

Update to the

PLAN OF WORK

Iowa State University

Iowa Agriculture and Home Economics Experiment Station

Cooperative Extension Service

Federal Fiscal Years

2000-2004

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I. Planned Programs:

1862 Research

GOAL 1: An agricultural system that is highly competitive in the global economy.

Program 1. Food Crops

Statement of Issue:

Three key issues addressed by this plan of work: (1) Better adapted fruit and vegetable cultivars, (2) a greater understanding of basic plant biological processes, and (3) more efficient cultural practices.

The first issue is better adapted fruit and vegetable cultivars. To remain competitive in our rapidly changing global economy, commercial fruit and vegetable producers must adopt new cultivars that are productive, have improved shelf life or nutritional value, or are more tolerant of biological and environmental stresses associated with Iowa growing conditions. Such stresses include soil and air borne diseases, insect and mammalian pests, soil physical and chemical properties, drought, and low temperature. The production of high value perennial fruit crops in Iowa has been limited by species and cultivar tolerance to low temperatures. With establishment costs ranging from \$1,800 per acre of strawberries to over \$4,000 per acre for apples and grapes, improper cultivar selection can be devastating. Before new cultivars can be recommended, they must be thoroughly evaluated under Iowa environmental conditions.

The second issue is developing a greater understanding of basic plant biological processes. Our culture of high value fruits and vegetables has relied heavily on the use of pesticides to protect our crops with as many as 20 sprays being applied per season. Such control measures add to the cost of production and are potentially at risk to the environment. The loss of fruits and vegetables following harvest can account for as much as 30% of the crop. To reduce the high reliance on chemicals for crop protection and reduce postharvest loss, alternatives to chemical controls need to be developed, but first we must develop a better understanding of plant functions at the biochemical level.

The third issue is identifying more efficient cultural practices. To remain competitive in our rapidly changing global economy, commercial fruit and vegetable producers must look to more efficient cultural practices that either increase productivity, improve market returns, or reduce our reliance on agricultural chemicals. However, adopting new cultural practices is not without an additional cost or risk. Therefore, before new cultural practices can be recommended, they must be thoroughly evaluated under Iowa environmental conditions.

Performance Goals:

The target level of performance is explained in the following three goals:

- Disseminate basic information. Provide a broad range of users (scientific community, extension specialist, agricultural producers, home gardeners) with critical information on the adaptability and productivity of fruit and vegetable cultivars.

- Disseminate basic information. Provide a broad range of users (scientific community, plant breeders, seed producers) with basic information on the biochemical pathways regulating disease resistance and fruit ripening.
- Disseminate basic information. Provide a broad range of users (scientific community, extension specialist, agricultural producers, home gardeners) with critical information on the adaptability of improved cultural practices under Iowa environmental conditions.

Output Indicators:

Outputs can be separated into reports and engagement with audiences.

- Reports
 - Number of research reports to the scientific community.
 - Number of technical reports for active producers and home gardeners.
 - Number of new and revised extension publications for active producers, home gardeners and the general public.
- Engagement
 - Number of workshops or seminars for active producers.
 - Number of field days to show activities to active producers.
 - Number of presentations to shareholders.
 - Number of presentations to scientific community.

Outcome Indicators:

This program has the potential to have the following impacts:

- Improved selection of fruit and vegetable cultivars.
- Identification of regulators that affect biochemical pathways.
- More effective and affordable disease pest management tactics.
- More efficient fertilization and irrigation practices.
- More efficient cultural practices.

Key Program Components:

This project has three key components addressing the three issues:

- Basic that leads to applied research.
- Multiple sites: field, laboratory, and greenhouse.
- Field days.

Internal and External Linkages:

This program involves linkages at three levels: university, state, federal.

University linkages

- Researchers and extension specialists in other departments and interdepartmental programs
- Leopold Center for Sustainable Agriculture
- Peer researchers at other Land Grant universities

State linkages

- Iowa Department of Agriculture and Land Stewardship
- Iowa Department of Economic Development

- Iowa Department of Natural Resources
- State and national commodity organizations
- State and federal extension service

Federal linkages

- U.S. Department of Agriculture and its agencies
- National and international scientific societies

Target Audiences:

Commercial fruit and vegetable producers and home gardeners, landowners, Extension faculty and staff, graduate and undergraduate students, consultants and industry representatives, and scientific collaborators and peers.

