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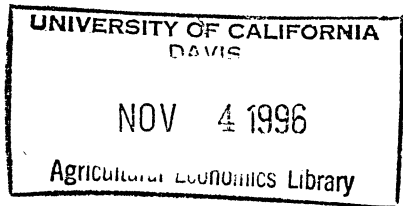
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**INNOVATION IN EXTENSION PROGRAMS:  
EXAMPLES OF PROGRAMS  
RELATED TO AGRICULTURAL ECONOMICS<sup>1</sup>**

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San Antonio, Texas.



<sup>1</sup> Updated 25 Jul 96; project developed by H. Bahn, D. Holder, D. West, F. Woods (each national program leaders, CSREES, USDA) and L. Sanders (Professor & Extension Economist), Oklahoma State University.

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Agricultural extension<sup>26</sup>

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## INTRODUCTION

Change is pervasive, and with all the emphasis on creating fresh new ideas to solve problems, some might assume that elements of the land grant system like extension are behind or remiss in adjusting programs to this rapidly changing environment. A review of activities in the states quickly shows the casual observer that, in fact, extension professionals are (and have been for decades) among the leaders in agricultural education innovation, and that is often linked with innovative research from the land grants.

The purpose of this paper is to begin an overview of a narrow segment of innovative extension programs, selected primarily from the agricultural economics discipline. Hopefully other disciplines will begin to catalog their innovative successes as well. Selection was not based on a scientific sampling, nor do these programs necessarily represent the "best" among new approaches. They were collected during conversations with agricultural faculty and business people across the country while "Managing Change in Agriculture" was being developed as a proposal. For every program summarized here, there are likely several similar programs operating in other states or regions.

The programs herein summarized are intended to be both catalysts and models of problem solutions that some entrepreneurial extension educators and agricultural business people have devised. Some are examples of programs that have been adapted from other states. The common threads, perhaps, are that these programs are successful by evaluation criteria and in observable results, they are "cutting edge", and they are adaptable, not only to other states and regions, but likely to other audiences, enterprises, businesses or problems (e.g., a dairy program adapted for horticulture).

Most programs summarized share several of these characteristics:

1. developed to deliver measurable results on coping with change.
2. integrate/synthesize family-business-production goals and learning styles.
3. modular and generalizable or adaptable.
4. innovative, often tied to new technology.
5. likely multi-disciplinary and multi-specialty; often multi-agency or multi-institutional.
6. require a commitment by both the user and the professional.

As a result of these and similar programs, participants will be able to apply many of these skills:

- develop effective strategies to adjust to change;
- use a greater variety of risk management techniques;
- respond more rapidly to market signals;
- develop integrated systems approaches;
- carefully evaluate and adopt technology;
- choose survival and growth options using innovation and science-based knowledge;
- understand and participate in resolution of public issues involving trade-offs between economic returns, environment, community, and other concerns.

The table at the end is not inclusive of all programs, but also a beginning snapshot of many of the programs by type with which the authors are familiar. Feedback and suggested additions to both the summaries and the table are not only welcome but encouraged. Also solicited by the authors are "success stories" of producers/agribusinesses who have benefitted from such programs, and "lessons learned" from educators, researchers and program participants on what has worked and what has not worked.

If the reader has suggestions for additions that seem to fit please send a one-page summary in the format that follows to:

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Or, you may send it electronically to: [lsander@okway.okstate.edu](mailto:lsander@okway.okstate.edu).

Or, you may send it by fax to: 405-744-8210.

Or, you can call at 405-744-9834.

PROGRAM TITLE: "Participating in the Global Marketplace" & related programs of the International Marketing Program for Agricultural Commodities and Trade (IMPACT) Center

FOCUS/CONTENT: Advising/training agribusinesses & others in international marketing

PROGRAM TEAM: Various faculty from the College of Agriculture and Home Economics, WSU

PROJECT CONTACT: A. Desmond O'Rourke, IMPACT Center, Washington State University

SUPPORT LEVELS: Mix of federal, state and private grants; state developed and implemented, occasionally jointly with private companies and associations, as well as other state agencies

DESCRIPTION:

IMPACT, established to support the marketing efforts of private firms and agricultural commissions and associations, is a unit of the College of Agriculture and Home Economics at WSU. The program leaders have carved out a new niche for land grants and extension in advising, training and technically assisting agribusinesses and others in international marketing. Since it draws on a variety of university expertise to address technical, economic and social problems arising in international marketing, it is a multidisciplinary endeavor. Primarily the program is responsible for collecting and distributing market information, applying research to export problems, and developing new products, services and processes that help Washington agricultural exporters develop foreign markets.

Programs such as "Going Global: Developing an International Market" provide workshops for owners and managers of businesses who are considering or are entering an international market with products or services and inservice for extension professionals who will work to meet the needs of clientele interested in international markets. Customized workshops for other specific groups have also been developed around specific trade issues such as trade policy (CUSTA, NAFTA, GATT), trade with Mexico, women's values and global issues, market development, firm-level assistance, youth and the world, and others. While programs are uniquely designed to respond to specific needs for Washington exporters, their structure and implementation can be adapted in other states.

Success stories include technical assistance to sweet cherry shippers, dairy cattle, and apples; market development for onions, apples, hay and wood; market assessment on trade policy impacts for Washington exportable products and commodities. Such activity deserves to be highlighted as an example of both what the system is already doing and where more states may want to be heading.

PROGRAM TITLE: PRO-DAIRY

FOCUS/CONTENT: Dairy Farm Profitability and Productivity

PROGRAM TEAM: Interdisciplinary instruction team consisting of ag econ, dairy science and agronomy at state and area level. Teaching teams are dairy, farm business management and fieldcrops agents and specialists. University faculty are also highly supportive in helping create curricula.

PROJECT CONTACT: Clint Young, Cornell

SUPPORT LEVELS: Cornell initiated; extensive inservice program for teaching teams has been attended by other state extension professionals, enabling adaptation by several states

DESCRIPTION:

PRO-DAIRY, initiated by Cornell CES and being adapted by several states, is a new dairy management workshop that uses a comprehensive management and production technology approach by extension to enhance producer profitability in a changing environment. The program involves producer participation in a curriculum that includes a management process and management skills; feeding, forage, milk quality, finance, heifer, records and nutrient management, reproductive management, manure management, pasture management; human resource subjects such as communication, leadership and conflict management; and, an introspective planning program called Your Dairy In Transition. The instructional team is interdisciplinary. Size and type of operation are not criteria for participation.

The first course is "Managing for Success" and includes understanding and developing personal and farm mission, objectives and goals; problem solving and implementing tactical plans. This is followed by a "Management Clinic" with one-on-one assistance by the team. Next are a series of "Management Focus Workshops" to help managers view the technical material through a management screen to determine what is appropriate technology for their operations. There are also customized sessions for such audiences as agriservice reps. A unique aspect of PRO-DAIRY is the empowered workshop. Teachers are known as facilitators and lecture is limited. The workshop approach gains the highest marks in evaluations by participants. Agriservice is also extremely important in support (creating awareness and encouraging client participation) of workshops.

Ohio, Pennsylvania, Washington, Tennessee, South Carolina, Michigan, New Hampshire, Vermont and North Carolina (see next summary) have all implemented PRO-DAIRY type programs. Also, Cornell has adapted PRO-DAIRY for horticultural producers and other states may follow. Ohio has developed extensive programs in other commodity areas.

PROGRAM TITLE: DAIRY-WISE

FOCUS/CONTENT: Dairy Farm Profitability and Productivity

PROGRAM TEAM: Interdisciplinary instruction team consisting of ag econ and dairy science area level; other expertise added on an "as-needed" basis.

