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ABSTRACT

This report outlines the activities of the Center for Agricultural and Rural Development (CARD), Iowa State University, for the year ending June 30, 1986. Progress was made in expanding and enhancing the policy research program, which comprises four divisions. The natural resources and conservation program participated with the Soil Conservation Service of the United States Department of Agriculture in a study completed during 1985-86 which culminated six years of redesigning a natural resource modeling system for analyzing agricultural production patterns and soil erosion in the United States. The trade and agricultural policy division (with the Food and Agricultural Policy Research Institute) supplied analyses related to the 1985 Farm Bill to Congress, the Administration and other participants in the legislative process. The food and nutrition division analyzed demand systems estimated for Indonesia, to provide a basis for integrating food and agricultural policy. A similar project was undertaken for Zambia emphasizing Zambia's agricultural pricing and attendant foreign exchange implications. The rural and economic development division studied the implications of changes in agriculture on the economic activity of related industries. CARD supported 38 students in the graduate economics department at Iowa State University. Also included in the report are an operating budget, lists of contracts and grant projects, a list of publications (both internal and external), and information about the CARD's administrative structure and staff.  
 (JMM)

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# Annual Report 1986

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**The Center for Agricultural and Rural Development  
Iowa State University | Ames, Iowa 50011**

**CARD Annual Report**  
**Year Ending June 30, 1986**



**The Center for Agricultural and Rural Development**  
**Iowa State University | Ames, Iowa 50011**

July 1, 1986

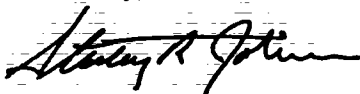
Dear Colleague:

We are pleased with our progress in expanding and enhancing the policy research program at the Center for Agricultural and Rural Development (CARD). During the past year our research program has been extended to include food and nutrition economics and rural and economic development. These research areas complement the traditional strengths of CARD in natural resources and conservation policy and trade and agricultural policy.

Among our major accomplishments during the past year are the completion of a long-term project with SCS and ERS, providing analysis for the Resources Conservation Act. Results from this research show longer term implications of changes in technology and economic incentives for soil loss and agricultural production patterns. In addition, CARD and the Food and Agricultural Policy Research Institute (FAPRI) supplied analyses to the U.S. Congress, the Administration, and other participants in the 1985 Farm Bill debate.

We expect to continue the tradition of CARD, contributing timely and high quality policy research and providing a working laboratory in which graduate students from the U.S. and other countries can become familiar with policy research methods. In an increasingly complex and interrelated economic world, solid quantitative analysis will play a more important role in agricultural and rural development policy initiatives.

Sincerely,



Stanley R. Johnson

MAY 1986  
MAY 1986

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# Summary

## Research Expansion

Fiscal 1985-86 marks the first full year of new administration for the Center for Agricultural and Rural Development (CARD). A number of important organizational changes facilitated development of an expanded research focus consistent with longer term economic policy issues facing Iowa, U.S., and world agriculture. The CARD research program comprises four divisions: trade and agricultural policy, natural resources and conservation policy, food and nutrition policy, and rural and economic development policy. Research in these divisions centered on analyses of U.S. agricultural policy in an international setting and the interaction of domestic policies with the diverse components of the agricultural sector.

CARD's integrated approach to agricultural policy analysis was furthered and enhanced by its merger with the

Center for Trade and Agricultural Policy (CTAP), the Iowa State University research arm of the Food and Agricultural Policy Research Institute (FAPRI). The most comprehensive quantitative modeling system for agricultural policy and trade analysis, outside the USDA, is centered at CARD and FAPRI.

Progress has been impressive in expanding the research activity within the four divisions, especially considering the financial situations of Iowa State University, U.S. agriculture, and midwestern rural economies. Funding for CARD's expanded research program has been generated entirely through grants and contracts. While the university funding for CARD was approximately \$550,000, CARD's total research budget approached \$2,000,000 in 1985-86.

## Research Accomplishments

There were a number of noteworthy research accomplishments at CARD in 1985-86. Our quantitative trade and commodity market models provided timely policy analysis of the 1985 Farm Bill. The extent of participation by CARD and FAPRI in the national debate on Farm Bill issues is evidenced in five special publications: "Summary Report: Economy-Wide Impacts of the Farm Financial Crisis," "An Analysis of the U.S. House of Representatives 1985 Farm Bill," "An Analysis of the Food Security Act of 1985," "Impacts of the Food Security Act of 1985 on Iowa Agriculture," and "The Food Security Act of 1985: A Ten-Year Perspective." These reports formed the basis of numerous presentations by CARD staff throughout the year, including those to the Southern Agricultural Economics Asso-



*CARD hosted a working symposium to evaluate components of a model related to pesticide abatement policies. Attending were researchers from CARD, the Oklahoma Climatological Survey, and the Environmental Protection Agency.*

ciation, Agriculture Canada, seminars around Iowa, the National Governors' Association, and policy briefings to the U.S. Congress in July 1985 and February 1986. CARD has assumed a leadership role in analysis of U.S. agricultural policy evaluation.

CARD's analysis for the Resources Conservation Act (RCA) was completed during 1985-86 under an agreement with the Soil Conservation Service of the U.S. Department of Agriculture (SCS-USDA) and with the cooperation of the Economic Research Service of the U.S. Department of Agriculture (ERS-USDA). The results of this analysis have important longer term implications for land use, regional production patterns, and water and wind erosion. The expansion of the production capacity stimulated by world economic conditions and U.S. farm legislation in the 1970s and early 1980s has significantly increased wind and soil erosion. A longer term potential was demonstrated for a major relocation of crop production to the Midwest if current technology and consumption trends persist. The broad policy implications of technological change for the infrastructure of the agricultural sector, for world commodity markets, and for the midwestern economy will be a continuing research interest at CARD.

