

WISCONSIN'S EXTENSION
STATE ANNUAL REPORT OF ACCOMPLISHMENTS AND
RESULTS FOR THE AGRICULTURAL RESEARCH,
EXTENSION AND EDUCATION REFORM ACT (AREERA) for
FY 2003

Submitted April 1, 2004

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1. Programs: National Goals

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**GOAL 1: AN AGRICULTURAL SYSTEM THAT IS HIGHLY COMPETITIVE IN THE
GLOBAL ECONOMY**

Overview

In 1998, Wisconsin's Agriculture and Natural Resources Extension organized itself into self-directed teams to develop and deliver programs to address priority issues. The teams are composed primarily of Cooperative Extension county and campus-based faculty and staff as well as other partners interested in the same priority issues. This report highlights the following programming efforts: dairy transition and modernization; milk money; emerging agricultural markets; farm management education; forage and grains; and addressing the needs of the underserved.

For 2003, Wisconsin's Agriculture and Natural Resources faculty and staff continued to address the issues identified through the 1999 Program Planning process. This report reflects progress made toward addressing those priority issues. One of the major issues facing Wisconsin agriculture is maintaining farm profitability and viability in an environment that is highly competitive and increasingly more global in nature.

Current Situation: Though there were price spikes, low dairy prices for most of 2003 continued to place financial stress on Wisconsin dairy farmers and rural communities where dairy is a larger portion of the local economy. Also contributing to the financial stress in dairy were areas of alfalfa winter kill and a late summer drought in the western part of the state. Wisconsin's Dairy Team focused its efforts in two areas: 1) dairy transition and modernization and 2) milk quality.

Total Expenditures:
(By FTEs and Source of Funding)

FTEs	Smith-Lever Act	State Match
42.82	\$417,557	\$3,586,012

Scope of Impact: State Specific

Key Themes

Key Theme: **SMALL FARM VIABILITY**

1) Dairy transition and modernization

Though there has been considerable unit expansion and modernization, much of Wisconsin's on-farm dairy infrastructure is older and in many ways antiquated – stanchion or tie stall barns, round the barn pipeline milking systems, feed storage in upright silos, daily hauling of manure, etc. As dairies in many western states continue to expand, Wisconsin dairy farmers are under considerable pressure to modernize and expand to take advantage of economies of scale and the efficiencies of modern equipment.

Extension's Response: Campus-based and county staff responded in two primary ways. First, through a variety of means (workshops, farm tours, newsletter articles, etc.) dairy farmers increased their awareness and knowledge of modernization options and alternatives. As a second response, educators worked with individual or small groups of dairy farmers to assist them with their specific modernization situation(s), providing education in areas such as facility siting, design considerations and feasibility analysis.

Documented Benefits:

- 1,342 dairy producers “explored” modernization option and management practices that may lead to improved profitability or productivity
- 79 dairy producers have developed a strategic/long range plan for their businesses
- 444 dairy producers “made a decision” on a modernization option based on information acquired from extension
- 832 dairy producers “adopted” a production and/or labor management practice based on information acquired from extension
- 516 heifer producers “explored modernization options and management practices that may lead to improved profitability or productivity
- 109 heifer producers “made a decision” on a modernization option based on information acquired from extension
- In Chippewa County, dairy modernization is an ongoing program combining farm tours, meetings and one-on-one counseling. In 2003, five farm families received farm visitations and/or consultations to discuss construction projects and modernizations. As a result, one farm family invested \$2.5 million to expand their operation. Freestall barns and a parlor have been built. The expansion will add 455 cows to the current operation and will create up to eight new jobs; another farm family built additional freestall housing and increased herd size by 100 cows. On a third operation, the Agriculture Agent, Randy Knapp worked with a farmer to purchase farm buildings that were not being used. The facilities are now in operation with 100 cows being milked. This operation plans to invest an additional \$350,000 for modernizing the milking facilities. A similar situation existing on another operation where

- facilities were not being fully used. The property was purchased by a farm family from Minnesota and the agent is working with the family in updating and upgrading the current freestall and milking parlor. A fifth producer completed the milkhouse and office upgrades planned in 2002.
- The dairy modernization program in Dane County is an ongoing program combining farm tours, meetings and one-on-one consultations. Subject matter includes low cost parlors, parlor design, freestall design, cow comfort ventilation, manure handling and overall farmstead planning as well as the economics associated with capital improvements. The Dane County Dairy and Livestock Agent Nolan Anderson surveyed 80 dairy farmers that he has worked with on modernization issues over a period of years. Twenty six percent completed a 10-year farmstead plan; 9 farmers installed or are in the process of installing a retrofit parlor in existing facilities (to save costs); 26 farmers remodeled present livestock buildings into freestalls; 8 farmers remodeled or added on to present heifer facilities; 18 modified existing or added manure storage structures and 36 improved ventilation systems.
 - In Jefferson County, Dairy and Livestock Agent Ken Bolton, organizes dairy management teams to assist farmers to address problems and improve competitiveness. Members of the on-farm teams typically consist of the service professionals active on and considered as key advisors by the farm manager. Common team members include the farm owner, key farm employees, veterinarian, milk-plant field representative, milking equipment service person, lender, ration and crop consultants and UW-Extension staff. The team completes a comprehensive business evaluation; a consensus is reached on the recommendations to be offered based on the owner/manager's stated goals; and an action list is presented. Follow up is provided by each team member. Formal meetings are held on a regular basis to monitor progress and provide further strategy and support for implementation of action plans to achieve goals. In 2003, six on-farm management teams were formed to address producer requests. As a result, one family increased milk production by 3,600 pounds per cow per lactation and reduced cow losses due to injury from 10 to 0%. A second farm manager improved a negative cash flow situation through better feeding of the milking herd and reduced losses from 40 to 0% through the adoption of calf hutch technology. A third producer reduced milking times on three times per day milking by 30 minutes for each milking and reduced the rate of new mastitis infection from 10 to 4% per month. A fourth young dairy farmer increased monthly income by a total of \$5,000; \$1,715 through improved udder health and \$3,285 per month through increased milk production of 10 pounds per cow per day. A fifth producer improved the quality and use of forages in his ration, resulting in more consistent milk production throughout the year. In a sixth situation, the agent worked with State Dairy Nutrition Specialist Randy Shaver and the farm's ration consultant to reduce the high incidence of displaced abomasums. The incidence of this metabolic disorder has been reduced to 0% resulting in over \$280,000 per year savings on this farm. The sum total of increased savings and incomes on the six farms the Agent worked with through on-farm management teams is \$400,000. These farms

