisms are shown to influence the physical properties of soil by aiding in the process of water-stable aggregate formation. Such action may equal in effectiveness the application of so-called synthetic soil conditioners at conventional rates.

A splendid chapter entitled "Improvement of the Sugar Beet in the United States" emphasizes the great importance of plant breeding in connection with resistance to disease.

The review of weed control cites accomplishments as well as mentioning unsolved problems confronting those engaged in such research.

A Swedish author, Dr. Aberg, shows that during the past half century marked changes have taken place in the areas of certain crops grown in Sweden. Wheat acreages have increased about five-fold while the areas devoted to rye and oats have markedly decreased. This volume maintains the high standard set in the earlier issues.

LITERATURE AVAILABLE

Antibiotic Feed Supplements.

Four-page folder in color gives chart comparing effectiveness of penicillin, bacitracin, and the tetracyclines in animal feeds for the control of various bacteria. Address: Dept. A&F, COMMERCIAL SOLVENTS CORP., 260 Madison Ave., New York 16, N. Y.

Cyclohexanone. Technical bulletin, 32 pages, gives physical and chemical properties of cyclohexanone, which is useful as solvent and intermediate for insecticides, fungicides, and herbicides. Address: Dept. A&F, NATIONAL ANILINE DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y.

Essential Oils. Pocket-size catalog of essential oils, aromatic chemicals, and certified colors. Address: Dept. A&F, DODGE & OLCOTT, INC., 180 Varick St., New York, N. Y.

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used in any given mixture. Includes information on: detailed analyses of nitrogen solutions; the number of pounds of each solution that must be used to add specified units of nitrogen; and the equivalent acidity or basicity of all commonly used nitrogen carriers. Address: Dept. A&F, NITROGEN DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y.

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Vermiculite. Summary of the chemical and physical properties of vermiculite, absorption capacity for toxicants, and a table of granular formulations. Dept. A&F, VERMICULITE INSTITUTE, 208 S. LaSalle St., Chicago 4, Ill.



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