In addition to domestic agricultural policy analysis, CARD has developed quantitative policy models of international commodity markets and has conducted extensive analyses of agricultural and food and nutrition policy for developing countries. Projects are

ongoing in Indonesia, Zambia, Haiti, and Jamaica. In each case, food consumption and nutrition consequences of food and agricultural pricing policies, and the implications of these policies for international commodity markets, are examined. In addition, special projects have been undertaken on the implications of the international debt situation for commodity trade, the conservation reserve, macroeconomic impacts on agriculture, the multilateral trade negotiations, and trade policy scenarios emphasizing free and more restricted trade stances by the United States and major trading countries.

### Research Objectives

Next year our objectives are to continue the studies and analyses of trade and agricultural policy, natural resources and conservation policy, and food and nutrition policy. Research programs will be designed anticipating major policy questions, building a more solid information base for enlightened action by the government and private sectors.

Two major new research initiatives during 1986-87 involve groundwater quality and rural economic development. Significant research agreements have been negotiated for study of these problems. One is with the Environmental Protection Agency (EPA) for analysis of groundwater quality and pesticides; another is with the National Governors' Association to investigate the implications of U.S. agricultural policy for rural economic development.

## Research and the Graduate Program

CARD enjoys a close affiliation with the Department of Economics and the graduate program at Iowa State University. A total of 38 graduate students were supported by CARD in 1985-86. These students received employment, experience, and an opportunity to participate in applied research programs producing information with immediate relevance to agriculture and rural economies.

The graduate students also contributed to the published research of CARD. During 1985-86, CARD staff authored over 80 published pieces, including re-

ports and working papers in CARD's own series as well as articles in professional journals, reports, and chapters in books and proceedings.

In summary, the productive research program, a tradition at CARD, has been continued and expanded. One achievement has been to provide more current information for major national agricultural policy problems. Another has been to improve the quantitative research methods for economic policy analysis. Not inconsequentially, these activities have led to important basic research results and have provided an environment for producing well-trained graduate students.



*CARD conducted a modeling seminar with a visiting delegation of students and government officials from Peru.*



## Administrative Structure

The administration of CARD has evolved to accommodate an expanded framework for policy research. CARD's four newly created divisions are illustrated in Figure 1. With the research expansion into rural and economic development planned for 1986-87, CARD will be in a position to provide economic policy analysis using more broadly conceived models for Iowa, Midwest, U.S., and world agriculture.

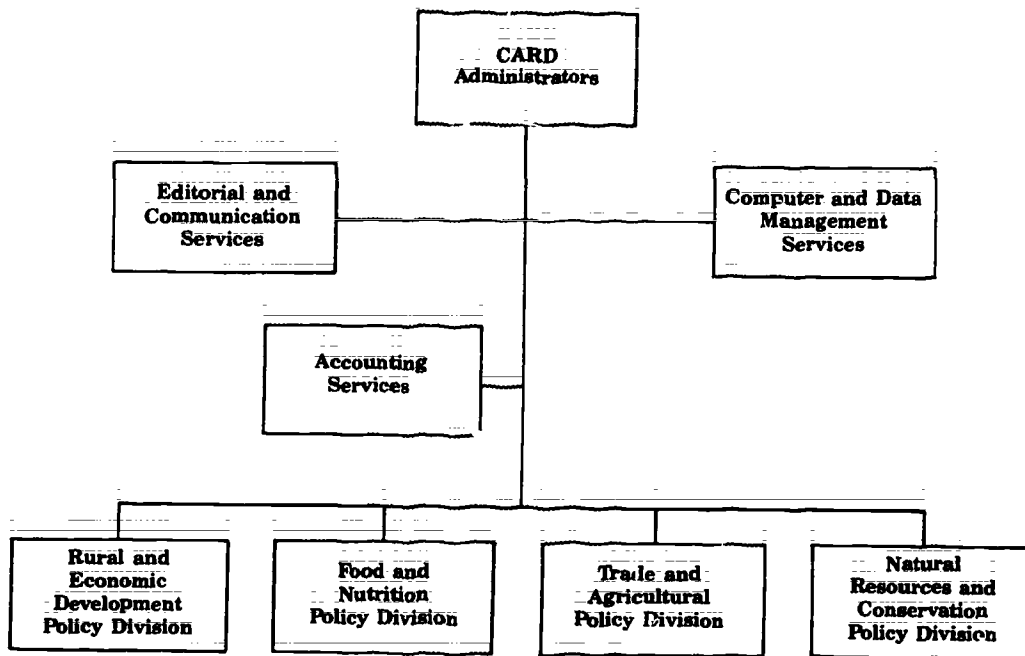
The affiliation of FAPRI and CARD points the way to more formal linkages

of CARD to research centers at other universities. FAPRI, a dual-university institute, with CARD at ISU and the Center for National Food and Agricultural Policy (CNFAP) at the University of Missouri-Columbia as components, provides the U.S. Congress and the public with timely and comprehensive analyses of commercial agricultural policy. CARD is a university-based research center with a mission broader than that of FAPRI. (See Figure 2.)