are now positioned to be more profitable and competitive into the future and in a better position to modernize further if that is their goal.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Key Theme: AGRICULTURAL VIABILITY

2) Milk Money

Milk quality is a serious, multi-faceted problem on many dairy farms. Even with low prices, many dairy producers can maintain or increase profitability by improving milk quality. Poor milk quality impacts dairy farm profitability because of reduced milk quality premiums, mastitis treatment costs and/or discarded milk due to antibiotic withdrawal times. Many Wisconsin dairy producers are becoming more comfortable addressing multi-faceted problems with teams of professionals that have a vested interest in the farm's success. Poor milk quality is also a problem for Wisconsin's cheese processors as a causative factor in lower cheese yields.

Extension's response: Dairy Team, Milk Quality workgroup under the leadership of Dr. Pamela Ruegg, UW-Extension Milk Quality Specialist coordinates the "Milk Money" program. Through this program a team of professionals is pulled together to address an individual dairy producer's milk quality problems. In most cases, "Milk Money" teams are initiated by the producer, working through the local county Extension agent. The team meets at the dairy farm on a regular basis, usually monthly, for four months. During the meetings the causes of the milk quality problem are identified, alternatives and possible solutions are considered, recommendations are made and progress is evaluated.

Documented Benefits: Before and after data has been obtained from 75 dairy herds participating in the Milk Money program. On average, each of the 75 dairies improved monthly income by \$2,032 for a total improvement in monthly milk income of \$152,403. That is \$152,403 available each month to these dairies to pay bills, save and reinvest for the future. Over a year, that translates to \$1,828,836 increased returns in these 75 herds. Not all Milk Money teams are led by UW-Extension Agents. However, teams led by Extension Agents fared better than those teams with other professionals working as leaders. Extension led Milk Money teams realized greater reductions in bulk tank somatic cell counts, a key indicator of milk quality (80,000 vs 55,000) resulting in a greater milk quality premium capture for dairies working with Extension agents. The Milk Money program serves as an example of how Extension can work with the Wisconsin dairy business community to achieve mutual goals. Major financial support for the Milk Money program comes from the Wisconsin Milk Marketing Board (WMMB). The WMMB sees quality milk production as a cornerstone in promoting Wisconsin dairy products in national and global markets.

Evidence: Dr. Ruegg has implemented an independent reporting mechanism to monitor the progress and capture the results of “Milk Money” teams. These results are entered in Cooperative Extension’s Plans and Reports system and are summarized through various reports.

Key Theme: NICHE MARKETS

3) Program: Emerging Agricultural Markets

With narrower and narrower profit margins, many of Wisconsin’s agricultural sectors have contracted and consolidated into fewer, but larger, production operations (poultry, swine, cranberries, vegetable crops for processing etc). Dairying, Wisconsin’s largest agricultural sector continues to undergo these changes at a rapid rate. At the same time, this consolidation has created niche market opportunities for thousands of farmers. The Emerging Agricultural Markets Team works to assist individuals and groups to explore new or niche markets and/or to add value to agricultural products. The Emerging Agricultural Markets Team works extensively with partners such as local units of government or Wisconsin’s Department of Agriculture Trade and Consumer Protection to address issues and expand opportunities.

Extension Response: The issues and opportunities in the area of emerging agricultural markets are extremely varied. Some individual producers are looking at improving very basic skills such as marketing relatively small quantities of produce directly to consumers. In other situations, small groups of producers might be coming together to form a cooperative or other business arrangement to build a larger processing plant of some kind. During 2003, Extension faculty and staff worked in all of these areas.