PROJECT CONTACT: Geoff Benson, NC State

SUPPORT LEVELS: Cornell initiated; inservice program to allow adaptation by North Carolina and several states

DESCRIPTION:

DAIRY-WISE, adapted from Cornell's PRO-DAIRY, is a new dairy management workshop that uses a comprehensive management and production technology approach by extension to enhance producer profitability in a changing environment (see previous summary).

NC State began a "pilot" program in early 1995 to adapt PRO-DAIRY from Cornell to its own state needs. Initial meetings were held for young dairy couples for four successive Tuesday evenings for a meal and a discussion group. There were no formal presentations, no overheads, few handouts. The program team of extension economists and production specialists drew on some of the management tools from Pro-Dairy, such as goal setting, tactical planning, "to do" lists, and combined these with technical material. Also discussed was time management, "is there a life outside the dairy", intergenerational issues (control, asset transfers, estate planning), waste management, and mastitis. They included one farm and one family topic each week.

The decision of the group to continue to meet as a monthly discussion group suggests a favorable response, as well as a new byproduct--supportive networking among producers who expressed previous feelings of professional isolation. That met one of the program objectives--to build a sense of community.



PROGRAM TITLE: The Natural Resources Leadership Institute (NRLI)

FOCUS/CONTENT: Resolving conflict related to natural resource use and environmental quality through leadership

PROGRAM TEAM: Several faculty from various departments of NC State University, the University of Kentucky, & the University of Arkansas.

PROJECT CONTACT: Leon Danielson or Steven Smutko, Dept. of Ag & Resource Economics and CES, North Carolina State University; Craig Infanger, University of Kentucky; Mike Hedges, University of Arkansas.

SUPPORT LEVELS: Developed and implemented by NC State and funded by W.K. Kellogg Foundation

DESCRIPTION:

Disputes over how land and water resources should be used and managed are perhaps the most common local public issue today. Recognition of the conflicts related to the environment and their resolution are an important part of the democratic process. This institute steers a new direction for extension in both audience and skill development, based on tools and methodology from public policy education, public issues education, conflict management and dispute resolution.

The Natural Resources Leadership Institute (NRLI) is structured around 5 3-day classroom sessions and a year-long practicum for selected applicants to study personal and group leadership skills, communication skills, dispute resolution techniques, environmental law and policy; and, develop professional roles for participation in the public policy debate process. Classroom time is divided between content and process. The practicum allows group and individual projects to apply the skills and information gained in the classroom to situations they face at work, in their organizations, or in their communities. Through the practicum, NRLI participants will seek collaborative solutions to natural resource issues with other stakeholders.

The program is now being adopted by several other states.

PROGRAM TITLE: The Executive Program for Agricultural Producers

FOCUS/CONTENT: Targets "ceo's" & senior management of large farms for comprehensive & intensive curriculum covering advanced management, domestic & international marketing, policy

PROGRAM TEAM: 18 faculty from U.S./Canadian universities/private sector

PROJECT CONTACT: Danny Klinefelter, Ag Econ Dept., TAMU

SUPPORT LEVELS: Public (TAMU & ES-USDA)-private (agribusiness firms) initial sponsorship; now self-supporting for direct costs.

DESCRIPTION:

When initiated 6 years ago, this was a relatively new direction for extension in both method and level of intensity. The program was generally adapted from the Stanford Executive Program for Small Companies and other similar programs from the nation's leading business schools to serve the perceived and anticipated educational needs of the management for the larger agricultural operations in the U.S. The program has had some 300 participants from 36 states, Canada and Mexico, including farm owners and managers, and about 10% non-producers such as extension, lenders and farm management association directors. While farm size of participants has ranged from \$500,000 to \$50 million, most are in the \$1-\$5 million range, with \$8 million being the average gross farm income. They are college educated, two-thirds having degrees in ag econ or business, and average 40 years of age (range 30-55). The target for solicited applications is primarily the top 47,000 U.S. farms (they produce 46% of US sales) and similar operations in other countries.

The program consists of two one week intensive resident instruction classes over a two year period. Content includes family business management, strategic planning, managerial accounting, marketing (commodity, export, product), tax management, farm programs, total quality management, financial management, human resource management, competing in the political arena, negotiation strategy, balancing business and family, business organization, buy/sell agreements and ESOPs, business transfer, and macro perspectives.

70% have returned in the second year, but 85% eventually complete the course, with some returning after an absence of at least one year. Instructional methods include lecture sessions, case study groups, faculty "bearpit" sessions, participant roundtables, special topic speakers, and structure for participants to learn from each other. These are managers who have likely attended other non-ag management courses, and will likely continue to do so. Feedback suggests that, had this program not been available, these participants likely would not have considered extension as a primary source of such assistance.

PROGRAM TITLE: Global Entrepreneurship Management Support (GEMS) & related programs

FOCUS/CONTENT: International marketing & policy for agribusiness

PROGRAM TEAM: ES-USDA support; multistate development/implementation (P. Rosson/associates, TAMU; L. Sanders/D. Henneberry, OSU; M. Reed/V. Vantreese, UK; B. Gauler, Missouri)

PROJECT CONTACT: Parr Rosson, Department of Agricultural Economics, TAMU

SUPPORT LEVELS: ES-USDA shared funding support w/several states; multistate development & implementation of pilot workshops; state continuation of ongoing programs

DESCRIPTION:

GEMS & related programs (i.e., "Going Global") are a new direction for extension in both comprehensiveness and subject matter. The primary purpose of GEMS is to provide resource materials on international marketing to CES and selected cooperators to enable them to assist agricultural and rural businesses to develop the necessary expertise to compete in the global marketplace. Materials developed for the program include a basebook International Marketing for Agribusiness: Concepts and Applications, an instructional videotape "Exporting Food and Agricultural Products: Strategies for Profit", and an instructional guide for teaching concepts related to international trade and marketing.

Two regional pilot workshops were held in 1993 in Stillwater, OK, and Lexington, KY, for extension personnel from 10 states. Workshop topics included trade theory, trade policy, assessing export readiness and developing an export marketing plan, market entry and pricing strategies, methods of payment, risk analysis and management, sources of information, export documentation, legal and tax considerations, and financial analysis of an international marketing plan. The overall package was rated good to excellent by 96%. The post-workshop survey indicated that 75% had made use of GEMS materials in program delivery.

State-level activities are continuing in several states, with some county agents now able to work directly with potential exporters. Materials have been distributed to 10 other countries and 34 states for adoption and use in extension programming efforts. Anecdotal feedback indicates that some county agents in Virginia, Missouri, Arkansas and Texas have incorporated export assistance in their plans of work and now have some experience in working with private companies and local communities on global marketing. Missouri, Arkansas, New Mexico, Oklahoma and Texas have conducted staff orientations, and some program building is taking place (see another case in this set entitled "Export Marketing-- Getting Started & related programs").

PROGRAM TITLE: Financial Recordkeeping with Quicken®

FOCUS/CONTENT: Financial recordkeeping/analysis

PROGRAM TEAM: Agricultural Economics (& Animal Science w/SPA)

PROJECT CONTACT: Adopted Program--Damona Doye, Ag Econ Dept., Oklahoma State University; Parent Program--Stokes-McGrann-Pena-Amosson, Ag Econ Dept., TAMU

SUPPORT LEVELS: State-level program, w/area/local agent support; public-private activity (Quicken® originally private-sector developed); public-farm organization collaboration, with Oklahoma Farm Bureau assisting.