Program Duration:

Five years

Allocated Resources:

Year	SYs	State and Hatch funds
FY99	2.5	\$ 289,776
FY00	2.6	295,571
FY01	2.6	301,482
FY02	2.7	307,512
FY03	2.7	313,662
FY04	2.8	319,936

Program 8. Improved Grazing Systems for Beef Cattle Production and Enhancement of Environmental Quality

The work described in this program is now being performed under multistate project NC-225, and will be reported on under the Hatch multistate reporting procedures.

GOAL 3: A healthy, well-nourished population.

Program 18. Improving Human Foods: Functionality, Selection and Nutrition

Statement of Issue:

This project will focus on improving the foods people consume. The scope of the research will cover improvements in all consumer aspects of foods including functional, sensory, economic, nutritional, and selection criteria. Research will span from developing more effective nutrition education tools to understanding fundamental principles of food ingredients, nutritive value and bioavailability. The overarching objective of this project is to improve human food consumption patterns to provide for a healthy, well nourished population. An additional objective is to support the development of a reliable food industry that can sustain this population.

Diet and nutrition are major factors in assuring adequate growth in children and adolescents, maintaining optimal health, and preventing acute and chronic diseases such as heart disease, osteoporosis, diabetes and cancer. At a time when the information linking diet and health is increasing, consumers in the United States and other countries in the world are becoming more dependent upon processed and packaged foods for a larger proportion of their diet. This results in a critical need to develop foods with improved nutritional properties that will maintain optimal health and prevent disease. Tight integration and cooperation between nutritional sciences and food sciences is critical to improving the nation's health. This approach is an essential component of health care reform and will help to contain health care costs that threaten to bankrupt the nation. Although a "healthy food" industry is gaining momentum, this industry needs guidance from scientists to provide the scientific basis for functional foods and to develop food products that will actually make people healthier, be cost effective, and be marketable.

Performance Goals:

- Improve our understanding of the principles of ingredients and flavor of foods.
- Increase our understanding of human nutritional needs and nutrient metabolism.
- Assess and optimize bioavailability of dietary components.
- Determine optimal dietary intakes for health maintenance and disease prevention.
- Develop strategies for improving the quality and nutritional value of consumer foods.
- Develop novel foods and food ingredients that will help prevent human disease.
- Improve tools for food surveys and nutritional assessment.
- Optimize market aspects of improved food products.
- Develop strategies for effective nutrition education.
- Improve our understanding of dietary and feeding choices.

Output indicators:

- Number of people in Iowa eating healthy diets.
- Number of health promoting foods available to consumers.
- Number of food companies willing to take the risk of developing improved foods.
- Percent of the public aware of health promoting dietary and feeding behaviors.
- Number of research reports to the scientific community, technical reports and workshops and interpreted information for potential producers, the general public and schools, and cooperative services to state agencies.

Outcome indicators:

- Greater understanding of food components as they influence food properties and nutritional value.
- Improved strategies for providing foods to the consumer that fit today's lifestyle.
- Increased availability and consumption of health promoting foods by people.
- Assistance to food companies in developing profitable foods that will improve human well being.

Key Program Components:

- Study the impact of food constituents on chronic disease indices.
- Research mechanisms of dietary prevention of disease.

- Assess bioavailability and bioactivity of nutrients and non-nutrient constituents of foods.
- Research detoxification of dietary toxicants.
- Study the effects of processing on bioavailability and bioactivity of dietary constituents.
- Investigate the impact of social and economic factors on food choices.
- Research to improve tools for assessment of dietary intake and nutritional status.
- Study dietary and feeding habits associated with optimal growth.
- Research the educational programs that will effectively inform and fully educate people about all the related issues of food and nutrition.
- Assess the impact of food perceptions, acceptability of products, and marketing on sales.