Documented Benefits:

- Jim Faust, Dunn County Agriculture Agent has been working with the Chippewa Valley Market Club since 1987. For many years, this club focused its efforts on improving the commodity marketing skills of its members. In recent years, members of the club explored the options and feasibility for adding more value to local corn production by building a corn-to-ethanol plant. A Wisconsin Chapter 185 Cooperative has been formed; several grants have been obtained; a feasibility study and a business plan have been completed; and equity capital has been raised. The group is in the final stages of obtaining permits and breaking ground for the ethanol plant.
- Approximately 240 producers increased their awareness/knowledge of direct marketing skills and/or practices by attending the Annual Value Added Conference, the Annual Small Acreage Options Conference, the Annual FarmDirect Conference and other Extension sponsored events related to emerging agricultural markets.

- Since a needs assessment was completed in 2000, Vernon County Agriculture Agent Tim Rehbein has been working with landowners to explore the possibilities of grape production as an alternative to tobacco production. An original group of twenty-one selected growers obtained funds to establish vineyards. In 2003, a small “first crop” harvest was made and thirteen producers had sufficient quantities for “test batches” of wine. Of the 21 vineyards, 16 are at the commercial level of production while five still need time to grow. An additional six vineyards have been established outside of the grant project.
- Keith Vander Velde, Ron Wiederholt and Kevin Schoessow, Agriculture Agents in Marquette, Clark and Washburn/Sawyer/Burnett Counties respectively, worked with local partnerships to organize and initiate farmers markets in Westfield and Montello in South Central Wisconsin, Greenwood in North Central Wisconsin and Spooner and Hayward in Northern Wisconsin. The first year’s farmers market in Greenwood, Wisconsin started with only three vendors. By the end of the first season, the number of vendors had increased to 13 and over 75 people were visiting the market each Wednesday.
- Rose Skora, Racine and Kenosha County Agriculture Educator, and Kristin Kleeberger, Waukesha County Horticulture Educator, have been working in Southeastern Wisconsin to establish closer connections between producers and consumers. There have been various components to this effort with a primary goal of increasing sales of locally grown agricultural products to consumers and increasing the opportunities for consumers to make these purchases. In 2003, Rose and Kristin worked with the Wisconsin Department of Agriculture, Trade and Consumer Protection and the Wisconsin Apple Growers Association in the coordination and development of a statewide website that provides a mechanism for producers to market what they produce and consumers a central web site where they can go to find agricultural products. SavorWisconsin.com was completed at the end of 2003 and went live in early January 2004. Over 700 businesses have already listed on this site.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension’s Plans and Reports system. They also submit more detailed success stories of their work.

Key Theme: MANAGING CHANGE IN AGRICULTURE

4. Program: Farm Management Education

Current Situation: To remain competitive Wisconsin’s farm business owners must make good decisions. Good decisions need to be made around a variety of issues – production practices, farm business planning, building on strengths, addressing weaknesses to be more profitable, managing risks, improving communication, working through farm transfer options, using government programs etc.

Extension’s Response: UW-Extension campus and county-based faculty and staff working through the Farm Management Education Team and the Risk Management

Team assist farm business owners to improve their farm business decision-making skills and, as requested, assist them in their decision making. UW-Extension staff members also help agricultural professionals increase their knowledge and skills to help farm families reach their goals.

Documented Benefits:

- 669 farm managers were provided information and/or were assisted with a farm management decision.
- 48 farm managers completed a farm business financial analysis
- 105 agricultural professionals increased their knowledge and skills to help farm families with farm transfer issues.
- In Lincoln and Marathon Counties, Agriculture Agent Tom Cadwallader worked with twenty-five new farm businesses through the Central Wisconsin River Graziers. This team effort between farmers, UW-Extension, Lincoln and Marathon Land Conservation Departments, the Marathon County Economic Development Corporation and Chamber of Commerce was supported through an Agribusiness Incubator project funded by a \$26,000 grant by the USDA Dairy Revitalization effort. Through this effort, the twenty-five farms have placed 5659 dairy cows, 5853 dairy heifers and 1204 beef cattle. As a result, the area has benefited by \$16,144,492 in additional economic activity.
- In Outagamie County, Dairy and Livestock Agent Zen Miller worked with three families that had participated in the AgVentures Farm Business Arrangement and Transfer training. One farm family completed the transition of the dairy herd from the older generation to a younger generation. A second family proceeded to form an LLC (limited liability corporation) between the mother and son to farm 400 acres and finish 200 head of Holstein steers per year. A third family is working to dissolve a family corporation.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Key Theme: PLANT PRODUCTION EFFICIENCY

5. Program: Forage and Grains

Current Situation: Wisconsin depends on adequate supplies of high quality forages and grains to feed its roughly 16,500 dairy herds. Other Wisconsin farm business owners sell cash grains, mostly corn and soybeans for their primary source of income. Forage and grain production technologies are constantly changing and the most up-to-date information is needed to increase yields and improve quality.

Extension's Response: The University of Wisconsin is recognized as a leader in applied agronomic research. UW-Extension campus and county-based staff use this research-based knowledge to help keep Wisconsin forage and grain producers and the agricultural professionals they work with on top of new developments and the

practical application of this knowledge. UW-Extension's campus and county based faculty and staff, working through Team Forage and Team Grains, help forage and grain producers grow high yielding and quality forages and grains.

