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UNIVERSITY OF MINNESOTA
INTERNATIONAL AGRICULTURAL PROGRAMS
and INTERNATIONAL SERVICE for NATIONAL
AGRICULTURAL RESEARCH (ISNAR)



**AGRICULTURAL
RESEARCH POLICY
SEMINAR**

April 14-24, 1986

Proceedings for Module I

Edited by:
Fred Hoefer
Carl Pray
Vernon W. Ruttan
Ruben Echeverria
May 1986

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Agricultural Research Policy Seminar

April 14-24, 1986

Proceedings

PREFACE

AGENDA

LIST OF PARTICIPANTS

LIST OF SPEAKERS

MODULE I - Papers submitted

The IARC's: Evidence of Impact on National Research and Extension and on Productivity - R.E. Evenson

Central Problems in the Management of Innovation - Andrew H. Van de Ven

The U.S. Agricultural Research System: The Institutions and the Interests - Keith Huston

Crop Loss Modeling and Research Resource Allocation - Paul S. Teng

The Agricultural Technology Delivery System: A Study of Agriculture and Food-related Technologies - Irwin Feller, L. Kaltreider, P. Madden, D. Moore, L. Sims

Support Structures for Technology Transfer - Francis W. Wolek

White House Perspectives on Future Agricultural Research and Extension - Alvin L. Young

A Survey of U.S. Agricultural Research by Private Industry - Edwin Crosby

The Factor Mix in the U.S. Agriculture Research System - Philip Pardey

Molecular Genetics, Biotechnology and Experiment Station Research - G.H. Heichel

Policy Implications of Biotechnology Research - W. Burt Sundquist

PREFACE

This volume includes the papers presented at the 1986 Agricultural Research Policy Seminar, held at the University of Minnesota on April 14-24. The seminar was sponsored by the University of Minnesota Agricultural Experiment Station, the International Service for National Agricultural Research, and the United Nations Food and Agricultural Organization. In addition, tuition and travel costs for participants were covered by Winrock International, the U.S. Agency for International Development and several state experiment stations and national research agencies.

We have made an effort to make the seminar papers available to speakers and participants as soon after the conference as possible. They have been assembled and reproduced without formal editing.

Similar seminars were held at the University of Minnesota in 1983, 1984 and 1985. We anticipate that an edited volume drawing on papers presented at the 1986 and earlier seminars will be prepared for publication during the coming year.

Vernon W. Ruttan
Carl Pray
Ruben Echeverria
Fred Hoefer

July 1986

AGRICULTURAL RESEARCH POLICY SEMINAR

APRIL 14-24, 1986
UNIVERSITY OF MINNESOTA
INTERNATIONAL SERVICE FOR NATIONAL
AGRICULTURAL RESEARCH (ISNAR)
FOOD AND AGRICULTURE ORGANIZATION (FAO)

TARGET AUDIENCE

Senior level U.S. and developing country public and private sector agricultural research administrator such as the Central Research Laboratory Director, State Experiment Station Director, Chief or Deputy Chief Agricultural Research Officer, National Regional Commodity Research Directors, responsible for directing, managing or planning, agricultural research in their country, state, province, region, or firm.

COURSE OBJECTIVES

The major focus of this course will be to help agricultural research administrators from public institutions in the U.S.A. and developing countries enhance their skills in research policy and administration. The seminar will provide an opportunity for dialogue among agricultural research policy and planning official from developed and developing countries. The seminar will be offered in two modules:

Module I April 14-18
Module II April 18-24

EDUCATIONAL OBJECTIVES

Participants will develop the knowledge and skills to:

1. Analyze, formulate and develop overall agricultural research policy and planning,
2. Identify research priorities at the regional, national and international level,
3. Build political support for public expenditure on research,
4. Define the role of public sector research vis-a-vis private sector research and technology development,
5. Examine alternative sources of funding such as foundations, private corporations, competitive grants from government agencies, and bilateral and multilateral aid donors,
6. Assess the impact of agricultural research,
7. Define the role and functioning of the research administrator.

Conferees will be housed in the Northstar Inn (618 2nd Ave. S., Minneapolis, Minnesota 55404, phone 338-2288). Conference sessions will be held in the North and South Ballrooms of the Northstar Inn unless otherwise indicated.

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AGRICULTURAL RESEARCH POLICY
SEMINAR
Module I
April 14-18, 1986

ISSUES IN AGRICULTURAL RESEARCH POLICY

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Sun., April 13</u>	<u>ARRIVAL DAY AT RESIDENCE FACILITY</u>	
<u>Mon., April 14</u>	<u>INTRODUCTION AND OVERVIEW</u> (North Ballroom)	
8:00a.m.	Registration (North Ballroom)	
9:00a.m.	Welcome and Opening Remarks	Vernon Ruttan, Professor Department of Agricultural and Applied Economics University of Minnesota
9:30	Objectives and Organizations of the Course	Carl Pray, Assistant Professor Dept. of Agricultural Economics Rutgers University
10:00	BREAK	
10:15	Thinking about Agricultural Research and Agricultural Development	Vernon Ruttan, Professor Department of Agricultural and Applied Economics University of Minnesota
12:00	LUNCH	
1:00 p.m.	Investment in Agricultural Supply: A Global Perspective	Robert E. Evenson, Professor Department of Economics Yale University
2:45	BREAK	
3:00	The Sociology and Politics of U.S. Agricultural Research	Larry Busch, Professor Department of Sociology University of Kentucky
5:00-6:00	Reception (North Ballroom)	
7:00	SEMINAR DINNER (South and Central Ballrooms)	
8:00	Managing Innovation	Andy Van de Veen, Director Strategic Management Center School of Management University of Minnesota

