

Appendix C

Commissioned Papers and Authors

This report and the three reports that complete this series were possible in part because of the valuable information and analyses contained in the background papers commissioned by OTA. These papers were reviewed and critiqued by the advisory groups, workgroups, and outside reviewers. The papers are available through the National Technical Information Service.¹

Emerging Animal Technology

Genetic Engineering in Animal Agriculture

Howard Bachrach
Southhold, NY

Bovine Somatotropin: Review of an Emerging Animal Technology

Dale E. Bauman
Cornell University

An Emerging Agricultural Technology: Porcine Somatotropin

Terry D. Etherton
Pennsylvania State University

An Emerging Technology: Poultry Somatotropin

Colin Scanes
Cook College, Rutgers University

Effects of Beta-Agonists on the Food Animal Industry

Edward Veenhuizen and D.B. Anderson
Eli Lilly and Co.

Reproduction and Embryo Transfer

William Hansel
Louisiana State University

Transgenic Poultry

John Kopchick
Ohio University

Transgenic Fish

Dennis A. Powers (Stanford University) and
Thomas T. Chen (University of Maryland)

Transgenic Swine

Vernon Pursel
U.S. Department of Agriculture

Transgenic Ruminants

Caird Rexroad
U.S. Department of Agriculture

Animal Health

Bennie I. Osburn
University of California

Antibiotic Growth Promotants

Gary L. Cromwell and Karl A. Dawson
University of Kentucky

Steroid-Like Growth Promotants

Rodney Preston
Texas Tech University

Environment and Animal Behavior

Stanley E. Curtis
University of Illinois

Agricultural Animal Welfare Issues

Andrew Rowan
Tufts University

Emerging Plant Technology

Genetic Engineering in Crop Agriculture

Robert Fraley
Monsanto Co.

Genetic Technology for Resistance to Insect Pests

Michael Adang and Lois Miller
University of Georgia

Genetic Modification for Weed Control

Ganesh Kishore
Monsanto Co.

Genetic Modification for Disease Resistance

Sue Loech-Fries
Purdue University

¹ These commissioned papers will be available in the fall of 1992 from the National Technical Information service, Springfield, VA 22161, telephone (703) 4874650.

Volume 2: A New Technological Era for American Agriculture—OTA Commissioned Background Papers:

Part A: Emerging Animal Technology

Part B: Emerging Plant Technology

Part C: Emerging Computer Technology

Part D: Agricultural Research and Technology Transfer

Part E: Food Safety and Quality

Part F: Economic and Policy Analysis

Biocontrol for Weeds

Raghavan Charudattan (University of Florida) and
Lloyd A. Andreas (U.S. Department of Agriculture)

Pathogens for Insect Control

James Fuxa
Louisiana State University

*Use of Parasites and Predators to Control Insect and
Mite Pests in Agriculture*

Marjorie Hoy
University of California

Microbial Biocontrol of Plant Diseases

Christen Upper and Susan S. Hirano
University of Wisconsin

Temperature and Water Stress

John Burke
U.S. Department of Agriculture

Plant Disease Management

J.A. Browning
Texas A&M University

Insect and Mite Management

George Kennedy
North Carolina State University

*Evolution of Resistance by Weeds and Pests to Herbicides
and Pesticides*

Fred Gould
North Carolina State University

*Exchange of Genetic Material Between Genetically
Engineered Crops and Close Relatives*

Carol Hoffman
University of Georgia

Emerging Computer Technology

Knowledge-Based Systems for Crops

Nicholas D. Stone
Virginia Polytechnic Institute and State University

Use of Expert Systems in Animal Agriculture

Michael Tomaszewski
Texas A&M University

Expert Systems for Business Decision Making

Steven T. Sonka
University of Illinois

*Networks, Telecommunications, and Multimedia
Information Bases for Agricultural Decision Support*

Jerry R. Lambert
Clemson University

*Emerging Agricultural Technologies in Human-
Computer Interactions*

Lawrence R. Jones
Cornell University

Sensor Technology

Gerald W. Isaacs
University of Florida

Robotics and Intelligent Machines

Gaines E. Miles
Purdue University

*Agricultural Research and Technology
Transfer*

*The Changing Budget Environment for Agricultural
Research and Technology Transfer*

Susan Offutt
Office of Management and Budget

The Changing Technology Environment

William Marshall
Pioneer Hi-Bred International, Inc.

Agricultural Research Issues for the 1990s

Terry B. Kinney
York, SC

Technology Transfer Issues for the 1990s

Jerome Siebert
University of California

*The Competitive Environment for Agricultural Research
and Technology Transfer*

Luther Tweeten
Ohio State University

*Alternative National Agricultural Research and
Technology Transfer Policies*

Ronald Knutson
Texas A&M University

*Privatization of Agricultural Research at Land Grant
Universities*

Edward Schuh
University of Minnesota

Food Safety and Quality

Biotechnology in Food Processing in the 1990s

Susan Harlander
University of Minnesota

*Scientific Information and Methodologies for Assessing
the Safety of Genetically Engineered Foods and Feeds*

Ian Munro (Canadian Centre for Toxicology), Michael
Pariza (University of Wisconsin), and Kent K. Stewart
(Virginia Polytechnic Institute and State University)

*Public Perceptions of Food Safety Risks: Implications for
Emerging Agricultural Technologies*

Eileen vanRavenswaay
Michigan State University

An Analysis of the Pork Grading System: Implications of New Growth Promotants

James Kliebenstein, Marvin Hayenga, Lauren Christian, Kenneth Prusa and Robert Rust (Iowa State University); John Forrest, Allan P. Schinckel, and Max D. Judge (Purdue University)

Assessing Federal Grade Criteria for Fruits and Vegetables

Thomas Sporleder, Carl R. Zulauf, Rebecca Boerger, Mark Bennett, James Hoskins, Eugene Jones, Timothy Rhodus, Kurt Wiese
Ohio State University

Economic and Policy Analysis

Adoption of Bovine Somatotropin: A National and Regional Analysis

J. Thomas McGuckin
New Mexico State University

National and Regional Impacts of Bovine Somatotropin Adoption Under Alternative Dairy Program Policies

Derrell S. Peel
Oklahoma State University

Farm Level Impacts of Bovine Somatotropin Introduction and Adoption Under Alternative Farm Policies

James W. Richardson
Texas A&M University

Farm Level Impacts of Porcine Somatotropin Introduction and Adoption on Representative Grain-Hog Farms in the Midwest

James W. Richardson
Texas A&M University