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Moving Up the Yield Curve: Advances and Obstacles

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Foreword

To feed the rapidly increasing number of world peoples, it is imperative that crop yields continue to increase. Presently, there are some indications that crop yields, after several decades of steady increase, are starting to plateau. Through research and education, we must find ways to maintain and increase crop production so that we can maintain and improve world diets.

In this report, the discussions concern how we can continue to move up the yield-time curve. This publication results from a symposium held at the American Society of Agronomy and Soil Science Society of America Annual Meetings in 1978. At the symposium outstanding scientists discussed the contributions and future directions of research in key areas of crop production, namely: climate and soil water, biochemistry and plant physiology, pest management, plant nutrient needs, energy, and governmental regulation. The material contained in this publication will be valuable to researchers, educators, students, and administrators in charting future actions for increasing crop yields.

On behalf of the societies, we express appreciation and thanks to the authors for preparation of the technical material; to the organizing and editorial committee members for conceptualizing and guiding the development of this publication; and to our Society Headquarters staff for technical editing and production.

R. L. Mitchell, President
American Society of Agronomy

W. E. Larson, President
Soil Science Society of America

Preface

The special publication "Moving up the Yield Curve" is a collection of papers presented at a symposium of the same title at the 1978 American Society of Agronomy meetings in Chicago, Illinois. Organized by Drs. Lloyd Hossner, Texas A&M University, and Robert Hoeft, University of Illinois, chairmen of Divisions S-4 (Soil Fertility and Plant Nutrition) and S-8 (Fertilizer Technology), the symposium directed attention to several areas affecting increased plant yields. Specifically, papers in this publication address energy relationships in crop production, nutrient needs of plants, biochemical and physiological considerations, climate and water needs, and genetics as well as impacts of governmental regulations on agricultural production.

Recognizing the need to increase production per unit of land to produce more food and fiber for the world and to maintain or improve the economic position of the farmer, authors have discussed in detail ways in which research should be directed to maximize crop production. Hopefully, these ideas will stimulate further research and extension of existing knowledge. Extension of research information to the farmer is as much a key in improved yields as the basic information itself. Without the implementation of research findings, it will be impossible for farmers to continue the struggle against rising costs. Their yields will stagnate and returns will fall far below costs.

We encourage your participation in this continuing discussion and look forward to following symposia on allied topics.

L. S. Murphy
L. F. Welch
E. C. Doll
Editors

L. Hossner
R. Hoeft
Organizers