Internal and External Linkages:

- Experiment station projects on improving the quality and safety of muscle foods and on food safety, Extension project 330 that focuses on diet and health (Nutrition: choices for healthy FY 2000-2004)
- Center for Designing Foods to Improve Nutrition and Center for Crops Utilization Research
- Food industries, local and national
- State agencies that focus on health and education, Iowa Department of Health, Iowa Department of Education
- Government agencies that address food and nutrition policy, FDA, USDA, NIH
- Professional organizations that focus on human foods and nutrition
- National and international foundations and research/educational institutions that aim to improve human health and prevent disease through better dietary intakes

Target Audiences:

Consumers, food processors, food companies, nutrition companies, and health care providers.

Program Duration:

Five years

Allocated Resources:

Year	SYs	State and Hatch funds
FY99	4.7	\$ 768,217
FY00	4.8	783,581
FY01	4.9	799,253
FY02	5.0	815,238
FY03	5.1	831,543
FY04	5.2	848,174

GOAL 3: Impacts

A healthy and well-nourished population through the development and dissemination of information on new or improved methods, practices, and products that will result in:

- Increase in the availability of health promoting foods for consumers.

- Increase in risk-taking by food companies in developing improved foods.
- Increase in the public's awareness of health promoting dietary and feeding behaviors.
- Increase in information disseminated through ISU extension project 330 ((Nutrition: choices for healthy FY 2000-2004).
- Improved food selections that will enhance nutritional status and improve health of the general population of Iowa, the United States, and the world.

GOAL 4: An agricultural system which protects natural resources and the environment.

Program 19. Sustainable Agriculture

Program 19 has been eliminated. It is a redundant program (duplicative of Program 20: Sustainable/Organic Agriculture, and Program 21, Sustainable and Environmentally Safe Management of Soil Resources). The resources have been reallocated to Programs 20 and 21.

GOAL 5: Enhanced economic opportunity and quality of life for Americans.

Program 31. Fundamental Social Sciences

Program 31 has been eliminated. The resources have been reallocated to Program 27: Rural Development.

1862 Extension

GOAL 1: An agricultural system that is highly competitive in the global economy.

Program 103. Crop Nutrient Management

Statement of Issue:

Having nutrients readily available for plant uptake is essential for crop production. Management of all nutrient sources, including fertilizer and manure, within the constraints of farm production systems and operational goals are prerequisite for both profitable crop production and environmental sustainability. Inappropriate management can lead to reduced economic return and potential environmental degradation. The environmental consequences are especially pertinent to nitrogen and phosphorus. In a statewide survey of producers conducted in Iowa (1998 Iowa Farm and Rural Life Poll), as an example, only 47 percent of crop producers reported they adjusted commercial fertilizer rates after applying manure to a field, and 59 percent used judgment alone when determining manure application rates. Applying those statistics across all of Iowa's counties, and recognizing that fertilizer use is a major input cost for crop production, touches on the importance of recognizing and appropriately using multiple sources of nutrients in crop production systems. Doing so will help Iowa producers optimize systems for comprehensive farm planning and maintain long-term economic viability and environmental stewardship.

Performance Goals:

- Adoption of best practices for fertilizer and manure management by crop producers, livestock producers, agency personnel, nutrient management planners, and nutrient suppliers (fertilizer and agricultural chemical dealers, livestock industry, and commercial applicators).
- Develop an Iowa society of production agriculturists that emphasize and incorporate nutrient planning into crop and livestock production systems.
- Minimize negative impacts on water, air, and soil quality by optimizing adoption of the most efficient use of available crop nutrients and by development and use of best storage and application technology for fertilizer, limestone, and manure.
- Provide manure certification training to livestock producers and commercial manure applicators as required by state law.
- Understand and evaluate the economic and environmental potential of site specific technology in nutrient utilization.
- Employ animal feeding strategies to reduce manure nutrient content.

