WHAT IT TAKES TO TEACH THE PLANT SCIENCES

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 "NAIVE approach to a problem", it is said "often insures its solution". At least, such an approach often yields interesting results. In trying to get some light on the usefulness of "rating scales" as an aid in evaluating teaching, what could be more natural—naive, if you like—than to get "ratings" of some of the teachers recognized as great by their mature students? With this—and perhaps other ends—in view, a rating scale for teachers was mailed to some 1,700 professional workers in the plant sciences, members of the Botanical Society of America or the American Society of Agronomy. They were requested to rate, as objectively as possible, the teachers who had most influenced them in the field of plant science, or seemed the most influential in their undergraduate or graduate careers.

The response was generous. It included over 1,100 ratings of more than 400 individual teachers, together with a small avalanche of letters. Incidentally, this indicates a very general interest in teaching and its problems.

The composition of the Botanical Society of America was analyzed by Tippo in 1940. According to him, approximately one-half of the total "interests" of the society lie in the morphological field in which he included systematic botany, cytology, etc., a little less than a fourth in physiology, and less than 10% each in pathology, ecology, and genetics. It thus overwhelmingly represents pure science, if there is any such thing. The American Society of Agronomy, on the other hand, must represent in large measure students of plant science who are conscious of its important practical possibilities.

The rating scale was chosen largely on the basis of availability. It is in a form now familiar, giving opportunity to evaluate, on a scale of 1 to 100, the following 10 characteristics arranged in the order named: Interest in subject, sympathetic attitude toward students, fairness in grading, liberal and progressive attitude, presentation of subject matter, sense of proportion and humor, self-reliance and confidence, personal peculiarities, personal appearance, stimulating intellectual curiosity. In interpreting the results, the writer has had the assistance of several people, particularly Dr. I. A. Berg and Dr. E. L. Welker of the faculty of the University of Illinois.

The very wide distribution of the answers is significant and was surprising. The highest number of returns for any one teacher was 22. This seems to indicate that the active botanists of this generation in the United States have derived their inspiration from widely scattered sources. No one man—or group of men—can have dominated American botanical teaching to the extent that may appear on the surface.

1Contribution from the Department of Botany, University of Illinois, Urbana, Ill. Received for publication October 7, 1943.
2Professor.
3TIPPO, OSWALD. An analysis of the major interests of the members of the Botanical Society of America. Science, 94:326-327. 1940.