Documented Benefits - Forages:

- 814 forage producers and ag professionals gained knowledge about research-based information and 166 forage producers implemented research-based management practices that increase forage yields.
- 1494 forage producers and ag professionals gained knowledge about information and 819 forage producers implemented research-based management practices that improve forage quality.
- 962 dairy and livestock producers gained knowledge about research based management practices and 87 producers implemented researched management practices that improved pasture productivity and utilization.
- Two on-going forage quality programs coordinated by Mike Ballweg, Sheboygan County Crops and Soils Agent, continue to improve the profitability on dairy farms in Sheboygan, Ozaukee and Washington Counties. The alfalfa quality-monitoring project helps farmers identify the appropriate time to harvest alfalfa. A survey of 26 participants revealed that 87% said that they were able to harvest higher quality forage as a result of alfalfa scissors cutting and PEAQ information during the past 5 years. It is estimated that those timely harvests translate to an 18-20 point improvement in relative feed value and increased profits by \$100.00 per cow. With 26,000 cows, the potential increase in profits in Sheboygan County alone is \$2.6 million. A corn silage quality project is using research-based information to help dairy farmers harvest corn silage on a timelier basis.
- In St. Croix County, Agriculture Agent Lee Milligan is using the Nutrient Detergent Fiber (NDF) Digestibility Test to increase milk production. Three dairy nutritionists in that area are now using the NDF digestibility test when trouble shooting nutrition problems. In one dairy farm situation the adjustments made as a result of a NDF digestibility test resulted in a 5 pound per cow per day increase in milk production. In this herd, revenue increased \$1,125 per month. In another herd with 380 cows, the use of a TMR quality analysis resulted in increased milk production of 4 pounds per cow per day. This translates into increased milk revenue of \$5,700 per month. In a third herd with 580 cows adjustments made to the ration will likely reduce the incidence of foot problems.

Documented Benefits – Grains

- 853 corn/soybean producers increased their knowledge or improved weed management
- 857 corn/soybean producers increased their knowledge of insect management
- 773 corn/soybean producers increased their knowledge of disease management
- 727 grain producers improved corn and soybean production through improved pest management
- 4077 Wisconsin producers learned to protect the environment and their own personal safety through private pesticide applicator training and certification
- Approximately 130 agri-professionals increased their knowledge of improved weed, insect and disease management in grain production systems.

- UW-Extension county-based faculty and staff were involved in fifteen on-farm grain crops research/demonstration projects. These projects included studies examining residue cover, two pass herbicide programs, soybean aphid insecticide applications, corn silage row spacing and population, corn silage dry down, and spring vs fall tillage of soybean acres to name a few.
- Jerry Clark, Chippewa County Crops and Soils Educator, and Mahlon Peterson, Eau Claire County Agriculture Agent, worked collaboratively to host hands-on pesticide applicator calibration workshops. As a part of the workshops, eleven participants calibrated their application equipment. On spray application equipment, 20-30% of nozzles checked were either over or under applying pesticides. Inaccurate application of pesticides costs private applicators money and may result in environmental and personal safety hazards. Depending on pesticides used, cost savings to farmers who calibrated their application equipment was as high as \$50 per acre.
- In 2000, soybean aphids were discovered for the first time in the United States and Wisconsin. Jim Fanta, Dodge County Crops and Soils Agent, and Dave Fischer, Dane County Crops and Soils Agent, have worked to research this new pest and, as knowledge is gained, provide information to producers and ag professionals about control options and recommendations. On-farm research prompted the development of a bulletin titled "Reproductive Soybean Development Stages and Soybean Aphid Thresholds." Research results indicate that an average of over 8 bushels per acre could be returned to soybean growers from proper treatment of the insect. With the cost of treatment deducted, the net return to soybean growers would be in excess of \$30 per acre per year. If the research results were applied to all acres of soybeans raised in Dodge County, the net return would be over 2 million dollars per year (using 3 year average soybean acres and yields and the best treatment timing).

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

6) Program: Addressing the needs of underserved audiences

Current Situation: Wisconsin Agriculture is becoming more diverse. Many persons of Hispanic and/or Latino origin work in dairy or horticultural operations (nurseries, greenhouses and landscape). Amish communities have developed in several areas of the state. Persons of Asian descent living in many communities raise fresh market vegetables, selling much of their produce through farmers markets. A wide variety of ethnically diverse groups regularly participate in UW-Extension Community Garden programs. Women play an important role in Wisconsin agriculture. Many Wisconsin farm businesses are owned and operated by women. In most farm businesses women are an equal partner, providing labor and/or management to compliment their husband's skills. However, women have not been as involved as participants in agricultural programs offered by UW-Extension.

Extension's response: UW-Extension addresses the needs of underserved audiences in a variety of ways. Programmatic efforts are often geared toward integration, helping underserved, diverse audiences integrate into the United States' culture and/or by helping others build their understanding of new cultures. In other cases, UW-Extension provides programs that build job skills. The Heart of the Farm (HOF) program is geared toward women in Wisconsin agriculture. HOF conferences were held in four sites in 2002-2003.