Output Indicators:

- In cooperation with the Natural Resources Conservation Service (NRCS), develop and educate audiences about the Phosphorus Index Risk Assessment Tool for estimating delivery of phosphorus to surface waters from farm fields.
- 2,500 confinement site manure applicators and 1,000 commercial manure applicators must meet certification requirements by Iowa law during this program planning cycle.
- Development and expansion of nutrient management information and educational web sites including: fertilizer use and management (NPKnowledge web site), Iowa Manure Management Action Group (IMMAG), policy and legislative issues, and nutrient management programs (fertilizer and manure workshops, manure certification, manure nutrient planning).
- New machine technology development that allows uniform field application of all agronomic rates of limestone and manure.
- Produce, update or revise handbooks, newsletters, and bulletins as appropriate.
- Hold workshops, field days, farm/field visits, and ICN (Iowa Communications Network two-way video and audio communications sessions) as appropriate.
- Establish field plots to evaluate manure application and crop nutrient use.
- Track web site hits and publication distribution.

Outcome Indicators:

- P-index utilized with 100% of producers where required for NRCS nutrient management plans.
- 65 percent of manure nutrient plans will be implemented.
- 60 percent of Iowa producers will implement a systematic soil sampling program, compatible with ISUE recommendations.
- 50 percent of manure producers will have their manure tested for nutrient content at least once.
- 60 percent of producers who use manure as a crop nutrient will take appropriate credit for the manure nutrients.
- 100 percent of manure applicators who are required by law to be certified and that attend training will be provided education programs to meet state certification standards.

Key Program Components:

Educational Meetings and Activities

- Certification meetings.
- On-going Iowa State University (ISU) Extension agribusiness education programs.
- Manure nutrient management workshops.
- Manure planner workshops.
- Development of successful agribusiness activities to commercially provide comprehensive nutrient planning.

On-farm Activities

- One-on-one on-farm visits.
- On-farm nutrient demonstrations - evaluation/demonstration of new nitrogen and phosphorus management techniques.
- Manure and limestone applicator calibration/application techniques.
- Manure nutrient content and managing manure nutrient variability.
- Manure nutrient availability studies, fertilizer rate studies, watershed projects, statewide nutrient management research/demonstration projects.

Written Communications

- Newsletters, web sites, publications.

Internal and External Linkages:

Partners

- Iowa State University College of Agriculture and appropriate departments and researchers
- Iowa State University Research and Demonstration Farms
- Natural Resources Conservation Service
- Iowa Department of Natural Resources
- Iowa Pork Industry Center
- Iowa Beef Center
- Leopold Center for Sustainable Agriculture
- Iowa Poultry Association
- Farm Bureau
- Agribusiness Association of Iowa
- Iowa Department of Agriculture and Land Stewardship
- Iowa Environmental Council
- Iowa Pork Producers Association
- Iowa Cattlemen's Association
- Independent Crop Consultants
- Certified Crop Advisors
- Other certification programs, community colleges, and farm equipment manufacturers

Efforts

- Host meetings of extension nutrient management specialists from the North Central Region to enhance discussion and collaboration on emerging nutrient management planning issues and concerns.
- Promote sharing of certification training materials across states and institutions and co-develop educational materials.
- Use multi-state Environmental Protection Agency (EPA) curriculum.
- Promote development and use of low-rate manure and uniform distribution limestone application equipment.

Target Audience:

Crop and livestock producers, crop consultants, Future Farmers of America (FFA) Advisors, agribusiness employees, nutrient management planners, regulators, legislators, agency personnel, non-farm public. All meetings and events are open and accessible to all. The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964.

Project Duration:

Five years

Plan for Resource Development:

Assess users appropriate fees for educational materials and programs to recover costs when needed. Contract educational meetings and materials for agency programs and certification. Additional funding resources for educational programs, materials, and on-farm activities may be available from Iowa Department of Natural Resources grants, EPA 319 funds, USDA/EPA Unified CAFO strategy, Leopold Center, Iowa Pork Industry Center, REAP, Agricultural Experiment Station, Agribusiness Association of Iowa, Farm Bureau grants to counties program, Iowa Legislature, commodity groups, United States Department of Agriculture/NRCS EQIP funding.

