fruit and a seed? Between simple, aggregate and multiple fruits? 5. Give examples of accessory fruits. What tissue comprises the edible part of each? Chapter VII has the following questions: 2. What are the distinguishing features of true bulbs? 3. In what way does a true bulb resemble a dormant bud in structure? 14. How do the sweet potato and the Irish potato differ in structure?

Those of us familiar with duplications in agricultural college courses can readily see from the nature of the questions cited that students will have had the same questions asked in general botany and elementary horticultural courses before they get to a special course on propagation. Though the criticism is offered, the reviewer knows no solution. Books on "Floriculture," "Pomology," "Vegetable Gardening," etc., usually carry a chapter or more on propagation of plants involved in the particular field. Whether or not such conflicts can be ironed out the reviewer is unable to say.

This book has a large store of compiled information, and the authors have made an effort to bring it up to date.

P. W. ZIMMERMAN

BOYCE THOMPSON INSTITUTE

INDIAN CORN

The Origin of Indian Corn and Its Relatives. By P. C. MANGELSDORF and R. G. REEVES. 315 pp. 93 figs. 40 tables. Texas Agric. Expt. Sta. Bull. 574. 1939.

LIVING in an obligate relationship with man and having covered its evolutionary tracks most successfully, the Indian corn plant presents an unusually interesting problem of origin and relationships. It is undoubtedly closely related to the two American grasses, *Tripsacum* and teosinte, but the exact relationship is obscure, and the picture of the wild ancestral form is wholly theoretical.

One theory makes teosinte the ancestor and assigns to the Indian the role of plant breeder, another has corn, *Tripsacum,* and teosinte develop from a common ancestor; and a third proposes a hybrid ancestry between teosinte and some other grass of hypothetical nature. Each of these has some shortcomings, but none of them can be entirely disproved.

By an ingenious technique, Mangelsdorf and Reeves have hybridized corn with *Tripsacum,* and the nature of the hybrid, supplemented by other data, suggests to them that teosinte originated, probably very recently, from a natural cross between these genera. The technical analysis, full details of which are given in an excellent manner, shows a close relationship between the characteristics of the various segregates and the presence of certain *Tripsacum* chromosomes, and teosinte is pictured as essentially corn to which certain genes of *Tripsacum* have been transferred.

This removal of teosinte from consideration in any ancestral relationship extends the possibilities as to the place in which corn originated, and attention is again turned to South America, where the highly developed agriculture of the Incas and the reports of early explorers are thought to afford promising evidence.

This addition to our collection of theories about these plants makes full use of important new data but does not necessarily preclude any of the older theories. It hardly fulfils the implication of the title of the book, for it adds nothing to our knowledge of the wild corn plant except to cast some doubt upon the claims of teosinte. To assume, as this theory does, that pod corn is the most promising lead back toward the wild ancestor leaves us exactly where we have been for a long time. Pod corn has primitive characters, but it is difficult to know whether they represent original or derived conditions, and, at best, it is not sufficiently different from the naked-fruited varieties to answer the requirements of the self-supporting wild plant.

PAUL WEATHERWAX

INDIANA UNIVERSITY

REPORTS

A STATEMENT TO THE BOARD OF TRUSTEES OF THE MUSEUM OF SCIENCE AND INDUSTRY, CHICAGO

FACED with a demand by the newly elected president of the Museum of Science and Industry for my resignation, a demand which he termed "irrevocable," I prepared the following statement dated August 22 for the Trustees for their meeting of August 26, 1940. Letters in regard to my appointment to the directorship are omitted and several minor alterations in the text have been made. Deletions are in general indicated by leaders, additions by enclosure in brackets.

Since 1 May 1937 I have served as director of the Museum of Science and Industry with singleness of purpose toward its welfare. I have held steadfastly to the aim that its exhibits should show primarily the dependence of our modern civilization on science and on its application in industry. Not only that this understanding be driven home, but that there should be clear presentation of the methods by which science approaches its problems, the attainments, the methods of application, the way of progress, what problems are pressing for solution. Moreover that there should be created an atmosphere of vivid alertness and inspiration.

This purpose was held in view as the interior construc-