DESCRIPTION:

First developed by Texas Extension Service for widespread use to improve farmers ability to do financial recordkeeping, analysis and decisionmaking, the Quicken® program is an example of an effort that was initiated in one state and has since been adapted by progressive extension educators in several other states, including Oklahoma. A broad base of expertise within OCES was augmented with Oklahoma Farm Bureau supporting with promotion and manpower. Since initial inservice, Quicken® workshops have been conducted with a variety of audiences (Extension staff, agricultural producers, women in agriculture, undergraduate students, 4-Hers) in many settings (local workshops, district and state in-service sessions, Oklahoma Cattlemen's College, Horticultural Industries Show, college classes, Young Farmers & Ranchers, multi-state workshops). Additionally, nonfarm audiences have participated in workshops focusing on investment features. Since 1993, well over 2000 producers have participated in three-hour Quicken® workshops. Workshops are ongoing, with area specialists as lead instructors. In addition to the "hands on" training, demonstrations have been provided to regional meetings of bankers and agricultural producers.

Participants are led through software applications to familiarize them with features and build skills as well as confidence with respect to the use of the software and computer. The instructions are spelled out step-by-step for self-paced independent study at home. New materials are developed to respond to producer questions and incorporate changes in new releases of the software. Workshop evaluations show 9 of every 10 gave the workshop high marks. A follow-up survey shows that over half of respondents indicated that their practices had changed as a result of the workshop. An extension of the workshops includes work with Animal Science faculty to link Quicken® to an integrated resource management program called Standardized Performance Analysis (SPA) software with selected Oklahoma cow/calf and stocker producers. SPA, an analytical approach to integrating production and financial results for use in decision-making for the individual farm or ranch, was developed at TAMU with input from National Cattlemen's Association staff and cattle producers from nine states who use the system on their ranches. Software development was financed by participating state Cooperative Extension Services and a grant from ES/USDA (now CSREES).

**PROGRAM TITLE:** Standardized Performance Analysis for Beef Cattle Enterprises

**FOCUS/CONTENT:** Reducing Beef Production Cost; Integrated Production and Financial Analysis

**PROGRAM TEAM:** National Beef Cattlemen's Association, SPA Committees, Integrated Resource Management Coordinating Committee, University Extension Agricultural Economists & Animal Scientists, Farm Financial Standards Council

**PROJECT CONTACTS:** State Integrated Resource Management Coordinators; Dan Kniffen, NCA; James McGrann, Department of Agricultural Economics, Texas A&M University

**DESCRIPTION:**

SPA is a standardized beef cattle enterprise production and financial performance analysis system. This enterprise analysis methodology was defined by the producer led SPA Subcommittees of the NCA and the IRM Coordinating Committee. SPA facilitates comparison of enterprise performance between years, producers, production regions, and production systems. The analysis is based on fiscal year production and financial data. The financial analysis follows the Farm Financial Standards methodology developed by the Farm Financial Standards Council. SPA methodology guidelines and software is now available for the cow-calf, seedstock, and stocker/feeder enterprises.

SPA for the cow-calf enterprise includes performance measures for reproduction, production, grazing and raised feed, marketing, financial and economic performance. SPA is an integrated analysis that links both financial and production performance. When completed the SPA data is sent to Cattle-Fax, who cooperate with producers, NCA and Extension in maintaining the SPA data base. Cattle-Fax will provide a comparative analysis summary to participating producers.

Training programs for producers, accountants, veterinarians, and Extension faculty have been conducted in 20 states through cooperative funding efforts of NCA, ES-USDA Washington and University Extension Services. Education materials and software have been provided to over 4,000 requestors. The SPA analysis is completed with producers through a one-on-one effort or workshops involving 10-15 producers. The SPA analysis focuses on the difficult and often neglected areas of production performance analysis, and financial statement preparation and analysis. Through the SPA analysis, many potential areas of change can be identified including specific items for cost control, nutrition, marketing and estate planning. The basic concept being that management for performance requires measuring performance.

The national cow-calf data base for 1991-93 has herds from 20 states. The results and methodology are widely quoted and used to inform producers. SPA efforts effectively utilize the Farm Financial Standards and is complemented by the Quicken™ and other financial software, the CHAPS, and Cow-Calf production record and analysis software.

PROGRAM TITLE: Export Marketing--Getting Started & related programs

FOCUS/CONTENT: Advising/training agribusinesses & others in international marketing; providing inservice for extension staff

PROGRAM TEAM: B. Gauler & J. Preston, MO; P. Leferney, AR; P. Rosson, TX; D. Henneberry, D. Peel & L. Sanders, OK.

PROJECT CONTACT: Brian Gauler, University of Missouri Extension System & Small Business Administration

SUPPORT LEVELS: 4-state consortium supported by USDA & CES for each state; other individual state projects in OK, TX & MO came from those states w/some USDA grants

DESCRIPTION:

Initiated by Gauler at OSU Center for International Trade Development and expanded with others in the 4-state consortium (Missouri, Arkansas, Texas Oklahoma), the works of Gauler and his associates are carving out a new niche for landgrants and extension in advising and training agribusinesses and others in global marketing. Programs offered in some but not all states include these:

1. "Orientation for 'Going Global'"--workshop and related materials that introduce the USDA-developed program "Going Global" and provides inservice education for extension professionals and other public agency helpers. The orientation targets awareness and networking.
2. "Export Marketing--Getting Started"--workshop and related materials that provide inservice education for extension professionals and others, as well as providing a model for introductory, comprehensive training of private sector individuals interested in international trade. While this program can also be effective in developing awareness and networking, its primary goal is to facilitate a working understanding of export marketing.
3. "Data Management Services"--includes Industry/Company Opportunity Report (I/COR), an initial service provided to requesting businesses who are new to export. The report helps develop awareness and networking; also, International Market Reports, foreign country reports and other information from National Trade Data Bank; Selected reports that are available for a minimal fee are listed.
4. Direct Assistance Programs--a variety of services or programs are offered to respond to a variety of queries from "am I ready to start exporting?" to rather detailed tactical and strategic enquiries. These include a checklist to determine export readiness and awareness, the I/CORs to assist potential exporters in networking with helpers, and the "Global Market Development Program" that provides a questionnaire and workplan for developing international sales and distribution.
5. Customized Issue-Based Programs--these vary over time by issue and interests of users of the programs; for example, state specialists have developed awareness, implementation and impact programs on trade policy such as CUSTA, NAFTA and GATT; cultural programs have been presented on the culture and customs of specific regions or countries; language training programs for educators and business managers are also presented at CITD, OSU.

PROGRAM TITLE: Teleauction for Slaughter Lambs

FOCUS/CONTENT: Electronic application to increase competitiveness/price

PROGRAM TEAM: Virginia CES livestock marketing economists and production scientists, & Virginia Dept. of Agriculture specialists

PROJECT CONTACT: David Holder, National Program Leader, RESD-CSREES/USDA

SUPPORT LEVELS: Joint effort of Virginia CES, Virginia Dept. of Agriculture, USDA, American Sheep Producers Council, Eastern Lamb Producers Cooperative

DESCRIPTION:

This case is a powerful example of the "cutting edge" program leadership extension has a long history of providing. Twenty-five years ago the Virginia Tech CES, Virginia Department of Agriculture, USDA and American Sheep Producers Council adapted the concept of "teleauction" for the first-of-its-kind with lamb producers and packers--an auction among packers and other buyers bidding on a conference telephone call, and formed a cooperative in 1971 to implement the concept. A new marketing system that met customer needs was created in a unique public-private joint venture. Key to the success of the market was the participation of producers in the Eastern Lamb Producers Cooperative that was developed for this purpose.

Lambs remained on farm until after the sale, so they could be held another week if bids were too low. They were sold in truckload lots of 400 head from as many as 15-20 farms, allowing efficient transportation to slaughter plants as distant as Toronto and Chicago. Both buyer and producer numbers at the market access point increased, thus increasing competition; prices to producers increased and buyer choices increased.