Documented Benefits:

- Mexican immigrants continue to move into Buffalo and Trempealeau Counties, mainly as employees on dairy farms. These counties are very rural and residents have had very limited contacts with other cultures. Dairy farmers with Mexican employees struggle with both the language and the culture of their new employees. Carl Duley, Buffalo County Agriculture Agent, and Jon Zander, Trempealeau County Agriculture Agent, have coordinated ESL and SSL classes locally in 2000 through 2003. Cross-cultural immersion experiences in Mexico for dairy farm owners have been coordinated in 2001, 2002 and 2003. Thirty-two dairy farmers from Wisconsin and Minnesota have gained a better understanding of the Spanish language and the Mexican culture. A video "The Mexican Connection in Wisconsin" has been produced. More than 2000 area residents have been exposed to the Mexican culture through various presentations.
- In Columbia County, Agriculture Agent Laura Paine and Community and Natural Resources and Economic Development Agent Kathleen Haas responded to producer needs for another outlet to sell produce in South Central Wisconsin. With help from Greg Lawless of the UW Center for Cooperatives, a group of 53 growers formed a cooperative - the Badgerland Produce Auction. Forty-three auctions were held during the 2003 growing season. A total of \$49,567 in fresh fruit and vegetables was sold. Approximately 10-20 of the buyers were larger scale, regular buyers representing large farm stands or grocery stores. A total of 71 growers sold produce through the auction. None of the growers relied exclusively on the auction as their main marketing outlet. Auction sellers included 32 Amish farmers, for some of whom this was a new income generating enterprise.
- In Keweenaw County, the Hispanic population is the fastest growing segment of the population. The dairy industry is attracting many Hispanic workers. Northeast Wisconsin represents a huge cultural challenge for new immigrants and their families as they adjust to new working conditions, a new language, new food ingredients, weather and a variety of other social, economic and cultural factors. Extension is a new concept and resource that few are familiar with. To help new immigrants adjust and learn about Extension, Jennifer Keuning, Keweenaw County Agriculture Agent, and her county colleagues organized a spring festival at a local dairy farm. Forty-seven members of the Hispanic community attended the "Fiesta Primavera" event. Following a Mexican dinner, the group divided into three groups, mothers with young children, youth, and farm workers. UW-Extension staff conducted needs assessments with each of the groups. The farm workers identified the desire to

enhance milking skills including proper procedures, mastitis detection and treatment, reproduction and general cow care as priority needs. As a result of the event, a dairy worker training on the subject of dairy reproduction was taught by UW-Extension Dairy Specialist Paul Fricke (translated into Spanish by a UW-Madison graduate student). Thirteen workers attended this training session. They requested additional training on other dairy topics.

- Ninety-nine women participated in four conferences organized by the HOF coordinating committee. Participants gained knowledge about various management topics including the 5Ds (Death, Divorce, Disaster, Disability, Disagreement), Health Care Strategies, Managing Debt, Marketing and Off-Farm Investments, Farm Sale or Transfer and Production Management. Two participant quotes summarize the success of these conferences. "This conference makes me feel GOOD. I laughed, I shared stories, I learned a lot. Women on farms tend to be so isolated. This session is just what the doc ordered." "Great program! I hope it continues!! Farm women have needed this for a long time."

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Multi State Efforts:

Four State (Wisconsin, Minnesota, Iowa and Illinois) Dairy Programming efforts concluded another successful programming year. This year's focus was on applied dairy nutrition and management. The focal point of the effort was the 4-State Applied Nutrition and Management Conference held in La Crosse, WI on July 9th and 10th. Approximately 425 mostly dairy industry professionals attended this event.

Participation: Paul Fricke - .05 fte, Roger Palmer - .05 fte, Randy Shaver - .10 fte,

Wisconsin and Minnesota Ag Engineering Newsletter was published four times during 2003. The newsletter reached professional agriculture engineers, county agriculture agents and others. The newsletter has been a successful venture bringing resources together from the two states that has saved time and resources.

Participation: Ron Schuler - .05 fte, Dave Kammel - .05 fte , Brain Holmes - .05 fte, and Doug Reinemann - .05

Dairy Price Risk Management video was a multi-state effort that includes Wisconsin, Illinois, California and New York was completed this past year. The effort is the development of a video DVD that through case studies explaining dairy price risk management. Video feature four dairy producers from the different states on how they

have managed dairy price risk. Videos have been edited for content and produced for distribution.

Participation: Jeff Key - .15 fte, Matt Glewen - .05 fte, and Kevin Bernhardt - .05 fte

The Minnesota Beef School is a distance education program that reaches into Wisconsin. Three Wisconsin agriculture agents advised twenty four Wisconsin participants in the Minnesota Beef Schools correspondence course in 2003. The course topic was Beef Reproductive Management (Keith Vander Velde wrote one of the chapters for the course).

Participation: Mahlon Peterson - .05 fte, Rhonda Gildersleeve - .05 fte, Keith Vander Velde - .05

The Great Lakes Grazing Network Grazing Dairy Financial Data project is an ongoing effort to gather financial data on grazing dairy farms under many different management practices. Participating states include: Illinois, Indiana, Iowa, Michigan, Missouri, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. The Canadian province of Ontario is also involved. First and second year project reports as well as five fact sheets derived from the reports have been completed and are available at <http://cdp.wisc.edu>. Tom Kreigl had submitted a detailed success story on this work.

Participation: Tom Kreigl - .66 fte

A consortium consisting of Extension and Research faculty and staff in Iowa, North Dakota, South Dakota, Minnesota and Wisconsin are integrating research, extension, and education activities to address economic, social and ethical issues associated with agricultural biotechnology. The research portion of the project examines determinants of product adoption, consumer behavior, industry response, product regulation, intellectual property rights, values influencing consumer and producer decisions, and producer and consumer attitudes' towards acceptance or rejection of agricultural biotechnology. Findings are being used in developing extension and educational materials for diverse audiences to help them understand the benefits and risks associated with agricultural biotechnology.

