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)
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
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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 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 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, macro-economic 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, CAFD staff authored over 80 published pieces, including reports 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.)
Figure 1. Administrative Structure

CARD Administrators

Editorial and Communication Services

Computer and Data Management Services

Accounting Services

Rural and Economic Development Policy Division

Food and Nutrition Policy Division

Trade and Agricultural Policy Division

Natural Resources and Conservation Policy Division
Figure 2. The CARD/FAPRI Interface

CARD
A Broad University-Based Research Center

- Rural and Economic Development Policy Division
- Food and Nutrition Policy Division
- Trade and Agricultural Policy Division FAPRI/ISU
- Natural Resources and Conservation Policy Division

FAPRI
A Dual-University Research Institute

Center for National Food and Agricultural Policy FAPRI/UMC
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
Tesfaye 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 Bloragren
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. Kesan
Eileen Krakar
Bruno Läue
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.
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.
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.

Tesiaye 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-tien 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.
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 analysis 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:
- 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 databases 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
• 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 and emphasizes agricultural pricing and 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 on 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.

[Graph showing net farm income and 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

<table>
<thead>
<tr>
<th>Receipts</th>
<th>Expenditures</th>
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<tbody>
<tr>
<td>Experiment Station</td>
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<tr>
<td>State Projects</td>
<td>Salaries, Wages, Benefits</td>
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<td>CARD Budget</td>
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<tr>
<td>Hatch Regional</td>
<td>Computer Use</td>
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<td></td>
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<tr>
<td>Sub Total</td>
<td>Computer Equipment</td>
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<td>Benefits (est.)</td>
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<tr>
<td>Sub Total</td>
<td>Travel</td>
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<td></td>
<td>138,000</td>
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<tr>
<td></td>
<td>Printing and Supplies</td>
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<tr>
<td></td>
<td>166,000</td>
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<tr>
<td></td>
<td>Other</td>
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<tr>
<td></td>
<td>69,000</td>
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<td>Fed. Government</td>
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<td>State</td>
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<tr>
<td>Industry</td>
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<td>Foundations</td>
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<td>Sub Total</td>
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<tr>
<td>Total</td>
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<tr>
<td></td>
<td>Total</td>
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<td>1,959,000</td>
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<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>1,359,000</td>
</tr>
</tbody>
</table>
### Contracts and Grants Projects

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

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

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

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

<table>
<thead>
<tr>
<th>Congressional Testimony and Press Briefings</th>
<th>Professional Meetings, Seminars, Conferences, and Workshops</th>
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<tr>
<td></td>
<td>Iowa</td>
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<td>-----------------------------</td>
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<tr>
<td>Stanley R. Johnson</td>
<td>3</td>
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<tr>
<td>William H. Meyers</td>
<td>2</td>
</tr>
<tr>
<td>Other CARD Staff</td>
<td>5</td>
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<tr>
<td>Total</td>
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Table 2. Number of CARD Staff Presentations, 1985-86

<table>
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<th></th>
<th>Iowa</th>
<th>National</th>
<th>International</th>
<th>Total</th>
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<td>William H. Meyers</td>
<td>2</td>
<td>6</td>
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<tr>
<td>Other CARD Staff</td>
<td>3</td>
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Appendix

CARD Publications, 1985-86

CARD Report


Working Papers


Staff Reports


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.
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External Publications, 1985-86

Articles


Reports, Chapters in Books and Proceedings, and Papers