Current use of video, satellite television and computer networks have evolved from the Virginia sheep teleauction. Now such markets are created for cotton, livestock and corporate stocks. They are all based on the straightforward concept that electronic technology provides an efficient means of bringing a larger number of buyers and sellers together to create a more competitive market. It works when the benefits to buyers and sellers outweigh the risks of trying a new marketing system.

PROGRAM TITLE: Integrated Resource Management

FOCUS/CONTENT: Production/economic analysis of beef cow profit centers

PROGRAM TEAM: Ag economist, area & state animal scientists, range management specialists, vet science specialists, county agents, bankers, veterinarians, feed dealers, and farm business management instructors.

PROJECT CONTACT: Harlan Hughes, North Dakota 701-231-7380  
Kris Ringwall, North Dakota 701-227-2348

SUPPORT LEVELS: Producers are introduced to a comprehensive educational program focused on the beef cow profit center. Intensive analysis is being conducted for each IRM Cooperator's beef cow herd leading to 1) a published IRM team analysis of each cooperator's herd and 2) construction of a primary data bank detailing integrated production and economic factors. The goal for the summer of 1995 is to statistically analyze the data bank for various production/economic relationships to be shared with all 12,000 beef cow producers in the state.

DESCRIPTION:

The 7 voluntary, progressive steps in North Dakota's IRM educational program are: 1) enroll beef cow herd in CHAPS (Cow Herd Appraisal Performance System); 2) conduct a comprehensive review of the herd's production performance; 3) conduct a range inventory documenting grazing capacity of native and tame forages; 4) prepare an economic analysis of the herd's performance factors; 5) form a "learning team" to review and evaluate the herd's facts looking for bottlenecks to profitability; 6) form a "herd action plan" that the producer and his county agent can carry out over the next year; and 7) reanalyze the herd's "on farm" facts in 12 months to measure progress and to identify new bottlenecks to profitability.

Individual "Herd Reviews" (step 2 above) were conducted for selected cooperators as requested. A series of special economic enrollment workshops were set up. Final numbers are entered into the North Dakota IRM Database.

The key to North Dakota's IRM program is 1) using individual herd data as the basis for in-depth analysis, 2) the involvement of a team of local agricultural professionals combined with broad mix of state extension specialists and county agents, 3) the integration of farm/ranch level data with public and private research results, 4) the use of learning teams to aid in the integration of all participants learning from each other, and 5) the direct involvement of local agricultural professionals with the emphasis on capitalizing on their current expertise. The long-run potential of the IRM integrated problem solving process will rest on the training of the local ag professionals who will continue this integration process into the future.



PROGRAM TITLE: Sustainable Dairy Systems  
FOCUS/CONTENT: Interdisciplinary dairy systems costs, returns, and production requirements manual and computerized data base.  
PROGRAM TEAM: 24-member KY & TN work team (agronomists, economists, Extension agents, engineers, dairy specialists, farmers)  
PROJECT CONTACT: C. Garland, University of Tennessee, Agricultural Extension Service, Agricultural Economics & Resource Development.

DESCRIPTION:

Dairy farming is a significant and dramatically changing part of agriculture. This change is occurring in production systems, investment requirements, environmental concerns and the need for enhanced overall business management. Extension Services in Tennessee and Kentucky are cooperating in preparing pilot teaching, and evaluating an interdisciplinary dairy systems costs, returns, and production requirements manual and computerized data base. Farmers, agricultural organizations, and rural leaders are actively involved in the development, evaluation, and use of the training materials. The SARE/ACE program has invested in this project to enhance the sustainability of dairy farms.

Over a two-year period, the work team has prepared, pilot taught, and evaluated a dairy systems manual and user-friendly computerized spreadsheet. The project started in August 1994. The manual is scheduled to be finalized in the Fall of 1996. Systems have been developed for dairy herd sizes ranging from 50 to 800 cow operations. The systems approach is being used directly in developing actual farm plans with dairy farm families.

The approved systems manual proposal included a total of six chapters on forage systems, feeding systems, manure management systems, milking centers, and a chapter combining all phases of the dairy farm into a systems approach to management. Environmental and sustainability concerns are being incorporated into the systems process. As the project progressed, work team added six additional chapters covering management information and decision support, dairy farmstead planning, dry cow housing, feeding and management, replacement heifer housing, feeding and management, milking herd feeding and housing facilities, and additional inputs. Extension agents have been trained to use the manual in conducting educational programs with at least 500 farm families with dairy operations. Additional intensive training was conducted in March 1996. Their evaluations and recommendations were incorporated into the final manual.

Educational materials developed in this project are a critical component in an overall farm and financial management educational program. Properly combining the expertise of appropriate subject matter specialists, researchers, and farmers to identify interrelationships and results of various decisions will dramatically affect the future of dairy farm families. The dairy systems should encourage leaders in other commodity areas to consider using this approach. Lessons in future work directed at other types of farms. A major benefit of this program is the professional growth experienced by the work team members. Working as a team puts together a total interactive system has improved the ability of each "specialist" to look at the often complex total picture instead of focusing only on a small part of the issue.

PROGRAM TITLE: Coalition Building Model

FOCUS/CONTENT: Providing a framework to resolve conflict involving agriculture and the environment

PROGRAM TEAM: Faculty from the University of Connecticut, Rutgers University, NJ Department of Agriculture, USDA personnel and Environmental Organizations

PROJECT CONTACT: Edmund M. Tavernier and Maurice P. Hartley, Dept. of Agricultural Economics and Marketing, Rutgers University

SUPPORT LEVELS: Northeast Regional Center for Rural Development and New Jersey Agricultural Experiment Station

DESCRIPTION:

The suburbanization of rural areas, the resulting conversion of agricultural lands, and societal demands represented by federal and state mandates, place new burdens on local policy makers, and rural leaders, including farmers. Addressing these challenges require a more holistic and synergistic approach to rural and environmental resource management, decision making and policy development than previously faced in most localities. This realization accentuates the need for improved models and strategies which simultaneously address environmental challenges and the long-term viability of agriculture.

The coalition model building is one such strategy that shows the potential for win-win partnerships which protects the environment, natural resources and open space while preserving and enhancing the future of agriculture and the quality of life for all. In order to be effective these partnerships should include the stakeholders, i.e. members of the farm community, environmental organizations, policy makers, and the non-farm public.

The coalition model adopts the focus group approach and provides the structure for the establishment of an information base and educational model. This framework increases the likelihood of a successful public policy program when the issues are contentious. The primary steps of the model include, (i) formation of a project advisory committee comprised of key leaders and respected representatives from the group of stakeholders to help frame the issues to be investigated, (ii) conducting homogeneous focus group conferences for areas of agreement, (iii) submitting common themes and areas of consensus to heterogeneous group (i.e. mix of stakeholders from different groups) for validation, and (iv) the creation of a mechanism to facilitate on-going coalition efforts to reinforce coalition outcomes. The model was successfully tested in New Jersey.

**PROGRAM TITLE:** New York FarmNet

**FOCUS/CONTENT:** Helping farm families through significant life challenges and transitions.

**PROGRAM TEAM:** Faculty director, Professor John Brake; program director, Cathy Martin; two part time staff and 20 community based part time consultants.

**PROJECT CONTACT:** Professor John Brake (607-255-2085; jb33@cornell.edu) or Cathy Martin (607-255-4121; crm3@cornell.edu).

**SUPPORT LEVELS:** Currently \$105,000 per year--from NY state appropriations, Dean of CALS and Director of Cornell Cooperative Extension and private funding sources.