Committee Members: John Creswell, Jack Frus, Mitch Hoyer, Jim Johnson, Paul Kassel, Randy Killorn, Kris Kohl, Jeff Lorimor, Antonio Mallarino, Dan Meyer, Angie Rieck-Hinz, John Sawyer, Laura Sternweis.

Allocated Resources:

Year	SYs	State and Federal funds
FY99	11	\$ 633,583
FY00	11	643,016
FY01	11	652,637
FY02	11	662,451
FY03	11	672,461
FY04	11	682,671

Program 107. Iowa Beef Center

Mission statement: "To enhance the vitality, profitability, and growth of the Iowa beef industry."

Statement of Issue:

Iowa beef producers must make significant strides to improve the quality and assure the safety of their product while reducing production costs in order to sustain the profitability of their beef enterprise. It is estimated that Iowa cattle producers have averaged approximately \$1.00 per head in cow-calf herds and \$12 per head in feedlots over total costs. The economic sustainability of these commodity beef enterprises will face increasing challenges in the years ahead due to narrowing operating margins, increasing input and output price risk, evolving value-based marketing standards, and rising food safety concerns. These same challenges also offer opportunities for Iowa cattle producers that have the information and skills to access emerging higher value markets and allocate available resources more efficiently. Well-managed profitable beef production systems add value to forages, grains, and operator inputs, reduce soil erosion and protect water quality, and stimulate economic activity via locally purchased inputs and services. Insufficient profit from beef enterprises will result in more acreage moving into grain production and increased exporting of raw grain products from Iowa communities.

Performance Goals:

- Increase the adoption of beef quality assurance practices.
- Reduce production costs and increase revenue of Iowa cattle producers.
- Expand cattle management practices that protect the environment, particularly water quality.

Output Indicators:

- Develop decision analysis tools to evaluate alternative markets for fed cattle and resource allocation questions for cow-calf operations.
- Conduct educational programs and demonstrations on value-based marketing, year-round grazing, alternative calving systems, and environmental management.
- Utilize Iowa Beef Center web site, newsletters, radio interviews, and print media to inform and educate clientele.

Outcome Indicators:

- Iowa produced beef will increasingly exceed national benchmarks on quality measures.
- Certify over 1,000 Iowa cattle producers in Beef Quality Assurance standards and work to develop Iowa standards for safe, high quality beef.
- The number of cow herds using SPA records for management decisions and to document and reduce production cost will double.
- The number of producers participating in source verified programs will double.
- The number of producers regularly selling fed cattle in grid marketing systems will increase five-fold.
- Iowa feedlots will dramatically increase their understanding of and investment in run-off control technologies and manure management.

Key Program Components:

Demonstration projects will involve producers in the learning process including:

- Collecting and analyzing carcass data, closeout records, and marketing alternatives.
- Evaluating of Iowa owned sires for beef tenderness and carcass characteristics to establish references sires for preferred quality measures.
- Alternative calving dates and year-round grazing involving commercial herds.
- Evaluating alternative certification systems (ISO 9000, Process Verified) for beef supply chains.
- Facilitating joint programs with out-of-state cow-herd owners feeding cattle in Iowa feedlots.

Provide computer decision analysis tools to improve producer management decisions.

- Hire staff to spearhead development of user-friendly computer spreadsheet programs.
- Train staff and allied industry professionals in use of decision tools and interpreting the output.

Increase visibility of and respect for the Iowa Beef Center as source of timely and relevant beef information.

- Media specialist will work with campus and field staff to increase the amount and quality of materials from the Iowa Beef Center that effectively reaches clients.
- Develop and maintain an innovative, high-quality web site for Iowa beef producers.
- Multi-county educational programs on emerging technologies and practices.