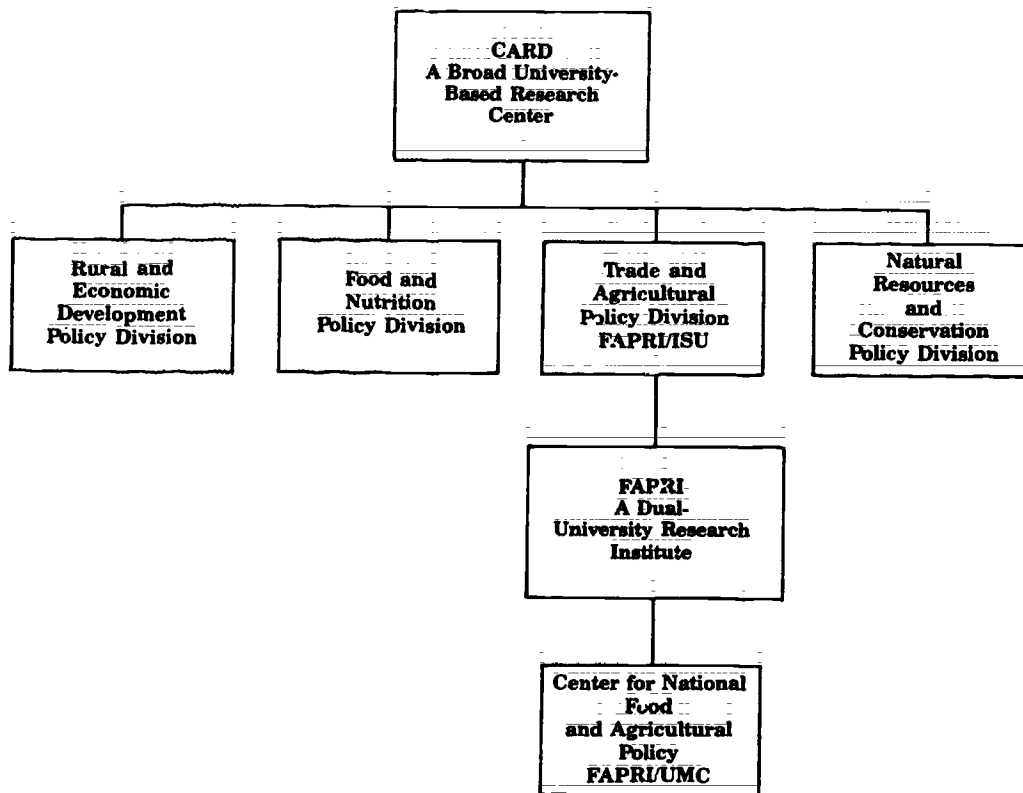


*Systems analysts provide data processing for CARD's policy research.*

**Figure 1. Administrative Structure**



**Figure 2. The CARD/FAPRI Interface**



# Card Staff

**Administrator**—Stanley R. Johnson  
**Associate Administrator**—William H. Meyers

## Faculty

E. Kwan Choi  
Burton C. English  
Helen Jensen  
Paul Rosenberry

## USDA Collaborators

Wen-Yuan Huang  
David J. Post

## Editor/Office Manager

Judith Gildner

## Post-Doctoral Research Associates

S. Devadoss  
Tefsaye Teklu  
Rhung-Jien Woo

## Computer and Data Support

Bruce Eveland  
Helen Graham  
Doug Haney  
Dana Kain  
Jess Robinson  
Duane Schouten  
Vance Temeyer  
Brett Uytiepo

## Secretaries

Kim Blomgren  
Tammy Crispin  
Karleen Gillen  
Marilyn Mortvedt  
Sandy Nelson  
Mary Shearer

## Graduate Assistants

Bruna Angel  
Jay Atwood  
Anisossadat Bahrenian  
Dabai Chen  
Terry Disney  
K. Eswaramoorthy  
Patricia Godoy  
Quentin Grafton  
Randall Hager  
Leroy Hansen  
Jude Igbokwe  
Jong Jeon  
T. Kesavan  
Eileen Krakar  
Bruno Larue  
Zong-Shin Liu  
Deepa Majumdar  
Fred Oleson  
Shihua Pan  
Premakumar  
Timi Sanni  
Neil Schneider  
Karl Skold  
Kai-one Sriplung  
Rittiron Sungsuwan  
Grace Tsai  
Chang-Fu Wanglian  
Meri Whitaker  
Sherry Wise

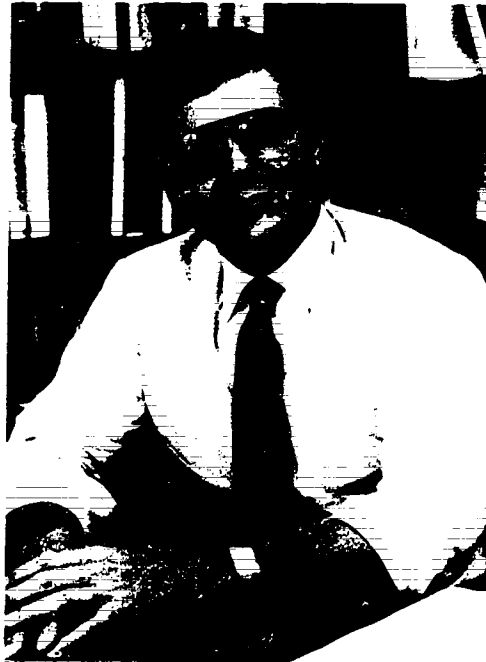
## Pre-Doctoral Research Associates

Satheesh Aradhyula  
Gary Cole  
Joseph Fosu  
Michael D. Helmar  
Matthew T. Holt  
David Krog  
Skip Lawrence  
George Oamek  
Patrick Westhoff

## Administrators

**Stanley R. Johnson** came to CARD from the University of Missouri where he had been a faculty member in economics and agricultural economics since 1964 and chair of the economics department from 1972 to 1974. During this period he had visiting appointments at the University of Connecticut, the University of California-Davis, Purdue University, the University of Georgia, the University of California-Berkeley, and in the Economics Branch of Agriculture Canada. Stan's research interests are in econometrics, theory, and agricultural price and policy analysis. His publication record reflects these interests and an ability to apply quantitative models in policy research. His most recent book (co-authored with two former students, T. Fomby and R. C. Hill) is *Advanced Econometric Methods*, published in 1984 by Springer-Verlag. He was a co-founder and executive director of the Food and Agricultural Policy Research Institute (FAPRI), which is now affiliated with CARD.