**DESCRIPTION:**

NY FarmNet began in 1986 to provide farm families with a network of contacts and support services to help them develop skills for dealing with significant life challenges and transitions through personalized education, confidential consulting and referral. The program focuses on family owned and operated farm businesses and builds on the individual strengths of those families. Utilizing a toll-free phone line, FarmNet has responded to over 9,500 calls. The confidential line serves as an access point to a comprehensive network of support and resources for the state's agricultural community. Staff knowledgeable about farming assess caller's needs and respond to individual questions and concerns. Follow up includes referral to appropriate sources of help, mailing of printed resources and/or on-farm consulting.

For transition situations in which other community services are not available or appropriate, NY FarmNet has a trained network of 20 community-based consultants. FarmNet Financial Consultants are available to work individually with a family on their farm. The consultant's role is to help the family in evaluating their situation, developing and analyzing options, and planning practical steps toward long-term resolution of the situation, including finances, management, and emotional stress.

FarmNet maintains a comprehensive resource library, available to the farm community. Staff also produces timely written resources when not available through other sources. A list is available upon request. A newsletter is published several times each year for rural service providers, agribusiness professionals and agencies serving the farm communities to help them better understand farm families and to inform them of FarmNet's services.

In ten years, FarmNet has worked with 1300 farm families and referred another 1400 families to Cornell CES. 15% of callers had never contacted Cooperative Extension before, and over half could think of no other source of help for their situation. Three years after calling FarmNet to assess financial consultants, 70% of respondents were still farming.

PROGRAM TITLE: Western Integrated Ranch/Farm Education (W.I.R.E.)  
FOCUS/CONTENT: Provides practical tools for integrating management of the physical, biological, financial and human resources of agricultural operations.  
PROGRAM TEAM: 4 ag agents and 4 state specialists.  
PROJECT CONTACT: John Hewlett, University of Wyoming.  
DESCRIPTION:

W.I.R.E. emphasizes the *process of management*--setting goals, priorities, making decisions, planning, budgeting, keeping records and performing evaluations with personal goals and optimization in mind--rather than particular production technologies. The process begins by setting goals, followed by thorough analysis of "where they are" and what they have to work with (physical and financial resources, the operator's management skills, etc). This is done at the more general or *strategic level* of management.

Once the operators have a clear picture of where they are and where they want to go with the operation, W.I.R.E. provides the planning and decision making "tools" for how to get there. At the *tactical level* of management, the operator becomes much more specific about enterprises the operation will have, technologies it will use, changes to be implemented, cost in time, labor and dollars, and expected results. Analysis of how enterprises relate to each other and what the desired set of enterprises might be in the operation is also conducted.

Finally, management plans have to be implemented. W.I.R.E. deals in detail with the practical, on-the-ground, how-to-do-it questions. At the *operational level* of management, the operator decides the specifics of how, when, and by whom the management plan is to be accomplished, and how it is likely to impact his/her financial situation. The operator is also provided information on how to monitor the various resources and respond to changes in a positive, proactive way. W.I.R.E. gives managers the tools to understand the relationships and interactions of the major ranch resources like soil, water, rangeland, crops, livestock, wildlife, finances, human creativity and labor. All of these resources are assessed and made to "flow" together. W.I.R.E. has been specifically adapted for Western producers from *Total Ranch Management*, a course developed by the Texas Cooperative Extension Service. It is team-taught by the agents and specialists who produced the course materials. A detailed, 6-year case study, based on an actual northeast Wyoming ranch, illustrates many of the concepts and specifics of the management process. Participants will be able to use or adapt many of the planning, record-keeping, and analysis tools to their own operations.

While there are some formal presentations, its emphasis is on "hand-on" work in small groups or as individuals, which practical problems in agricultural management--some of which may involve financial calculators and computers. Two afternoon field trips are included in the course. Technical presentations concentrate on the options used in the case study. The instructional team is dedicated to teaching the *philosophy and process* of good management, as well as technical knowledge about various resources. A reference handbook covering each major ranch resource is provided, including technical/scientific information regarding the management of the resources and their use in agricultural operations.

PROGRAM TITLE: Nebraska Soybean and Feed Grains Profitability Project  
FOCUS/CONTENT: Analysis tools, selected topics, research reports  
PROGRAM TEAM: UNL Extension Educators Keith Glewen, David Varner, Robert Meduna, Doug Jose  
PROJECT CONTACT: Keith Glewen, UNL Extension Educator, Agricultural Research and Development Center, Rt. 1, Box 63B, Ithaca, Nebraska 68033-9731; (402-624-8005)  
SUPPORT LEVELS: Participants annual registration fee \$150; technical support from crop consultants/farm service representatives and Extension personnel; contract out statistical analysis with UNL emeriti faculty; 3-5 K Cooperative Extension Grant.

DESCRIPTION:

The project is a cooperative educational program with participation from farmers, private industry representatives and the UNL Cooperative Extension. Components include: 1) Farm/commodity budget analysis; computer generated confidential budget analysis for the cropping enterprise they are conducting on-farm research. 2) Continuing education opportunities; programs may be formal on campus with a faculty member lecturing on a specific topic or informal discussion or demonstration in the field; tours, demonstrations and group discussions have also been an effective means of sharing information concepts and ideas. 3) On-farm field research and grain marketing analysis; participants choose to conduct on-farm research comparison or evaluate marketing strategies or both; agronomic comparisons are designed and statistically analyzed with the help of Extension staff; comparisons are often designed to evaluate the profitability and environmental soundness of a conventional practice versus a new production practice; participants grain marketing evaluates the effectiveness of strategies previously identified by research supported by the Nebraska Soybean Board; producers have committed at least 1000 bushels of grain and will compare the outcome with cash sales made on two specified dates of the marketing year.

There are 37 farm operators in the project representing 7 Nebraska counties. A three-year commitment to the project is requested to generate reliable experimental results to account for variations in growing conditions and crop prices. The success of the on-farm research comparisons depends heavily upon the contributions of the private industry cooperators. They perform such tasks as research comparisons, monitoring crop conditions, and collecting data. Most participants are college graduates, and represent medium to large operations by income. The private industry representatives are mainly independent crop consultants. Over 50% of participants continue in the project after completing a three year enrollment period.

Participants have shared information obtained from their on-farm research comparisons and market analysis with other farmers in and outside the project. Participants continue to emphasize the project is an excellent approach for transferring technology from the University to the farm and also from farmer to farmer. Farmers outside of the project often ask about results. Results have enhanced the marketing and agronomic knowledge and skills of participants, and they have implemented new technologies and concepts, improving profitability and lessening production agriculture's impact on the environment.

PROJECT TITLE: Pork Central  
FOCUS/CONTENT: Competitiveness tools for moderate sized pork producers.  
PROGRAM TEAM: John Allen (Rural Sociologist), Angela Baysinger (Extension Veterinarian), Larry Bitney (Ag Economist), Gerald Bodman (Ag Engineer), Mike Brumm (Animal Scientist), Dick Fleming (Ag Communications), Larry Germer (Extension Educator), Rick Koelsch (Ag Engineer), Don Levis (Animal Scientist), Tom Long (Animal Scientist), Jill Lorenz-Goodrich (Nebr. Pork Producers Assn.), Duane Reese (Animal Scientist), Deb Rood (Program Coordinator - Ag Economists), Jeff Royer (Ag Economist), and Mike Turner (Ag Economist).

PROJECT CONTACT: Larry Bitney, Ag Economics Department, 402-472-2047; Duane Reese, Animal Science Department, 402-272-6425.

SUPPORT LEVELS: UNL Institute of Ag and Natural Resources - Special Operating funds - \$30,000/yr x 3 yrs.; Nebraska Pork Producers Association - \$25,000/yr - annual grants; Matching funds from four IANR departments - \$35,000/yr. x 3 yr.

DESCRIPTION:

Moderate sized pork production enterprises in Nebraska can be competitive in the "New" swine industry. Families operating these enterprises will be assisted in evaluating their resources and in making changes which will enable them to be competitive, while maintaining their spirit of individuality.