Internal and External Linkages:

- College of Agriculture
- Animal Science
- Agronomy
- Economics
- Agricultural and Biosystems Engineering
- College of Veterinary Medicine
- Veterinary Diagnostic Production Animal Medicine
- Extension field staff
- Livestock, Farm Management
- Crops, agricultural engineers
- County Extension education directors
- Iowa Agriculture and Home Economics Experiment Station
- Meat Export Research Center
- Leopold Center for Sustainable Agriculture
- Iowa Cattlemen's Association
- Iowa Quality Beef
- Iowa Beef Industry Council
- Iowa Farm Bureau
- Iowa Department of Natural Resources
- Iowa Department of Agriculture and Land Stewardship

- Iowa Department of Economic Development
- Iowa Veterinary Medical Association
- Chariton Valley Beef
- Cow Herd Improvement Program
- Precision Beef Alliance
- Community colleges

Target Audiences:

The primary audience is Iowa cattle producers, allied industries, and professionals that serve them. The focus will be on commercial sized beef cattle enterprises with cow-calf, backgrounding, and feedlot operations. Programs will also include or be developed for part-time farmers with cattle operations and youth projects.

Project Duration:

Intermediate

Plan for Resource Development:

Extension 21 Value-Added and Precision Agriculture funds are currently the core resources for the Iowa Beef Center. These resources will be leveraged by cooperative work with other agencies and other funding sources such as: CSREES, Iowa Cattlemen’s Association, National Cattlemen’s Beef Association, Iowa Department of Natural Resources, Iowa Department of Economic Development, Leopold Center for Sustainable Agriculture, Iowa Farm Bureau, Natural Resource Conservation Service.

Allocated Resources:

Year	SYs	State and Federal funds
FY99	20	\$ 1,700,912
FY00	20	1,725,438
FY01	20	1,750,454
FY02	20	1,775,970
FY03	20	1,801,997
FY04	20	1,828,544

Program 121. Value-Added Agriculture

Statement of Issue:

Iowa production agriculture is facing new challenges and opportunities due to revisions in government policies, shifting consumer demand, international economic changes, structural reorganization and other factors. To capitalize on these challenges, Iowa producers are seeking new products, relationships, markets, processes, quality systems and other opportunities to differentiate their products from traditional commodities. ISU Extension will provide leadership in helping Iowans realize value added ag opportunities and encourage and assist in producer and community initiated, value-added agriculture activities.

Performance Goals:

- Increase the understanding of producers, processors, distributors, certifiers, consumers and marketers of those factors that drive consumer demand (social, technological, cultural, ethnic, food safety, cause, etc.).
- Increasing producer net income through attribute and quality pricing of meat and livestock co-products.
- Increase access to local markets for Iowa producers and processors, and increase community awareness of the potential of local food system enterprises.
- Increasing net producer income through component/attribute pricing of corn and soybeans.
- Assist producers and agribusiness to increase their incomes by moving up the food, fiber and fuel chain to participate in the merchandising and processing of their products/commodities.
- Assist producers and agribusiness to create effective producer networks, businesses and alliances.

Output Indicators:

- Develop a certified training program for food chain attributes for producers and processors, in differentiated markets such as organic, natural, environment, social, etc.
- Conduct two in-depth training sessions on ISO quality systems for Extension staff. Ten people will be trained annually.
- Attend classes and pass examinations so that two ISU Extension staff will become certified ISO auditors each year of this plan of work.
- Conduct four sessions yearly to acquaint producers with transitioning to organic production and one-on-one counseling will be conducted with 40 producers.
- Hold at least two education seminars to acquaint producers and processors with the tenants of quality systems and ISO, so they can incorporate this knowledge into their operations.
- Convene yearly a statewide conference to update Iowans on changing market preferences in food products.
- Assist the Iowa Department of Economic Development (DED) with getting processors and growers to participate in the “Taste of Iowa,” campaign.
- Develop/locate of a processing facility that will reward producers for quality attributes.
- Identify pricing mechanisms to reward producers and processors.
- Disseminate consumer preference information to producers, industry and consumers.
- Train at least 40 staff and service providers in-depth on local food systems.
- Provide readily accessible information (web, directories, printed materials) on local markets for Iowa producers and processors.
- Conduct five regional hands-on workshops for producers, food service providers, community leaders, and agribusiness representatives to teach local food system skills annually.
- Assist eight Iowa communities to plan and develop local food system projects annually.
- Increase by 20 percent the number of local food system projects in Iowa.
- Conduct a feasibility study on the practicality of component/attribute pricing.
- Increase by 10 percent the number of growers participating in a pilot area, who are capturing premiums for above average grain components.

