BOOK REVIEWS, continued

followed by a soil map and description prepared by Dr. H. E. Streemme of Kiel. The map is at a scale of 1:10,000,000. Also included are soil maps showing the suitability of soil types for various cereal crops.

The largest section of the book is made up of maps and charts showing the following: (i) Area and average yield per hectare, (ii) cereal varieties, (iii) climate diagrams, (iv) phytological data, and (v) bibliography.

The final sections of the book cover the description of varieties of various cereals and their geographic distribution. The editor and the publisher are to be congratulated for their efforts in this large project. Volume I covered agro-climatic atlas of Europe, Volumes III and IV will cover cereal diseases and pests and the ecological pattern of cereals.—RCD.

Rice Fertilization


This publication reports on a 6-year study of the uptake of nitrogen and phosphorus fertilizer by lowland rice using isotope techniques. Carried out in rice-growing countries throughout the world from 1962–1968, the study was part of a coordinated research contract program organized by IAEA and the FAO. Those participating in the program met each year, compared results from the previous year, and planned the experimental program for the next growing season.

The book includes a brief summary of the results of the study on the efficiency of phosphorus and nitrogen fertilizer. This is followed by a discussion of the factors affecting the uptake of phosphorus and nitrogen from fertilizers. This covers placement, time of application, nature of the nutrient source, and the use of nitrification inhibitors. The book also includes three appendices covering description of field experiments, analytical procedures, and sources of literature on the program. The appendix on description of field experiments is very detailed and covers 73 pages. A list of the participants and the secretariat are included.

This book will be of value not only to those concerned with rice culture, but also to those interested in the use of radioisotopes and in coordinating a research project on a world-wide scale.—RCD.

Elena Farm, U.S.A.—An Agricultural Success Story


This is an interesting, but somewhat rambling and philosophical, account of how the author turned a run-down, “worn out” Ohio farm into a successful, profitable one. The author, vice president and director of research for the Growers Chemical Corp., Milan, Ohio, purchased the farm not only to try out his theories on plant nutrition and soil management but to serve as an experimental farm for his company. The main theme of the book is the importance of available calcium in obtaining high crop yields, as well as in the value of calcium in human and animal nutrition. The author states “The thing that determines high yields of crops is available calcium and the degree of saturation of the soil colloids. Above 85% saturation, the amount of dry fertilizer has little effect on yields”.

The soil on the Olena, Ohio, farm is classed as a Bennington Marengo heavy silt loam with a heavy clay subsoil. The program followed by the author included the application of 23 tons of finely ground limestone per acre over a 5–6 year period, plowing the limestone under, subsiding to a depth of 22 inches at 3-foot intervals, minimum tillage (plow-plant for corn), and the use of a minimum amount of fertilizer nutrients using a liquid starter and foliar sprays (no dry fertilizer).

The author states that the soil acidity test is not enough in determining the need for lime. The level of available calcium must be determined. On his soil he found that the original calcium level was about 400 pounds per acre and that a level of 3,600 to 4,800 pounds per acre was needed for maximum yields. His account showed that corn yields in a 5–6 year period increased from 11 bushels per acre to 147 bushels; wheat from 7 to 53 bushels; and soybeans from 5 to 37 bushels. Only 45 pounds per acre of a liquid 10–20–10 were applied per year for the corn crop.—RCD.

Corporate Farming and the Family Farm


This is the proceedings of the 1969 Institute which has been an annual event since 1937 and is sponsored by the Greater Des Moines Chamber of Commerce. The 14 papers cover agricultural corporations, rural poverty, farm size and land values, taxes, farm legislation, outside capital, and the forces modernizing farming. The authors include farm magazine editors, university and government economists, farmers, a farm corporation head, a US Congressman, the head of a farmers organization, and a tax expert.

Soil Biology & Biochemistry

*E. W. Russell, Editor-in-Chief. Published quarterly by Pergamon Press Inc., Headington Hill Hall, Oxford OX3 0BQ, England. 1/2 X 9/4 inches. $30 (£12) annual subscription to libraries; $15 to individuals.*

The first issue of volume 1 of this new journal appeared in January 1969. The journal is intended to act as a publication medium for research on soil organisms, their biochemical activities, and their influence on the soil environment and plant growth. It will publish original work from all parts of the world on quantitative, analytical, and experimental aspects of such research. Papers will be published in English, French, or German. Short Communications or Notes concerned with modern experimentation, techniques, equipment, and significant observations will also be published. The typesetting and printing are of good quality. The board of regional editors includes the following from the USA and Canada: J. M. Bremer, F. E. Clark, A. R. McLaren, D. Parkinson, D. Pramer, and G. Stotzky.

Communications in Soil Science and Plant Analysis

*J. B. Jones, Jr., Executive Editor. Published bimonthly by Marcel Dekker, Inc., 95 Madison Avenue, New York, New York 10016. 7 X 10 inches. Annual subscription $20; special for individuals Vol. 1, $8.50.*

The first issue of this new journal appeared in January 1970. The aim of the journal is to provide a rapid means of publication on important developments in soil science and crop production with emphasis on the mineral content of soils and plants and plant nutrition. Subjects included are soil chemistry, mineralogy, fertility and testing soils, soil-crop nutrition, plant analysis, mineral metabolism and plant physiology, methods of soil and plant analysis, and liming and fertilization of soils. Papers in English, French, and German from all parts of the world, including subtropical and tropical areas, will be considered for publication.

The style and format of the journal are designed for rapid publication, using direct photo reproduction of the original double-spaced typewritten manuscripts, which cannot exceed 1,500 words. The 17 member editorial board is composed of plant and soil scientists from several countries.