Crop and Livestock Technologies:
RCA III Symposium

Burton C. English, Richard L. White, and Liu-Hsuing Chuang, editors.
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Preface

In May 1995, 100 national specialists, scientists, and researchers assembled in an Arlington, Va., hotel conference room to deliberate on the potential impacts of technology on agriculture during the next fifty years. These experts wrestled with questions concerning yield potentials for major crops and livestock categories, what limiting factors might keep agriculture from reaching its yield potential, and what technologies might overcome these limiting factors. A follow-up workshop was conducted with thirty experts in November 1995 to reconcile the diverse findings of the crop Work Groups into common estimates for the selected crop and livestock categories. The completed document then was subjected to expert review by ninety peers who did not participate in either of the earlier sessions.

The assembled experts reached many separate conclusions but, perhaps, the more important collective findings include the increasing importance of a systems approach in assessing technological impacts and in agricultural research, in general. U.S. society has grown beyond the need for merely single-disciplinary research of the challenges facing agriculture, many of those attending the conference and workshop held. The fact that those involved in developing the technological coefficients agree with this conclusion is resident in the subsequent workshop conducted in late 1995.

Another important conclusion reached during this effort is that tremendous technological potential exists for agriculture based on three levels of possibilities. Merely expanding the adoption by agricultural producers of existing but relatively new technologies is expected to significantly expand average U.S. crop and livestock yields.

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Also available is a press release issued by USDA's Natural Resources Conservation Service, the federal agency which provided much of the project's funding:

Higher Yields Through Better Technology--
New RCA Book Looks Ahead to the Next Half Century

What's ahead for crop and livestock technologies during the next 50 years? More than 100 scientists, researchers, and specialists in crop and livestock technology from universities private institutions and companies, and federal agencies offer their answers to this question in "Crop and Livestock Technologies: RCA III Symposium," recently published by the Iowa State University Press.

Based on projections gathered at the 1995 Resource Conservation Act (RCA) symposium, the book examines how crop and livestock yield potentials could be increased through advancements in agricultural technology. Key technologies include genetic engineering and how altering the genes of livestock could increase output and reduce demand on resources, breeding crops for productivity and stress tolerance, making agricultural technologies more efficient, and enhancing technology transfer through better education and information delivery.

The report states that these technologies, if combined with others, could double the yields of corn, soybeans, wheat, cotton, rice, and sunflowers. It also says that yields of milk, beef, pork, and poultry per unit of feed could increase 80, 60, 50, and 30 percent, respectively in the coming 50 years.

Editing the book were Burton C. English, professor with the Department of Agricultural Economics and Rural Sociology at the University of Tennessee; Richard L. White, information specialist with the University of Tennessee's Agricultural Policy Analysis Center; and Liu-Hsiung Chuang, senior program analyst with the Resource Economics and Social Science Division of USDA's Natural Resources Conservation Service in Washington, D.C.

The NRCS sponsored the symposium. Financial support for the book came from the USDA's Agricultural Research Service, Cooperative State Research, Education, and Extension Service, Economic Research Service, and NRCS. To order a copy of the book, call the Iowa State University Press on 1-800-862-6657, or through the Internet at http://www.isupress.edu.