- Increase by 20 percent the number processors offering component pricing incentives.
- Develop pricing mechanisms to reward producers and elevators.
- Disseminate information on component/attribute pricing to producers, industry, and consumers via the web based, video and other media based delivery methods.
- Develop the value-added business skills of 10 extension field staff members.
- Develop three business models for value-added businesses.
- Work with three regions of the state to develop asset maps to help community leaders determine the value added ag businesses, which are the best fit for the natural, human and cultural assets.
- Develop the network/alliance skills of 10 extension field staff yearly.
- Create two network/alliance organizational models yearly.
- Develop and expand six producer networks.
- Facilitate 30 meetings, workshops or seminars to acquaint producers with producer networks, alliances and businesses being formed.

Outcomes Indicators:

- Act as ad-hoc advisors for the ISO quality system projects.
- Conduct three feasibility studies annually, which explore opportunities in organic marketing, processing or other niche markets.
- 100 additional producers each year will be able to document their production protocol.
- 25 producers will be ISO certified and maintain their certifications.
- Certified organic production will increase by 25 percent annually.
- Participants in the Taste of Iowa marketing project will increase by 15 percent annually.
- 75 to 100 producers will be trained in humane animal production techniques and will sell their products into these certification systems.
- Information on niche market opportunities will be posted on the iowaagopportunity.org web page.
- Increase by at least 10 percent, fresh and processed food served through institutions which was produced and/or processed in Iowa.
- Establish an information clearinghouse on local food systems, including projects underway in Iowa and other states.
- Increase by 10 percent producer groups enrolling in the "Taste of Iowa" program.
- Increase by 20 percent the number of producers selecting varieties that promote higher end use.
- Creation or expansion of 10 value-added businesses with ownership of these businesses by 150 producers.
- Generation of \$15 million value-added business profits yearly, creating 80 new jobs and providing economic wealth generation of an additional \$90 million economic activity.
- Creation or expansion of six producer networks/alliances and increase producer membership of 1,000 or more in the networks.

Key Program Components:

- Develop entrepreneurial and business skills.

- Supply networks and alliances through conferences, workshops and other educational programming, as well as printed, web-based and video materials for individuals and organizations.
- Teach topics such as strategic planning, business start-ups, organizational development and support, quality systems, ISO criteria, feasibility, capitalization, market research and development, and potential technology transfer and application.

Through the value added ag program, key agency personnel such as commodity and farm organization staff, Extension, USDA Rural Development and RC and D staff and others will be provided training in capacity building to assist the farmers and community entrepreneurs.

Internal and External Linkages:

- All agricultural commodity boards and general farm organizations
- Iowa Crop Improvement Association
- Iowa Department of Agriculture
- Iowa Department of Economic Development
- Iowa Department of Natural Resources
- USDA Rural Development
- Iowa Institute for Cooperatives.
- ISU Center for Advanced Technology and Development
- ISU Center for Crops Utilization Research
- ISU Center for Manufacturing Technology
- ISU Center for Industrial Research and Service
- ISU Meat Laboratory
- ISU Iowa Pork Industry Center
- ISU Iowa Beef Center
- ISU Grain Quality Laboratory
- Leopold Center for Sustainable Agriculture
- Center for Designing Foods to Improve Nutrition

Target Audiences:

Farmers and agribusiness professionals and others who have an interest in developing value added ag businesses are the primary target audience. Particular emphasis will focus on small-scale and minority farmers. Other individuals and organizations involved in community and economic development will be targeted to provide them the capacity building skills to work with community-based value added agricultural groups.

Project Duration:

Five years

Allocated Resources:

Year	SYs	State and Federal funds
FY99	8	\$ 994,365
FY00	8	1,009,457

FY01	8	1,024,851
FY02	8	1,040,553
FY03	8	1,056,569
FY04	8	1,072,906

Education and Outreach Programs:

ISU Extension will work closely with other institutions to develop and deliver programming. Partnerships and collaborations with the 16 state regional value added group, ISU has been convening will be expanded.