New technologies and systems of pork production and marketing have resulted in a \$5-7 per cwt. cost advantage for producers adopting the package of technologies. Large production units, particularly new one, have implemented these technologies, giving them a cost advantage over smaller, traditional producers. However, the smaller, traditional producers can become more competitive. To do this, they must re-think their management practices and their production-marketing system. This may involve forming strategic alliances with fellow producers.

The overall objective is to provide research based assistance to Nebraska farm families in adapting to rapid changes in the pork production industry. This will be done by mobilizing the interdisciplinary resources of IANR, the Nebraska Pork Producers Association, and allied groups. Central to this effort will be research which will provide information relevant to the changing pork industry, the formation of Pork Central (a communications center at IANR) and the development of a management review for pork producers.

Results/Impacts: Families will make informed decisions regarding their future in pork production. More pork producers will keep and analyze production and financial records. More moderate sized pork production enterprises will remain competitive and survive. Rural communities will remain more viable.

PROGRAM TITLE: Managing for the Cattle Market of the 1990's  
FOCUS/CONTENT: Developing management strategies and tactics for surviving the bottom of the cattle price cycle and profiting from its turn around.  
PROGRAM TEAM: Agricultural economists, animal scientists and others from several land grant universities.  
PROJECT CONTACT: Chris Bastian, University of Wyoming  
Dee Von Bailey, Utah State University  
SUPPORT LEVEL: Faculty of several land grant universities and special funding by Cooperative State Research, Education and Extension Service (USDA) and the Farm Foundation.

DESCRIPTION:

Cattle producers across the United States are in a financial crisis caused by the lowest calf prices in ten years. Cattle prices have declined by at least 40% since 1991. In a recent report by the Livestock Marketing Information Center, cow-calf producers averaged losses of \$45 per cow in 1995 and heavy losses are projected to continue in 1996 and 1997. While most economists feel the current price cycle is driven largely by domestic cattle supply and demand factors and high feed costs, many producers believe low cattle prices are caused by NAFTA and the structural changes in the meat industry (primarily packer concentration and packer-feeder contracting or captive supplies). Extension faculty across the nation must respond to clients who ask: 1) Why is the cattle industry in such a condition? 2) Where are prices headed? And, most importantly, 3) How can I survive the current crisis?. These questions must be addressed now as producers are forced to adjust their operations.

The purpose of this project is to develop educational materials and Extension programs that help producers make important strategic and tactical decisions necessary to survive the current down side of the cattle price cycle, and to position their businesses to take advantage of the recovering market situation after the bottom in prices has occurred.

A group of experts from several states is developing a set of 36 management guides which will be used in state and county educational programs to meet specific needs of local producers. Topics covered by the guides include: 1) Pricing to protect variable production costs; 2) Loss minimization strategies; 3) Cost reduction strategies; 4) Liquidation strategies; 5) Alternative marketing methods; 6) Altered production schedules; and 7) Retained ownership and other possible value added merchandising strategies. Suggestions for educational programs based on the guides will be included.

Camera-ready copies of the management guides will be provided to the Cooperative Extension Service in all 50 states. They will also be disseminated by the Livestock Market Information Center, by commercial media such as Farmer-Stockman magazines, and by cattle producers organizations such as the National Beef Cattlemen's Association.

PROGRAM TITLE  
FOCUS/CONTENT

Master Marketer Program  
Provides extensive training for a small group of producers to become competent professional marketers and volunteer leaders of marketing clubs and related activities with other producers. Together, they develop aggressive marketing strategies to reap more income from the market place, in part, to replace income from government programs.

PROJECT CONTACT:

Dr. Mark L. Waller  
Dept. of Agricultural Economics  
Texas A&M University  
College Station, TX 77843-8784  
Phone: (409) 845-8011  
Fax: (409) 845-4906  
E-mail: mlw@ag-eco.tamu.edu

Dr. Stephen Amosson  
6500 Amarillo Blvd.  
Amarillo, TX 79106  
Phone: (806) 359-5401  
Fax: (806) 358-9718

SUPPORT LEVELS:

TAES, Texas Corn Producers Board, Texas Wheat Producers Board, Chicago Board of Trade, and approximately 12 other agribusinesses, along with a \$250 tuition fee for each student attending the 64 hour training program.

DESCRIPTION:

The purpose of this project is to combine the master program approach with the proven marketing club concept in a pilot program. The Master Marketer Pilot Program focuses on intensively training two producers per county in advanced marketing/risk management techniques. First, selected producers, with an expressed interest in marketing and demonstrated leadership abilities, go through an intensive marketing education program (64 hours). These highly trained producers will then serve as volunteers to work with the country agent in starting and leading marketing clubs in their own counties. The end result should be an expansion in the number of volunteer educators, and valuable educational opportunities for producers within a cost effective framework that circumvents the personnel and resource constraints currently hindering marketing/risk management educational efforts.

As one producer stated on the feasibility committee, "Even on the downside, if you don't get the marketing clubs established, you still have trained 40 super marketers. Also, you will have created a set of marketing/risk management materials that do not exist now, which can be utilized in a number of other educational programs. On the upside you accomplish this and multiply the results through marketing clubs. It seems to me its a win-win project." If participants are able to increase their net price on average just 2½%, they could change their net income \$10,000-\$25,000 annual. If they could increase their net price 5% annually, producer income would rise \$20,000 - \$50,000. For the class as a whole, this would increase net incomes before taxes some \$500,000 - \$1,000,000. It also is difficult to estimate the number of marketing clubs and their membership that will be started from this effort. If just four other producers per pilot program participant are positively affected through marketing clubs, the total annual economic impact could range from \$2.8 - \$5.6 million dollars. Over the 7-year life of the expected new farm bill, area producer net income earnings could increase \$19-\$39 million.



PROGRAM TITLE: Palmetto Leadership  
FOCUS/CONTENT: Palmetto Leadership is a county-based leadership and community development program designed to help counties in South Carolina face economic, educational, social, governmental and quality of life change.

PROGRAM PROJECT CONTACT: Christopher M. Sieverdes, Ph.D.  
Christopher Sieverdes  
Department of Agricultural and Applied Economics  
Clemson University  
Clemson, SC 29634-0355  
Phone: (864) 656-0196  
Fax: (864) 656-5776  
E-mail: csvrds@clemson.edu

SUPPORT LEVELS: The program is funded by the Kellogg Foundation with matching monies from the Clemson University Cooperative Extension Service, the state and counties.

DESCRIPTION:

For six years, Palmetto Leadership had been assisting counties face change. In that time, over 1,300 local leaders and public officials in 26 counties have graduated from the program. Palmetto Leadership makes a difference by building teams to address community concerns, providing leadership skills education, and promoting consensus building, planning and action tactics.

Training is 8-10 weeks and consists of two inter-connecting phases: leadership instruction and task force action. The leadership education phase consists of 32 hours of training on communication, team building, conflict management, group dynamics and self understanding. In the task force phase, participants use what they have learned in the first phase and tackle a community issue. Accomplishments of these task forces include:

- \* A \$30 million poultry processing plant providing more than 700 jobs
- \* County-wide Chambers of Commerce established
- Adopt-A-Highway program established to clean up counties
- \* Countywide recycling programs initiated
- \* Adopt-a-school programs initiating increased community/school relations
- \* E911 system established within counties
- \* Educational scholarships established for local students
- \* Local businesses brought together through "Business After Hours" programs
- \* Tourism increased through creation of new festivals and recreational tournaments

PROGRAM TITLE: Turfgrass and Ornamentals Initiative  
FOCUS/CONTENT: To conduct environmental impact research and education for turfgrass and ornamental horticulture industries in South Carolina  
PROGRAM TEAM : Ted Whitwell, Bruce Martin, James Blake, Joe Dickerson, Jim Camberato, Bert McCarty, Landon Miller, Albert Johnson, Russell Henderson, Ken Dixon, Clint Waltz, Milling Blaylock, Todd Lowe, Allan Rogers, John Frederick, Floyd Hiott, Paul Thompson, Mike Payne, Jim Rice, Charles Martin, David Alverson, Clyde Gorsuch, John Kelly, Elwyn Deal  
PROJECT CONTRACT: Ted Whitwell  
Professor of Horticulture  
165 Poole Agricultural Building  
Clemson University  
Clemson, SC 29634  
(864) 656-4971  
SUPPORT LEVELS: 1st year - \$390,000 State funds. 2nd year - \$500,000 State funds.