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Tues., April 15</u>	<u>RESEARCH PLANNING & TECHNOLOGY ASSESSMENT</u> (South Ballroom)	
7:30 a.m.	BREAKFAST	
8:30	The U.S. Agricultural Research System: The Institutions and the Interests	Keith Huston, Director At Large North Central Agricultural Experiment Station
9:45	BREAK	
10:00	Establishing Priorities in the State Experiment Station System	Neville Clark, Director Agricultural Experiment Station Texas A & M University System
11:45	Travel Agent Appointments*	
12:00	LUNCH	
1:00p.m.	A Technology Assessment Case: The Bovine Growth Hormone	Robert Kalter, Head Dept. of Agricultural Economics Cornell University
2:45	BREAK	
3:00	Crop Loss Modeling and Research Resource Allocation	Paul Teng, Associate Professor Department of Plant Pathology University of Minnesota
6:00	DINNER	

*A travel agent will be available immediately following last morning session.

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Wed April 16</u>	<u>TRANSFERRING AGRICULTURAL RESEARCH</u> (South Ballroom)	
7:30 a.m.	BREAKFAST	
8:30	Research and Technology Transfer Linkages	Irwin Feller, Director, Institute for Policy Research & Evaluation Pennsylvania State University
10:00	BREAK	
10:15	Transferring Federal Agricultural Research to Industry	Francis W. Wolek, Director of Research, College of Commerce and Finance, Villanova University
12:00	LUNCH	
	NEW DIRECTIONS IN RESEARCH POLICY	
1:00 p.m.	Implementing the Long Range Plan of the Agricultural Research Service: The Lessons of Experience	Terry Kinney, Administrator Agricultural Research Service U.S. Department of Agriculture
2:45	BREAK	
3:00	New Directions in Agri- cultural Research	Martin Rogoff, Director Western Regional Research Center
6:00	SEMINAR DINNER (North Ballroom)	
7:30 (South Ballroom)	Strengthening the U.S. Agricultural Research System: Policy Perspective	Alvin Young, Office of Science & Technology Executive Office of the President

<u>Date/time</u>	<u>Function</u>	<u>Speaker</u>
<u>Thur., April 17</u>	<u>PUBLIC AND PRIVATE SECTOR SUPPORT FOR</u> <u>AGRICULTURAL RESEARCH</u> (North Ballroom)	
7:30a.m.	BREAKFAST	
8:30	Mobilizing Political Support at the Minnesota Agricultural Experiment Station	Richard J. Sauer, Vice President University of Minnesota and Director, Minnesota Agricultural Experiment Station
10:00	BREAK	
10:15	The Private Sector on the U.S. Agriculture Research System Implications of the New Survey	Edwin Crosby, President Agricultural Research Institute
12:00	LUNCH	
1:00	Planning and Financing of Agricultural Research in the Private Sector: The CIBA-GEIGY Case	Jack R. Forsythe, Director Research & Development Planning CIBA-GEIGY Corporation
3:00	BREAK	
3:15	The Factor Mix in the U.S. Agricultural Res. System	Philip Pardey, Economist Department of Agricultural and Applied Economics University of Minnesota
6:00	DINNER	

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Fri., April 18</u>	<u>ISSUES IN THE ORGANIZATION AND IMPACT OF BIOTECHNOLOGY</u> (South Ballroom)	
7:30 a.m.	BREAKFAST	
8:30	Molecular Genetics, Biotechnology, and Experiment Station Research	Gary Heichel, Plant Physiologist USDA, Agricultural Research Serv. Adjunct Professor, Department of Agronomy & Plant Genetics, University of Minnesota
9:45	BREAK	
10:00	Policy Implications of Biotechnology Research	Wesley B. Sundquist, Professor Dept of Agricultural & Applied Economics University of Minnesota
12:00	LUNCH	
1:00 p.m..	Depart hotel by bus	
2:30	Visit to Northrup King Crops Research Station, Stanton, Minnesota	Bruce Wiese, Manager Stanton Research Station Northrup King
5:30	Arrive Owatonna (Thrifty Scott Motel)	
6:30	SEMINAR DINNER (Happy Chef-Owatonna)	
8:00	The Southern Exper. Station Research Program (a) Relation Between Waseca and St. Paul Campus, (b) Generating local Political Support	Richard Anderson, Superintendent Southern Experiment Station University of Minnesota Waseca, MN