**William H. Meyers** has been on the faculty of the Department of Economics at Iowa State University since 1979. He has been a research fellow at the International Rice Research Institute in the Philippines and was an agricultural economist in the Forecast Support Group and the Food and Agricultural Policy Branch of the Economic Research Service, USDA, before coming to Iowa State University. At ISU, Willi has been teaching and conducting research in the areas of agricultural policy and trade and price analysis. In 1984 he organized and headed the Center for Trade and Agricultural Policy (CTAP), which was the Iowa State component of FAPRI. He became associate administrator in 1985 when CTAP and CARD merged.



*Stanley R. Johnson*



*William H. Meyers*

## Senior Staff

**E. Kwan Choi** teaches courses in international economics. His research during the year concentrated on agricultural price stabilization policy. In the coming year Kwan will help organize a workshop on price stabilization policy. He will also be involved in cooperative research with the EPA to evaluate public regulatory policy under uncertainty, including pesticide and groundwater quality.

**S. Devadoss** was a CARD graduate student and completed his doctorate in the spring of 1985. Presently he is leader of CARD's Trade and Agricultural Policy Division. An adaptation of Devadoss's dissertation on the impacts of monetary policies on U.S. agriculture is slated to be published next year in the CARD Monograph Series.

**Burton English** is an adjunct assistant professor of economics. He worked under Earl O. Heady as a graduate student and subsequently was appointed to the faculty and research staff. Burt is leader of the Natural Resources and Conservation Division. In September 1986 he will leave Iowa State to accept a post in the Agricultural Economics Department of the University of Tennessee.

**Judith Gildner** provides editorial and communications services for CARD and manages the office. She directs the review, copy editing, and production of CARD publications. Press releases and related information are issued from Judith's office.



*E. Kwan Choi*



*S. Devadoss*

**Helen Jensen** came to CARD in 1985 from the University of Maryland. She teaches courses in comparative economic systems. As leader of the Food and Nutrition Policy Division, Helen has been involved in directing research based on food consumption pattern surveys in the United States, Indonesia, Zambia, Haiti, and Jamaica.

**Paul Rosenberry** has been associated with CARD since 1962. He has worked on the economics of conservation and pollution for watershed and river basin research. As special project coordinator, Paul directs CARD's site and off-site evaluation of farming systems, conservation practices, and land use impacts on soil productivity and quality of surface and groundwater.

**Tesfaye Teklu** has been a post-doctoral research associate at CARD since the summer of 1984. He is involved in research in the Food and Nutrition Policy Division and has completed a review of consumer demand studies for Indonesia. A series of staff reports scheduled for 1986-87 will contain results and analyses based on this Indonesia project.

**Rhung-Jien Woo** completed graduate studies in economics at ISU in 1986 and recently joined the staff of the Trade and Agricultural Policy Division in CARD. He is assigned to trade modeling research.



*Burton C. English*



*Helen Jensen*

## Research Divisions

Of CARD's four research divisions, the Natural Resources and Conservation Policy Division and the Trade and Agricultural Policy Division received major emphasis in 1985-86. The Food and Nutrition Policy Division was organized in 1985-86 and grew to include a staff of six. Projects developed in this new area are complementary to the general research mission of CARD. They provide a basis for studying linkages of agricultural, resources, and food policies domestically. The enhanced dimensions of the research program provide an enriched experience base for our graduate students.

### Natural Resources and Conservation Policy Division

The data bases and modeling capability at CARD permit region-specific analy-

sis of a variety of policy questions on natural resources and the structure of agricultural and rural economies.

Highlights of the research in natural resources and conservation policy are largely related to CARD's participation with the SCS-USDA in an analysis conducted under the Resources Conservation Act. This study, completed during 1985-86, culminated six years of re-designing a natural resource modeling system for analyzing agricultural production patterns and soil erosion in the United States.

Mathematical programming models used in this policy exercise reflect information on soil types, production and distribution systems, transportation, and other factors that determine impacts of national level policies for regions and states. These data bases and models have been developed in part



*Site data is gathered for conservation studies.*



with cooperative funding from SCS-USDA, and with the assistance of ERS-USDA and SCS-USDA collaborators at CARD.

Projections from the RCA study show the likely relocation of agricultural production resulting from surplus supplies of farm commodities. Feed grain and oilseeds production would be even more concentrated in the Midwest. Erosion on frail lands brought under cultivation during the expansion of the land base in the 1970s and 1980s would be reduced as these lands are returned to less intensive enterprises.

Another major analysis, a study of the Conservation Reserve title of the 1985 Farm Bill, was undertaken jointly with the University of Missouri, Resources for the Future, and the SCS-USDA. This was the first comprehensive analysis of the Conservation Reserve program and showed the likely impacts on production and the location of production as well as estimated rental rates for land taken out of production.

CARD has been selected by the EPA to develop a nationwide study of pesticides and groundwater quality. This three-year research project has particular implications for the Midwest and other intensively cultivated agricultural areas in the United States.

Other research accomplishments of this division include:

- Evaluation of land use policy in the southern United States
- Estimation of the off-site costs of soil erosion
- Development of crop yield models for studying the effects of climate, soil, and technology
- Analysis of export impacts on natural resource use

- Study of corn borer damage in Iowa corn
- Design of approaches for identifying fragile soils
- Completion of the initial phase in development of an economic/resource data system for Iowa

## Trade and Agricultural Policy Division

Research in this division concentrates on domestic and international markets for major U.S. agricultural commodities. Large time-series data bases are maintained and applied to econometrically model production and consumption of major importers and exporters of U.S. agricultural commodities. CARD's contribution to FAPRI involves mainly the work of this division. The research provides quantitative evaluations of national and international economic impacts on U.S. agriculture and, in particular, consequences of national farm program proposals. Baseline projections of production, consumption, and trade for major producing and consuming regions are also supplied by this system. Intermediate, within-year, longer-term, and 10-year evaluations and projections are published routinely.