DESCRIPTION:

Clemson University researchers are working with turfgrass and ornamental producers to help these industries grow in South Carolina, at the same time as they protect the state's environment. The ornamental horticulture industry is currently valued at \$128 million in South Carolina, with dramatic growth projected in the future as investment in landscaping for homes, businesses, golf courses and tourism increases.

Scientists on the Clemson campus and at the university's Pee Dee Research and Education Center in Florence are involved with the multi-disciplinary research. They are gathering information from the producers of turfgrass and landscape plants, as well as from turfgrass managers on golf courses and athletic fields, to understand the needs and limitations of both groups.

Managing damage from disease, weeds and insects in an environmentally responsible manner is the primary focus of the research. Although only in its second year, the Clemson research has already provided several recommendations. Among the suggestions are selecting environmentally friendly pesticides and timing the application of pesticides to be more effective, so fewer applications are needed. Other recommendations include developing waterways around nursery greenhouses to channel the run-off water and filter pesticides through natural plantings. Golf course superintendents around the state are playing an active role in developing the recommendations for turfgrass management; while commercial nurseries are equally involved in developing recommendations for ornamental horticulture. "This effort represents a long-term commitment by Clemson university to strengthen research in the environmental area," explained Ted Whitwell, professor of horticulture at Clemson. The turfgrass and ornamental initiative at Clemson began with a 1994 decision by the South Carolina Legislature to provide funding for facilities improvements and research. Research grants and industry support assist in funding the research efforts.

**PROGRAM TITLE:** DairyMax

**FOCUS/CONTENT:** A curriculum-based extension educational program to teach business management principles/techniques to South Carolina dairy farmers utilizing an interdisciplinary team approach.

**PROGRAM TEAM:** Scott Whiteside, Johnny Jordan, Terry Sudduth, Tom Dobbins, Hal Harris, Howard Van Dijk, Marion Hiers, Mike Loveless, Phil Perry, Dixon Lee, Dwight Vines, John Chastain, and Virgil Quisenberry.

**PROJECT CONTACTS:**

Scott Whiteside Financial Mgt. Agent 301 University Ridge Suite 4300 Greenville, SC 29601 (864) 232-4431	Terry Sudduth Ext. Associate-Dairy 120 Poole Ag Center Clemson University Clemson, SC 29634 (864) 656-3230
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**SUPPORT LEVEL:**

Year 1-\$15,000 State Funds Workshop Fees-\$4,100 Private Industry-\$2,800	Year 2-\$10,000 State Funds Workshop Fees-5,100 Private Industry-\$500
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**DESCRIPTION:**

The Clemson University Cooperative Extension Service DairyMax program is a multidisciplinary (Ag Econ, Dairy Science, Ag Engineering, Food Science, Agronomy) curriculum-based Management Education Program. Managing for Success (MFS) is the core workshop, which teaches how to develop an effective management system through business planning and creative problem solving. Business planning includes the functions of management, i.e., Planning, Organizing, Staffing, Directing and Controlling. Participants are taught creative thinking by looking at paradigm shifts, mission statements, objectives, goals, and tactical planning. Creative problem solving focuses on problem identification and diagnosis, developing alternative solutions, and decision-making processes. Creative teaching techniques consisted of multiple projectors including computer-aided visual presentations. Case studies, group discussions, and team teaching in a shared learning environment round out an effective teaching model. After attending MFS, participants attend Focus workshops on specific management priority areas such as financial management, financial record keeping, milk quality, feeding and waste management. The Focus workshops utilize the same problem solving, tactical planning and teaching style model. Each Focus workshop begins with emphasis on the importance of the material presented in the core MFS workshop.

Program evaluations indicated the material and teaching methods to be very effective. The evaluations indicated both a positive change in understanding of the material presented and the intent of participants to utilize these new skills. The workshops received a 3.4 overall rating on a scale of 1 to 4. Workshops consisted of two six-hour days with a \$60 registration fee per farm. Approximately 50 percent of South Carolina dairy farms participated. This interdisciplinary comprehensive curriculum approach, along with innovation teaching techniques, encompasses the essence of teaching farmers how to cope with change. One of the mottoes is, "Give someone a fish, they eat for a day; teach them how to fish, they eat for a lifetime."

PROGRAM TITLE: Lake Bowen Project  
FOCUS/CONTENT: To protect water quality in Lake Bowen and the surrounding creeks, streams and rivers that run into the lake in Spartanburg and Greenville counties.

PROGRAM TEAM: Bill Yates, Edmund Taylor.

PROJECT CONTACTS: Bill Yates  
Extension Program Coordinator  
Agriculture and Natural Resources  
Clemson University  
108 Barre Hall  
Clemson, S.C. 29634-0311  
(864) 656-3384

Edmund Taylor  
Area County Extension Agent  
Spartanburg County Extension Office  
(864) 596-2993

SUPPORT LEVELS: 1st year - \$60,000 grant from USDA  
2nd year - \$60,000 grant from USDA  
3rd year - \$60,000 grant from USDA

DESCRIPTION:

The project began four years ago with a grant from the U.S. Department of Agriculture. The two thrusts of the program were to reduce the pesticide and fertilizer applications for both peaches and apples, and at the same time maintaining the same standard of quality fruit to which growers were accustomed. Before the 1992 growing season began, Taylor made fertilizer recommendations to the growers and gave them a list of threshold values for different pests. When a problem grew beyond a certain level, then the growers would need to spray. Taylor also tried to encourage the growers to use insecticides that were as target-specific as possible so populations of beneficial insects would not be damaged. When the growing season began in mid-March, a scout was hired to check each tract of land for specific pests and problems. Traps and visual checks were used and the scout wrote a weekly report for each grower.

A total of about 2,000 acres were involved in the project, with about 80 percent of the land used for growing peaches, and the remainder for apples. In the first year, the program made only modest changes in the growers' practices. None of the growers had ever formally utilized Integrated Crop Management practices before, and many of them had always sprayed on a calendar basis. All of the participants reduced their insecticide sprays by at least one or two sprays the first year. Some reduced their fungicide sprays significantly the first year. In the second and third years (1993 and 1994) of the project, many growers were saving three or four insecticide sprays, a couple of early fungicide bloom sprays and some later season scab sprays. All growers saved at least two or three insecticide sprays. Although the grant money has run out, a group of growers are using their own money to pay the scout to continue his work.

PROGRAM TITLE: Master Cattle Farmer Program  
FOCUS/CONTENT: The Master Cattle Farmer Program promotes progressive beef cattle farming by identifying outstanding producers, recognizing them and getting them involved as volunteers to help young farmers as they develop their own farming enterprises.

PROGRAM TEAM: Mark Talbert, Rusty Thomson

PROJECT CONTRACTS: Mark J Talbert County Ext. Agent 107 S. Bypass 321 Winnsboro, SC 29180 (803) 635-4918  
Rusty Thomson Area Livestock Agent 6 S. Congress St. York, SC 29745 (864) 684-9919

SUPPORT LEVELS: \$810.90 in state funds for printing program guide.

