
Methods in Plant Physiology

This book will prove useful to all botanists engaged in teaching laboratory plant physiology. It is the most comprehensive volume which has yet appeared on the subject in the English language. The first part, entitled "Laboratory Exercises," is essentially a laboratory course in plant physiology. The order of arrangement of the topics does not appear to be a very logical one, but this is a minor matter in a laboratory guide. One hundred and eighty-two experiments are described covering all phases of the subject. The experiments are for the most part well chosen although the reviewer is puzzled by the complete omission of any exercises dealing with modern concepts of the osmotic quantities of plant cells. The experiments are classified according to their difficulty into three groups—elementary, intermediate, and advanced, a useful pedagogical device. There are numerous citations to text books and original literature.

The second part of the book, entitled "General Methods," is essentially a brief discussion of standard chemical and physical methods used in plant physiological research. Chemical methods are more strongly emphasized than physical methods. More extensive bibliographies would, in the opinion of the reviewer, enhance the value of this part of the book. The last chapter in this section, by Snedecor, deals with the statistical methods used in biology. The writer has been informed by competent statisticians that this is an excellent introduction to the principles of this subject.

The appendix consists of thirty-three tables covering most of the physical and chemical constants of frequent use in plant physiological work.—B. S. MEYER.

Methods in Plant Physiology, by W. E. Loomis and C. A. Shull, (with a chapter on Statistical Methods by G. W. Snedecor). New York, McGraw-Hill Book Co. 1937.