In 1985-86, highlights of the research accomplishments in the Trade and Agricultural Policy Division were related to the 1985 Farm Bill and the ongoing farm crisis. A number of comprehensive analyses of alternatives were developed prior to formulation of the legislation. Throughout the debate on the 1985 Farm Bill, CARD/FAPRI analyses were supplied to the U.S. Congress, the Administration, and other participants in the legislative process. These studies

were made more valuable by the integration of the international trade models for wheat, coarse grains, and soybeans maintained by CARD, which permitted analysis of the 1985 Farm Bill in external markets.

The survey data and modeling capacity of CARD and FAPRI permitted an assessment of the 1985 Farm Bill not only for farm commodity markets and net farm income but for financially stressed farmers, a large share of whom reside in the Midwest.

Farm financial stress was studied using a survey conducted in conjunction with *Farm Journal* and funded in part by Pioneer Hi-Bred International and the Farm Credit Council. Editors of the *Farm Journal* who developed three articles based on the CARD/FAPRI analysis won a prestigious journalism award,

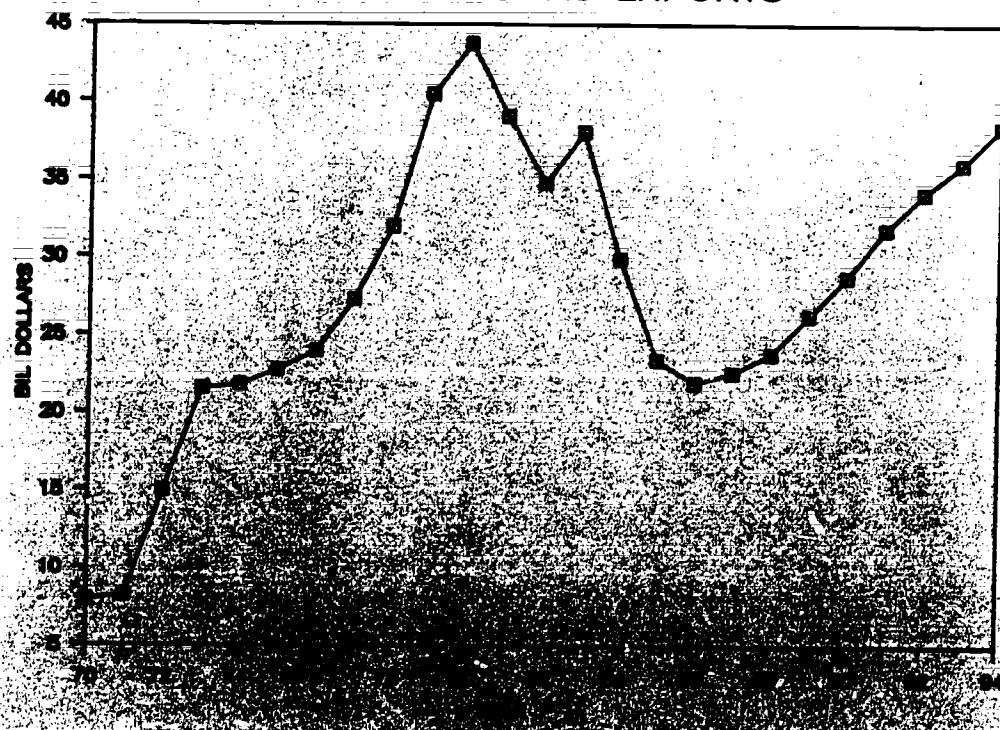
the DeKalb Oscar in Agriculture. The magazine won a national award from Columbia University for a series of in-depth articles based on the findings of the survey; and, Pioneer also won an award—from the National Agri-Marketing Association (NAMA)—for the quality and impact of news clips dealing with the financial stress study that were released to radio and television stations.

Other major studies completed in this division included an analysis of free and restricted trade scenarios for a conference of the International Agricultural Trade Research Consortium. CARD results were a major empirical contribution to this conference and will be included in the published proceedings.

Additional contributions include:

- Study of EC policies and U.S. exports

## VALUE OF U.S. AG EXPORTS



CARD projections of U.S. exports under the 1985 Farm Bill for the Spring 1986 FAPRI/Wharton ten-year outlook.

- Evaluation of export subsidy programs
- Development of a model to assess the potential for U.S. feed grain exports
- Estimation of Iowa soybean and corn price and income linkages to national and international markets and policies
- Completion of an Office of Technology Assessment (OTA) study of technology to the year 2000

### **Food and Nutrition Policy Division**

Data systems developed from nationwide food consumption surveys of the USDA and the national health survey of the Department of Health and Human Services (DHHS) are being used in domestic food and nutrition policy research at CARD. Studies of linkages among agricultural and trade policy and food and nutrition policy will contribute to a more complete understanding of food price and consumption patterns, technology, and food assistance programs. Impacts of agricultural policy and technological change on consumption patterns and nutritional status of populations in the United States and in developing countries are the major policy emphasis in this CARD division.

Highlights of the 1985-86 research accomplishments are the activities in Indonesia and Zambia. Consumer demand systems were estimated for Indonesia. These complete demand systems provide a basis for integrating food and agricultural policy—rice pricing policy in particular. A CARD team traveled to Indonesia to present preliminary project results and conduct a workshop on demand and agricultural price policy modeling. A similar project is near completion in Zambia. This project emphasizes agricultural pricing and its implications for

foreign exchange, as well as relationships between agricultural production and consumption patterns. Another CARD team traveled to Zambia and presented a preliminary version of a microcomputer model for implementation by that country's Planning Division of the Ministry of Agriculture.