DESCRIPTION:

Any cattle farmer with more than five years of experience can apply for entry into the Master Cattle Farmer Program. The applicant, however, must complete a written plan and be able to explain the written plan during a farm visit. Applicants must attend five accredited cattle meetings dealing with subjects related to forage management, herd management, marketing and records keeping. In addition, applicants must attend four county livestock association meetings and the annual state cattlemen's meeting. Membership in local and state cattle associations is required and membership in the National Cattlemen's Association and the Forage and Grassland Council is recommended. Each applicant must also exhibit leadership in cattle industry affairs and his community. The applicant must also be a good steward of the land, water and wildlife and be active in practicing and encouraging farm safety.



PROGRAM TITLE:  
FOCUS/CONTENT:

The Agricultural Human Resource Management Program  
The Human Resource Management Program has taken a curricular approach to helping farm managers and horticultural managers adjust to the challenges of formalizing personnel management practices that a larger work force requires.

PROJECT CONTACT:

Thomas R. Melanie, Senior Extension Associate, Cornell University, (phone: 607-255-1628, email: trm5@cornell.edu)

DESCRIPTION:

The Program addresses change in agricultural and horticultural businesses in two important ways: 1) With tighter profit margins and greater emphasis on productivity and efficiency managers are challenged to gain employee commitment and to provide a work place where employees can work to their maximum potential; managers who adapt to these challenges ensure future productivity and profitability of the business; 2) Structural shifts in agriculture and horticulture continue to trend toward larger more efficient operations; as organizations develop they tend to employ more people, assign more specialized tasks and require increased training, development and support from management; this is a new role for many agricultural managers who find they must become students of human resource management to create a more effective work team. The following are examples of curricula that have been developed for Extension audiences in the area of human resource management:

- 1) Employee Recruitment and Selection. This train-the-trainer curriculum was designed to train Cooperative Extension educators and other professionals to teach workshops in employee recruitment and selection. The curriculum is divided into five main parts: I) The Work Force Environment; II) Planning to Staff; III) Employee Recruitment; IV) Employee Compensation; V) Employee Selection. This course is designed to teach employers to hire the best person for the job and to avoid the pitfalls of a rushed recruitment and selection process.
- 2) Employee Motivation. This workshop was designed to introduce some basic concepts of motivation theory including Abraham Maslow's hierarchy of needs and Frederick Herzberg's two factor theory. Case examples are used to apply these basic theories to real life motivational situations. The final section of this curriculum focuses on practical suggestions that employers can use to create an environment where employees will be motivated.
- 3) Performance Management. This curriculum focuses on how to manage and improve employee performance. Starting with the business mission and vision, the performance management process includes goal setting for each individual in the business, coaching and feedback for management, and performance review (either formal or informal). This three-step process goes beyond simply addressing issues of performance appraisal and talks about continuing communication and goal setting as keys to achieving peak-level performance from all employees.
- 4) Leadership: This curriculum focuses on leadership as it relates to supervisory situations. Six leadership styles are discussed: authoritative, coercive, affiliative, democratic, pace-setting, and coaching. Workshop participants fill out a leadership styles instrument to determine their dominant leadership styles. The workshop then defines each leadership style and provides an opportunity for participants to consider how these leadership styles work together in day to day supervision of employees.

PROGRAM TITLE: Developing and Utilizing All the Capabilities of All Farm Personnel.  
FOCUS/CONTENT: Create awareness of the boundless potential of empowerment for increased farm productivity and farm personnel job satisfaction.  
PROJECT CONTACT: Dr. Robert A. Milligan, Cornell University, ph. 607 255-4579, email: ram18@cornell.edu

DESCRIPTION:

The potential to use empowerment to capitalize on all the capabilities of all personnel is illustrated by:

- 1) Involving everyone in the audience in a role play that illustrated the difference between a controlling and an empowering management style. Discussion and illustrations of the differences between a controlling and an empowering management style. (see attached summary).
- 2) A discussion of the vision and mission of the golf course, including a first cut at a farm vision. Ideas for gaining commitment to the farm mission.
- 3) Discussion and illustrations of the role of an empowering supervisor including communication skills, coaching, team building and training and development. Discussion of ideas and tools to increase supervisor - employee levels of trust.

Progress to Date: Numerous one hour to one and one half hour presentation at various conference with participant businesses from dairy, fruit, horticulture and sheep. Feedback has been very positive. Four two-day workshops with the management team of large dairy farm business has been offered in cooperation with Farm Credit. Participants in three of these workshops have requested a third session. Discussion at these sessions have reported very constructive results.



PROGRAM TITLE: Peanut Leafspot Advisory

FOCUS\CONTENT: Disease Control

PROGRAM TEAM: Faculty from Plant Pathology, Entomology, Horticulture and County Extension Field Faculty

PROJECT CONTACT: Jack Bailey, North Carolina State University

SUPPORT LEVELS: Mix of state and commodity association grants.

DESCRIPTION:

Peanut Leafspot Advisory is a computerized system of tracking changing temperature and humidity on a continuous basis in order to accurately predict the development and spread of peanut Leafspot disease. The weather measurements provide information that allows farmers to increase profitability and reduce pesticide use by adjusting their fungicide applications to those periods when weather conditions are favorable for Leafspot development

The continuous weather tracking by computer allows for the information to be accessed by Extension agents and provided directly to the farmers to guide their decision making. The information is continuously available at the local Extension offices. The weather monitoring equipment is located near the Extension offices, and is connected to a computer located in the local office. In addition to farmers being able to obtain the monitoring information by telephone, some local agents fax the information directly to farmers or to agribusiness firms who agree to post the information.

PROGRAM TITLE: Farming Alternatives Program (FAP)  
FOCUS/CONTENT: To promote a sustainable food and agriculture system which supports farm families and their communities.  
PROJECT TEAM: One faculty, one senior research associate, two Extension specialists, one office manager.  
PROJECT CONTACT: Dr. Thomas Lyson, Department of Rural Sociology, Cornell University.  
SUPPORT LEVELS: Funding from College of Agriculture and Life Sciences, & Cornell Cooperative Extension: SARE grants, the Northeast Regional Center for Rural Development, and foundations.

DESCRIPTION:

Both theoretical and applied research are conducted, along with a very active Extension program through conferences, in-service training, and publications. FAP serves farmers, Extension field staff and other educators, community agricultural development groups, Cornell faculty, staff and students, and consumers. The Farming Alternatives Newsletter, published four times a year, provides information on all aspects of community agriculture development to farmers, processors, agricultural development specialists, and consumers.

Educational programs (conferences, in-services training seminars, on-farm field days, and local workshops) and research-based publications, covering many facets of sustainable agriculture and community agricultural development have also been produced. Recent program foci includes: improving farm and neighbor relations; farmers' markets; community supported agriculture farms; agritourism; fruit and vegetable grower cooperatives; agricultural economic development; new enterprise feasibility studies; sustainable farming practices; specialty agriculture; agricultural industry structure issues; and rural quality of life.

FAP personnel are in demand for presentations, testimonies, consultations and field visits. We respond to thousands of information requests each year, and annually make 30 or more formal presentations.

Post-conference and workshop evaluations suggest that FAP educational efforts are effective in motivating individuals and groups to implement organizational and management practices which lead to agricultural sustainability.

Future programmatic direction include:

1. Continue to strengthen "think-tank" function, providing leadership in analysis of the food and agriculture system and emerging alternatives.
2. Increase outreach to and collaboration with urban/consumer/non-farmer audiences.
3. Continue to provide educational and capacity-building programs to strengthen the network of local and statewide community agriculture development leaders.
4. Increase participation of undergraduate and graduate students in program activities.