BOOK REVIEWS

SULPHURIC ACID AND THE MANUFACTURE OF PHOSPHATIC FERTILIZERS


This report was compiled by a “working party” appointed by the OEEC sub-committee for scientific research and technical development to study methods for saving sulphuric acid in the production of phosphate fertilizers. It outlines the principal methods used in member countries for the manufacture of alternative phosphate fertilizers, and indicates what raw materials are required, but does not describe the chemical reactions at each stage of the processes. The processes outlined are those used by various European firms. The book points out that the report does not assess the relative economic values of the various processes because of differences in the economic structure between countries as well as differences in general agricultural conditions.

Among the conclusions reached are the following: extensive use of non-sulphuric acid processes depends upon the capacity for nitrogen fixation in each country; reduction of phosphate rock by the electric furnace process is economical only where cheap electric power is available; introduction of “complex” fertilizers (two or three plant nutrients obtained by chemical reaction between the raw materials) may depend upon official tests for P2O5 solubility; more data are needed for crop response under the same conditions with fertilizers, “compound” (obtained by a mixture of fertilizers prepared separately) and “complex.”

The report recommends that a competent OEEC committee assemble all existing works on the agronomic tests for the use of “complex” fertilizers. A chapter each is devoted to the following: “complex” fertilizers, dicalcium phosphates, ammoniated superphosphates, thermally treated ground rock phosphate. There is also a listing of new methods for producing phosphate fertilizers in the U. S.

ENGINEERING FOR AGRICULTURAL DRAINAGE


The prominent authors of Moisture Requirements in Agriculture, Soil Erosion and Its Control and Land Reclamation respectively, have combined to produce a book devoted primarily to the subject of the design, construction and maintenance of open ditches, and underdrains. The authors include a discussion of soil-water relations.