Participation: Ken Smith - 1.0 fte, Brad Barham - .10 fte, Rick Klemme - .05, Mary Ellen Bell - .10 fte Tom Zinnen - .10 fte, Mohammad Dougla - .05 fte

Budgeted: \$223,005

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REFORM ACT (AREERA)
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GOAL 2: A SAFE, SECURE FOOD AND FIBER SYSTEM

Overview

University of Wisconsin Cooperative Extension responded to the emerging food safety and food quality needs of the state's communities. Effective education is critical so that consumers handle, prepare and store food safely to ensure quality for the entire household and so that processors are fully trained and able to implement federally-mandated food safety programs.

Education within the areas of food safety and food quality targeted not only consumers and food industry personnel but also allied interests within state and local governments. Educational efforts focused on the following intended outcomes:

- Communities will encourage and support the safety of food and water for all consumers.
- Individuals/families will choose, handle, prepare and store food safely.
- Food processors/food industry personnel will produce safe/high quality food for consumers.

The University of Wisconsin-Extension Nutrition Education Program (WNEP) responds to the diverse needs and resources of the poor by implementing community-based nutrition education programs. WNEP is made up of two federally funded nutrition education programs for low-income families and individuals – the Food Stamp Nutrition Education Program (FSNEP) and the Expanded Food and Nutrition Education Program (EFNEP). FSNEP is a partnership between the Food and Nutrition Services of USDA, the Wisconsin Department of Health and Family Services, and University of Wisconsin-Extension. EFNEP is a partnership between CSREES of USDA and UW-Extension.

During fiscal year 2002-2003, WNEP operated as 39 projects in 58 Wisconsin counties. WNEP educators reached 297,563 people during the year. Thirty percent of the participants were families with young children; 45 percent were school age youth; 15 percent were older adults; and 6 percent were adults between 18 and 65 years. Sixty-one percent of the participants were female and six percent had a disability. WNEP educators reached persons of many diverse cultural groups: 74 percent of participants were Caucasian, 12 percent African American, 4 percent Asian, and 4 percent Native American. Nine percent of the educational contacts were with persons who were

identified as Hispanic or Latino. Educational programs were offered in a variety of settings using group sessions, learn-while-you-wait, lessons for individuals and other strategies.

Educational programs have resulted in significant change within the state. These impacts for FY 2003 include:

- A total of 44,634 educational contacts where individuals learned to choose, handle, prepare and store food safely.

Total Expenditures:
(By FTEs and Source of Funding)

	FTEs	Smith-Lever Act	State Match	FSNEP Match
Smith-Lever	1.25	\$12,189	\$104,683	--
EFNEP/FSNEP	9.90	\$80,751	\$504,554	\$504,554

Key Themes

Key Theme: FOOD SAFETY

Current Situation: Food safety education is an integral part of the Wisconsin Nutrition Education Program (WNEP). We believe that education in proper food storage, handling, and preparation can result in changed behavior on the part of limited resource families. Our goal is to provide individuals with knowledge about safe food handling and storage practices so they will be better able to purchase, prepare and serve food that is safe to eat.

Our program efforts parallel efforts at a national level that are dedicated to reducing the incidence of food borne illness through the Fight BAC™! campaign. We utilize safe food handling messages that provide consumers with consistent, brief, and positive actions that they can take to reduce their risk of illness. We teach food safety lessons to children, youth and adults.

Documented Benefits:

Educational programs have resulted in significant change within the state. These impacts for FY 2003 include:

- A total of 44,634 educational contacts where individuals learned to choose, handle, prepare and store food safely.
- School children across the state participated in the food safety evaluation project, responding to various questions related to safe food handling and preparation. After a food safety lesson, nearly all of the children said that they would wash hands properly; about 90 percent said that they would keep milk cold and rinse fruits and vegetables before eating.

- Nearly 500 adults participated in a project to evaluate the effectiveness of food safety programming. Overall, adults responded positively to the following statements after a food safety lesson: I wash my hands with warm soapy water after I handle raw meat, fish and eggs; I wash knives and cutting boards with hot soapy water after I cut up raw meat; I cook hamburger to 160°F; and I transfer hot food to shallow containers for quick cooling in the refrigerator.
- A large number of individuals were targeted for general food safety education: 37,956 youth (ages 5-17), pregnant women, families with children, adults without children, and elderly participated in educational programs about handling food safely when buying, preparing, serving, storing, or preserving food.
- 429 youth (ages 12-17), pregnant women and parents with children reported that they have changed one or more behaviors related to handling food safely, since participating in EFNEP.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Source of Funding: Smith-Lever Act funds, State matching funds, and FSNEP matching funds

Scope of Impact: State Specific

Evaluation of the Success of Multi-State and Joint Activities

Extension Specialists continue involvement in multi-state Extension activities focusing on education of consumers and food industry personnel. Safe handling of food at home is important in decreasing the risk of food borne illness, and this can be especially important for low-income households. But consumers often lack the basic skills and knowledge of how to handle, prepare and store food safely.