New projects have been initiated in Haiti and Jamaica. In Haiti, the first complete consumer expenditure and food consumption survey in more than 30 years is being conducted jointly by CARD, the International Programs Division of the Bureau of the Census, the U.S. Agency for International Development Mission in Haiti, and the Office for International Cooperation and Development of the USDA. CARD participated in the design of the survey and will analyze the data for food consumption and nutritional impacts of alternative agricultural and food pricing policies.

Other important studies in the Food and Nutrition Policy Division include:

- Development of methods for modeling market demand at disaggregated commodity levels
- Study of off-farm/farm work decisions in the United States
- Analysis of U.S. calcium consumption and impacts of dairy promotion programs
- Analysis of bulk-loading issues for food and coarse grains in Haiti
- Development of methods for linking the continuing and nationwide surveys of USDA
- Participation in a DHHS/USDA committee to study the national health status of the U.S. population
- Analysis of the consumer expenditure surveys for Jamaica

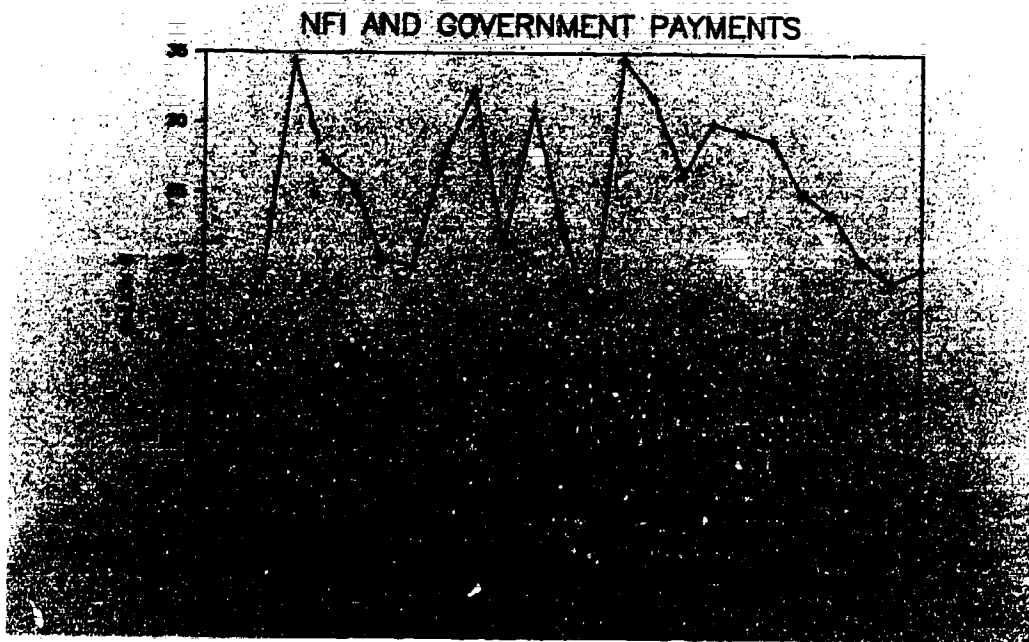
## Rural and Economic Development Policy Division

The operational models and data bases at CARD can be adapted and applied to evaluate the impacts of agricultural performance and policies on rural economies. Also, rural economic development programs and their relation to agricultural policy can be studied using CARD's research base. Research activity is expanding in this division. Models and data bases are being developed to facilitate broadly based analysis of U.S. and foreign rural economic development programs.

Studies are being initiated to evaluate implications of the changes in agriculture on the economic activity of related industries, particularly the "underperformance" of economies in midwestern agricultural states. Effective rural economic development planning will depend to an increasing degree on projections of changes in agriculture, business activity, government services, and population dynamics. The

diminishing agricultural and rural populations in the Midwest juxtaposed with the magnitude of current agricultural and rural economic development problems demand that policy measures be more carefully fashioned than ever before.

Rural and economic development is a significant economic policy problem for the Midwest. It is one in which CARD expects to become a prominent source of policy analysis. Preliminary agreements have been made with the National Governors Association for a general policy information system to support governors' offices in all the states. A cooperative agreement has been signed with the Center for Policy Research of the National Governors Association. CARD, with support from the Legislative Council of the Iowa General Assembly, will investigate the interrelationships between agriculture, farm income, and incomes of farmers, and the impacts of these factors on rural communities in the Midwest.



Net farm income and direct government payments, past values and projections under the 1985 Farm Bill.

## Operating Budget

The total operating budget for CARD during 1985-86 was approximately \$2 million. Research funding raised by CARD was approximately \$1.5 million. Because many of the research contracts in which CARD is involved are of multi-year duration, more funding than the \$1.5 million expended in 1985-86 was actually raised during 1985-86.

Research funded projects active during 1985-86 are listed on the facing page of this report. Sources of funds for CARD outside the Iowa State University Experiment Station include: approximately

\$1.17 million from the federal government, \$10 thousand from state contracts and grants, \$72 thousand from industry, and \$153 thousand from foundations.

The operational funds of CARD were allocated as shown in Table 1. Wages, salaries, and benefits accounted for approximately \$1.2 million. Computer use and computer equipment represented approximately \$400 thousand. Travel costs were \$138 thousand. Printing and supplies and other expenditures accounted for \$166 thousand and \$69 thousand respectively.