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Sat., April 19</u>		
7:00 a.m.	BREAKFAST	
7:30	Bus departs for Waseca	
8:00	Visit to Southern Experiment Station: Tour	Richard Anderson
11:00	Visit Byron Farm Supply	Frank Byron, Owner Byron Farm Store Waseca, Minnesota
12:00	LUNCH	
1:00 p.m.	Farm Visit	
4:00	Arrive, Red Wing, MN (St. James Hotel)	
7:00	SEMINAR DINNER (at St. James Hotel)	
8:30	The Minnesota Agricultural Extension Service in Goodhue County Minnesota	Richard Walter, Goodhue County Extension Director, Minnesota Extension Service, U of Minnesota
<u>Sunday, April 20</u>		
10:00 a.m.	BUS DEPARTS FOR MINNEAPOLIS	

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Mon., April 21</u>	<u>THE DEVELOPMENT OF PUBLIC SECTOR</u> <u>AGRICULTURAL RESEARCH IN DEVELOPING</u> <u>COUNTRIES</u> (North Ballroom)	
8:30	National Agricultural Research Systems in the Developing World: A Quantitative View	Alexander von der Osten Director General International Service for National Agricultural Research
10:00	BREAK	
10:15	Identifying Reform Opportu- nities in National Agricul- tural Research Systems: The ISNAR Rutgers Model	Reed Hertford, Director International Agric. Programs Rutgers University Howard Elliot, Executive Officer, ISNAR
12:00	LUNCH	
1:00	Evaluating Efforts to Strengthen National Agri- cultural Research Systems: The FAO Experience	A. R. Ayazi, Chief Evaluation Service Office of Director General FAO of the United Nations
2:45	BREAK	
3:00	Developing National Agri- cultural Research and Education: The Dominican Republic Case	Luis Crouch, Member Board of Directors Instituto Superior de Agricultura Santiago, Dominican Republic
6:00	DINNER	
7:30	The Evolution of Organiza- tional Structures for Agricultural Research and Organizational Change in the Dominican Republic	Huntington Hobbs, Training Office ISNAR

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Tues., April 22</u>	<u>PRIVATE SECTOR AGRICULTURAL RESEARCH IN DEVELOPING COUNTRIES: PROBLEMS AND OPPORTUNITIES</u> (North Ballroom)	
8:30	Private Sector Research in Developing Countries: Examples from Asia	Carl Pray, Associate Professor Dept. of Agricultural Economics Rutgers University
10:00	BREAK	
10:15	Private Sector Research in Latin America: Implications for the Public Sector	Eduardo Jacobs, ISNAR/CISEA Proagro Project, Buenos Aires
12:00	LUNCH	
	<u>AGRICULTURAL RESEARCH IN AFRICA: PROBLEMS AND OPPORTUNITIES</u>	
1:00	Agricultural Research in Nigeria: Organization Policy and Impact	F.S. Idachaba, Professor Dept. of Agricultural Economics University of Ibadan
2:45	BREAK	
3:00	Strategy for African Agricultural Research	Hans P. Binswanger, Economist Agric. & Rural Development Dept. The World Bank
6:00	Dinner	

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Wed., April 23</u>	<u>INTERNATIONAL ASSISTANCE AND THE DEVELOPMENT OF NATIONAL AGRICULTURAL AGRICULTURAL RESEARCH SYSTEMS</u> (North Ballroom)	
8:30 a.m.	Low Input Technologies and Farming Systems: The Nepal Case	Richard Harwood, Winrock International
10:00	BREAK	
10:15	The Development of National Agricultural Research and Extension Systems: The Role of the U.S. Agency for International Development	Charles H. Antholt, Director Office of Technical Resources Asia Bureau, USAID
11:30	BUS DEPARTS FOR ST. PAUL CAMPUS	
12:00	LUNCH (at University of Minnesota, St. Paul)	
1:15 p.m.	The International Agricultural Research System: Some Results of the Impact Study	Robert Herdt, Consultative Group on International Agricultural Research
2:45	BREAK	
3:00	Minnesota Crop's Improvement Association	Harley J. Otto, Executive Director, Minnesota Crop Improvement Association
4:30	BUS RETURNS TO NORTHSTAR INN	
7:00	RECOGNITION DINNER IDS Building 50th Floor Tower Club	Richard J. Sauer Michael Boehlje Dept. of Ag. & Applied Economics University of Minnesota

<u>Date/Time</u>	<u>Function</u>	<u>Speaker</u>
<u>Thur., April 24</u>	<u>DEVELOPING COUNTRY PERSPECTIVES ON AGRICULTURAL</u> <u>RESEARCH POLICY ISSUES</u> (North Ballroom)	
8:30	Strengthening Research in Small Countries	Participant Panel
9:30	Evaluation	
10:15	BREAK	
10:30	Toward a Global Agricultural Research System	Vernon Ruttan, Professor Department of Agricultural and Applied Economics University of Minnesota
12:00	LUNCH	

We would be pleased to arrange for personal appointments at the University on Thursday afternoon or Friday for participants who do not plan to leave until Friday or Saturday.

ARP86SCH.7 4/7/86

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