Extension specialists integrated within the College of Agricultural & Life Sciences at the University of Wisconsin-Madison work collaboratively with personnel in Minnesota, Iowa and Illinois. Specific collaborations with the University of Minnesota include the Better Process Control School (canning plant personnel), ice cream short course, and pasteurization short course. Collaboration with Iowa State University occurred in Seafood HACCP training and the continued marketing by the North Central Regional Aquaculture Center of fish processing training videos produced at Wisconsin. Extension specialists from the University of Wisconsin also participated in training of fruit and vegetable growers from Iowa and Illinois in safe application of manure to crops.

Extension activities in the state are strengthened by applied research efforts. Continued evaluation of consumer food handling practices led to development of improved educational messages for clients. Research on the safety of applying non-composted cow manure as fertilizer in vegetable production, improved methods for evaluating the hygienic condition of ready-to-eat foods, improved processing of sprouted seeds and alternative processing techniques for apple cider allowed specialists to better address the needs of consumers, state and local governments, and the industry. A major contribution to the industry was the establishment of the University of Wisconsin Center for Meat Process Validation in 2003. This Center was established to meet the increasing need of small and very small meat and poultry processes for applied research to meet federal HACCP guidelines.

The University of Wisconsin-Extension continues to partner with New York and Louisiana in the second phase/year of Food Safety at Home. In Wisconsin low-income families, enrolled in the Expanded Food and Nutrition Program (EFNEP) in 4 counties and in the Food Stamp Nutrition Education Program (FSNEP) in 1 county have been trained in five areas of food safety using computer-based food safety lessons. Evaluation of behavior change is ongoing and will be disseminated in the future.

Budgeted: \$9,512

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RESULTS FOR THE AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION
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GOAL 3: A HEALTHY, WELL-NOURISHED POPULATION

Overview

Wisconsin's people are faced with increasingly complex lifestyle choices that can affect health for themselves and their families. Wisconsin enjoys success in implementing programs related to creating a healthy, well-nourished population. The state program team "Food, Nutrition, and Optimal Health" concluded its four year plan at the end of 2003. This programming was supported by faculty with research and Extension appointments, drawing on the expertise of the College of Agricultural and Life Sciences, the School of Human Ecology, and the Center for Biotechnology.

The University of Wisconsin Cooperative Extension system continues as a research-based, well-respected resource for scientifically valid information for Wisconsin consumers. Among Wisconsin's target audiences are parents and caregivers of young children, limited resource families, culturally and ethnically diverse individuals and families, under-served and under-represented populations, youth and older adults. In addition, other education and health professionals are reached through Extension programming. Target audiences are reached by forming close collaborations with partners who have access to target audiences, by careful work with local advisory committees, through educational programs, and by taking the initiative to reach out to under-served or unfamiliar audiences. Wisconsin Nutrition Education Program (WNEP) staff work with individuals, families and communities affected by economic poverty, tailoring messages to Food Stamp recipients and those eligible for the Food Stamp program, as well as EFNEP families in counties.

Hunger and food insecurity are real problems for Wisconsin families. Statewide, approximately 510,000 people live in households that are food insecure – they do not have access at all times to enough food for an active healthy life. This means almost one out of every eleven Wisconsin households is food insecure. Low income families have alarmingly high rates of food insecurity (44 percent) and hunger (19 percent).

According to 2000 Census data, 8.7 percent of Wisconsin citizens and 10.8 percent of Wisconsin children live in poverty. In many more households, incomes are considered above the poverty line, but are still low enough to qualify families for government assistance programs such as food stamps and Badgercare health insurance. Statewide unemployment rates are increasing – 4.6 percent in 2001 compared to 3.5 percent in 2000. And emergency food providers, such as food pantries, report that demand is at an all-time high.

Food stamp participation is on the rise. While the percent of food stamp recipients declined by 18.6 percent between 1995 and 2001, there has been a significant increase in recent years. The increase was 20.2 percent between 1999 and 2001, and jumped 23.5 percent between February 2001 and February 2002.

Wisconsin continues to rank at the bottom nationally for participation in School Breakfast Programs. Thirty-nine percent of Wisconsin schools that offer lunch programs participate in breakfast programs. Only 23 percent of low-income students who receive school lunch also received school breakfast.

The University of Wisconsin-Extension Nutrition Education Program (WNEP) responds to the diverse needs and resources of the poor by implementing community-based nutrition education programs. WNEP is made up of two federally funded nutrition education programs for low-income families and individuals – the Food Stamp Nutrition Education Program (FSNEP) and the Expanded Food and Nutrition Education Program (EFNEP). FSNEP is a partnership between the Food and Nutrition Services of USDA, the Wisconsin Department of Health and Family Services, and University of Wisconsin-Extension. EFNEP is a partnership between CSREES of USDA and UW-Extension.

During fiscal year 2002-2003, WNEP operated as 39 projects in 58 Wisconsin counties. WNEP educators reached 297,563 people during the year. Thirty percent of the participants were families with young children; 45 percent were school age youth; 15 percent were older adults; and 6 percent were adults between 18 and 65 years. Sixty-one percent of the participants were female and six percent had a disability. WNEP educators reached persons of many diverse cultural groups: 74 percent of participants were Caucasian, 12 percent African American, 4 percent Asian, and 4 percent Native American. Nine percent of the educational contacts were with persons who were identified as Hispanic or Latino. Educational programs are offered in a variety of settings using group sessions, learn-while-you-wait, lessons for individuals and other strategies.