**Table 1. CARD Budget, Fiscal Year 1985/86**

Receipts		Expenditures	
<b>Experiment Station</b>			
State Projects	79,000	Salaries, Wages, Benefits	1,187,000
CARD Budget	351,000	Computer Use	349,000
Hatch Regional	36,000	Computer Equipment	50,000
		Travel	138,000
Sub Total	466,000	Printing and Supplies	166,000
Benefits (est.)	85,000	Other	69,000
Sub Total	551,000		
<b>Contracts and Grants</b>			
Fed. Government	1,173,000		
State	10,000		
Industry	72,000		
Foundations	153,000		
Sub Total	1,408,000		
<b>Total</b>	<b>1,959,000</b>	<b>Total</b>	<b>1,959,000</b>

# Contracts and Grants Projects

Duration

## Natural Resources and Conservation Policy

Natural Resource Modeling and Analysis	1985-1986
Development and Maintenance of National Models	1985-1990
Resource Conservation Act Analysis	1979-1990
Analysis of Range Conservation Treatment Needs	1986
Long-term Conservation Reserve Program	1985-1986
Resourceful Farming Demonstration Project	1986-1987
Skunk River Basin	1985-1986
Watershed Modeling	
Conservation Easement: An Integrated Policy	
Approach to Soil Erosion and Ag. Supply Control	1985-1987
Pesticide Policy Evaluation System and Pilot	
Study for the Midwest	1986-1988

## Trade and Agricultural Policy

Food and Agricultural Policy Research Institute	1984-1987
Agricultural Policy and Trade Modeling	1983-1986
World Feed Grains Demand Modeling and Analysis	1985-1988
Iowa Soybean Sector Linkages to National and	
International Markets and Policies	1985-1987
Iowa Corn Sector Linkages to National and	
International Markets and Policies	1985-1987
Food and Agricultural Policy Analysis	
(with University of Minnesota)	1985-1986
Agricultural Credit Policy Analysis	1985
Economic Impacts of Farm Financial Crises	1985
Trade Embargos and Competitive Pricing	1986
Modeling of U.S. Agriculture for the International	
Institute for Applied Systems Analysis (IIASA)	1986-1987
Future Economic Impacts of Technology on Agriculture	1985-1986

## Food and Nutrition Policy

Consumption Effects of Food and Agricultural	
Policies—Indonesia and Zambia	1984-1986
Food Consumption and Agricultural Prices in Haiti	1985-1987
National Dairy Board Calcium Study	1986-1987
Jamaica Food Assistance Study	1985-1987
Consumption Effects of Agricultural Policy: Handbooks	1986-1988
Analysis of the 1985-86 Continuing Food	
Consumption Survey for the U.S.	1985-1986

## Rural and Economic Development Policy

Economic Development Information Systems	1985-1989
Developing Policy and Rural Development Strategies for Iowa	1986
Agriculture and Economic Underperformance of	
Midwest Economies	1986-1987
Interrelationships between Agriculture and Farm Income	1986

# Contracts and Grants Funding Agencies, 1985-86

## Public Agencies

Economic Research Service, USDA  
International Economics Division  
Natural Resource Economics Division  
Environmental Protection Agency  
Health and Nutrition Information Service, USDA  
Iowa Department of Soil Conservation  
Iowa Office for Planning and Programs  
Legislative Council of the Iowa General Assembly  
Office of International Cooperation and Development, USDA  
Office of Nutrition, U.S. Agency for International Development  
Office of Technical Assessment, U.S. Congress  
Soil Conservation Service, USDA  
Special Grant, U.S. Congress

## Foundations and Private Voluntary Organizations

Farm Credit Council  
Iowa Corn Promotion Board  
Iowa Natural Heritage Foundation  
Iowa Soybean Promotion Board  
Minnesota Corn Growers Association  
National Corn Development Foundation  
National Corn Growers Association  
National Dairy Board  
U.S. Feed Grains Council

## Private Corporation

Pioneer Hi-Bred International, Inc.

# Publications and Communications

Research results and analyses are issued in CARD's publication program and are summarized in journal articles, proceedings papers, and other external publications authored by CARD staff. A total of 48 reports were produced and published internally during the year. CARD staff and graduate students publish regularly in professional journals, books, reports, and proceedings compendia. Thirty-eight research pieces authored by CARD staff were published externally in 1985-86. Selected journal articles are available in CARD's reprint series.

Presentations at congressional briefings and professional meetings, seminars, and workshops communicate much of the policy analysis and ongoing research at CARD. Table 2 provides a numerical summary of state, national, and international presentations.

A list of 1985-86 CARD publications and staff-authored external publications is appended to this report.



**Table 2. Number of CARD Staff Presentations, 1985-86**

	Congressional Testimony and Press Briefings	Professional Meetings, Seminars, Conferences, and Workshops			Total
		Iowa	National	International	
Stanley R. Johnson	3	5	11	5	24
William H. Meyers	2	6	7	4	18
Other CARD Staff	-	3	11	4	16
<b>Total</b>	<b>5</b>	<b>4</b>	<b>29</b>	<b>13</b>	<b>61</b>



# Appendix

## CARD Publications, 1985-86

### CARD Report

- CARD 132 Potential Agricultural Resource Use and Structure under Soil Conservation Alternatives for the Future, by Burton C. English, Earl O. Heady, and Klaus F. Alt December 1985.

### Working Papers

- 86-WP1 Money, Inflation, and Relative Prices: Implications for U.S. Agriculture, by Barry Falk, William H. Meyers, and S. Devadoss. January 1986.
- 86-WP2 Baseline Projections, Yield Impacts, and Trade Liberalization Impacts for Soybeans, Wheat, and Feed Grains: A Trade Model Analysis, by William H. Meyers, S. Devadoss, and Michael D. Helmar. January 1986.
- 86-WP3 Emerging Trade Policy Issues: The Hard Choices, by William H. Meyers. February 1986.
- 86-WP4 Agricultural Finance and Credit: The Farm View (Macro), by Robert W. Jolly. February 1986.
- 86-WP5 Monetary Policies, Interest Rates, and U.S. Agriculture: An Econometric Simulation Analysis, by S. Devadoss and William H. Meyers. June 1986.

