SYMPOSIUM—PLANT PHYSIOLOGY AND AGRONOMIC SCIENCE

1. WHY AGRONOMY NEEDS RESEARCH IN PLANT PHYSIOLOGY:

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In beginning a discussion of this theme, the terms used are defined so that the speaker and hearer may stand on common ground. Then, the principles and practices underlying the conclusions reached are stated. Finally, these conclusions and problems are illustrated by material drawn from agronomic and physiologic experience and accomplishment.

DEFINITION

Agronomy is the art and science of field crop culture. More specifically it is the art and underlying science of so handling the crop plant and the soil substrate as to produce the highest possible quantity and quality of the desired crop product, from each unit of plant and soil and water and light, with the minimum of immediate or future expense in labor and soil fertility.

Research is the search for truth. It is the endeavor to interpret phenomena, to solve the riddle of the universe and all that is therein. It is the effort to discover causes for observed effects, to find the means of producing desired effects through providing known conditions. Research presupposes training, equipment, and judgment. It is organized, discriminating, persistent.

The plant is an aggregation of living cells developed from a food-carrying seed, shoot, or root, and deriving its substance first from the

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