### Staff Reports

- 86-SR1 FAPRI Trade Model for Feed Grains: Specification, Estimation, and Validation, by Aniss Bahrenian, S. Devadoss, and William H. Meyers. January 1986.
- 86-SR2 FAPRI Trade Model for Soybean Sector: Specification, Estimation, and Validation, by William H. Meyers, Michael D. Helmar, and S. Devadoss. January 1986.
- 86-SR3 FAPRI Trade Model for the Wheat Sector: Specification, Estimation, and Validation, by S. Devadoss, Michael D. Helmar, and William H. Meyers. January 1986.
- 86-SR4 Trade Implications of the Food Security Act of 1985, by William H. Meyers and Michael D. Helmar. February 1986.
- 86-SR5 The Conservation Reserve: A Preliminary Assessment of Short-Term Impacts, by David E. Ervin, Burton C. English, and S. R. Johnson. February 1986. Revised June 1986.
- 86-SR6 The Value of Climate Information, by S. R. Johnson and Matthew T. Holt. March 1986.
- 86-SR7 A Review of Consumer Demand Theory and Food Demand Studies on Indonesia, by Tesfaye Teklu and S. R. Johnson. April 1986.
- 86-SR8 1990 RCA Baseline with Moderate Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.

86-SR9	2000 RCA Baseline with Moderate Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR17	2030 Low Technology with Moderate Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.
86-SR10	2030 RCA Baseline with Moderate Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR18	2030 Low Technology with Low Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.
86-SR11	1900 RCA Baseline with Low Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR19	1990 Water Quality Level One Solution with Low Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.
86-SR12	2000 RCA Baseline with Low Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR20	2030 Conservation Reserve with No Terraces: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.
86-SR13	2030 RCA Baseline with Low Exports: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR21	1990 Water Quality Level One Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. May 1986.
86-SR14	1990 RCA Conservation Reserve: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR22	1990 Water Quality Level Two Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. May 1986.
86-SR15	2000 RCA Conservation Reserve: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR23	2030 No EPIC Impacts Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. May 1986.
86-SR16	2030 RCA Conservation Reserve: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. March 1986.	86-SR24	2030 Increased Demand for Beef Demand Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. May 1986.

- 86-SR25 2030 Environmental Enhanced Solution: Selected Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR26 2030 Pessimistic with Moderate Exports Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR27 2030 Pessimistic with High Exports Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR28 2030 Optimistic Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR29 2030 Laissez Faire with 30 Percent Flow Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR30 2030 Laissez Faire with No Stream Flow Requirement Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR31 2030 Optimistic with the Conservation Reserve Land Base Solution: Selected Solution Tables for the 10 Farm Production Regions and a National Summary, by Burton C. English. June 1986.
- 86-SR32 Agricultural Planning in Thailand, by Keith D. Rogers and Dan C. Tucker. June 1986.
- 86-SR33 Impacts of the Food Security Act of 1985 on Iowa Agriculture, by Daniel M. Otto and William H. Meyers. April 1986.
- FAPRI Staff Reports**
- FAPRI 6-85 National Farm Survey on Financial Stress, by Abner W. Womack, John Marten, Gregory Gergin, and Wesley Bailey. July 1985.
- FAPRI 7-85 An Analysis of the Variable Loan Repayment Option for the 1985 Farm Bill, by S. R. Johnson, W. H. Meyers, Abner W. Womack, and Robert E. Young II. July 1985.
- FAPRI 8-85 Farm Income and the Financial Condition of United States Agriculture, by Robert W. Jolly and Damona Doye. July 1985.
- FAPRI 9-85 Summary Report: Economy-Wide Impacts of the Farm Financial Crisis. July 1985.
- FAPRI 10-85 An Analysis of the U.S. House of Representatives 1985 Farm Bill. January 1986.
- FAPRI 1-86 An Analysis of the Food Security Act of 1985, by Abner W. Womack, Robert E. Young II, William H. Meyers, and S. R. Johnson. January 1986.
- FAPRI 2-86 The Food Security Act of 1985: A Ten-Year Perspective, by S. R. Johnson, William H. Meyers, Abner W. Womack, Robert E. Young II, and Michael D. Helmar. June 1986.
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- CTAP SR#11 Commercial World Commodity Export Demand Equations Utilizing Real Importer Prices and Income, by Patrick Westhoff and William H. Meyers. July 1985.
- CTAP SR#12 Some Evidence on Exchange Rates and Competitiveness of U.S. Agriculture, by Patrick Westhoff. July 1985.

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- "Food Shopping Patterns and Nutritional Quality of Diets," by Karen J. Morgan and S. R. Johnson, *Cereal Foods World* 30. 1985.
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- "An Evaluation of Alternative Investment Hypotheses Using Non-Nested Tests," by Thomas O. Wisley and S. R. Johnson, *Southern Economic Journal* 52. 1985.

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- "Erosion Control Practices: The Impact of Actual Versus Most Effective Use in Soil Conservation Assessing the National Resources Inventory," by Paul Rosenberry and Burton C. English. National Academy Press, Washington, D.C. 1986.
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- "Future Challenges for Modeling in Agricultural Economics," by S. R. Johnson, *American Journal of Agricultural Economics*. 1986.
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- "Modelling Inventory Behavior in an Econometric Time Series Framework," by Suchana V. Langley, William H. Meyers and Dennis R. Starleaf, *International Journal of Modelling and Simulation*. 1985.
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- "A Critique of Existing Models for Policy Analyses," by S. R. Johnson, *Proceedings, Agricultural Sector Models for Policy Analysis*, Agriculture Canada, Ottawa, Canada. 1985.
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