Documented Benefits:

Wisconsin's goals for working toward a healthy, well-nourished population and related impacts include:

1. Communities will promote healthy food, physical activity and lifestyle choices.

- During 2002-2003, WNEP provided community-based nutrition education programs in partnership with nearly 1000 agencies, including public sector or government-funded agencies, private non-profits, schools, private sector agencies and others. WNEP entered into over 1,000 agreements with those agencies with the common goal of providing nutrition education to food stamp-eligible individuals and families; half of the agreements led to in-kind matches in accordance with program guidelines.

WNEP is a major partner in the Wisconsin Nutrition Education Network, a statewide alliance of agencies working collaboratively so that low-income individuals and families receive consistent and effective nutrition messages.

The Network sponsored a nutrition education campaign for three months in 47 counties. The campaign promoted physical activity and healthy eating to parents and other adults who serve as role models for young children eligible to receive Food Stamps. The campaign reached over 19,000 adults and children through group lessons, interactive displays and demonstrations. A majority of these participants (95%) reported that they intend to make behavioral changes as a result of what they learned and 71% of the local agency partners said the campaign initiated strengthened or expanded their relationships. Over 338,000 people were reached via handouts, posters, menu backs, newsletters and newspaper articles.

- Teaching with learn-while-you-wait lessons at WIC or other public health clinics Milwaukee County WNEP has participated in 17 health fairs during FY03. These health fairs were conducted at a variety of community sites such as schools, community health centers, WIC sites, and churches and reached a diverse population of 2,645 learners. The learners were 26% African American, 16% white/Caucasian, 35% Hispanic, 18% American Indian, and 5% Asian. The WNEP participation in these health fairs provided the opportunity to disseminate information via interactive displays and WNEP promotional and educational materials. It also resulted in enrollment of learners in nutrition education programs. For example, a bilingual educator made 280 contacts at 4 different health fairs in a predominantly Hispanic neighborhood. Of those 280 contacts, the educator was able to enroll and graduate 120 learners in a WNEP long term nutrition education program.
 - \$2,105,387 of resources was contributed as cost share by partners to increase healthful eating, physical activity, and lifestyle choices. These resources included in-kind match, grants or donations.
2. Individuals/families will achieve optimal health throughout their lifespan by choosing and preparing nutritious meals and snacks and balancing the food they eat with physical activity.
- 176,283 youth (ages 5-17), pregnant women, families with children, adults without children, and elderly participated in educational programs about choosing and preparing meals and snacks to meet the Dietary Guidelines for Americans and the Food Guide Pyramid. These contacts with under-served increased over 2001-2002 by 6,674 persons.
 - 19,604 pregnant women, families with children, and individuals who care for children participated in Extension-led educational programs focused on choosing and preparing age-appropriate meals and snacks. This represents almost a four-fold increase over 2001-2002.
 - 476 pregnant women, parents with children, and other adults reported that they have changed one or more behaviors related to choosing and preparing nutritious meals and snacks or participating in physical activity, since participating in an EFNEP educational program.

- 714 pregnant women, parents with children, and other adults reported consuming a diet closer to the recommendations of the Food Guide Pyramid since participating in an EFNEP educational program.
3. Communities will ensure that all people at all times have physical and economic access to sufficient acceptable food to meet their dietary needs for a productive and healthy life.
- UW-Extension WNEP improves access and increases participation in school meals. Free and reduced price school lunches and breakfasts, free summer meals and after school snacks provide nutritious meals for children that might not otherwise be receiving them.
 - UW-Extension enhances access to locally produced fresh produce through community gardens or farmers' markets, providing increased quantity and quality of nutritious food to low-income families.
 - The Pierce County Hunger Prevention Council along with UW-Extension distributed approximately 5000 lbs. of venison along with nutrition and food preparation materials. Healthy Eating Active Living coalition distributed over 500 brochures about low or no-cost physical activities available in the county.
4. Individuals/families will manage their resources so they are healthy and well nourished.
- A major goal of WNEP is to help limited resource families become more food secure by teaching them to track spending, manage food dollars and plan nutritious meals.
 - WNEP educators reached 1500 people in small group interactive lessons about managing food dollars. After a lesson on using food stamps and other programs to put together a food budget, 83 percent of the 541 learners said they had learned something that would make it easier for them to get enough food or money for food. After playing a game on saving money when eating away from home, 90 percent of the 451 participants reported that they had learned a new way to eat away from home occasionally without spending too much. After learning about choosing low cost foods based on the Food Guide Pyramid, 98 percent of the 122 participants could name a nutritious low cost food that they would buy for their family.

More general results are as follows:

- 59,513 educational contacts focused on helping learners better manage their food dollars and plan and buy food for their families.
- 6,582 youth (ages 12-17), pregnant women, families with children, adults without children, and elderly participated in educational programs about developing

family spending and savings plans to improve their food security or about community programs and resources that enhance work toward a healthy, well nourished population.

- 45,860 youth (ages 12-17), pregnant women, families with children, adults without children, and elderly participated in educational programs about planning, buying and preparing affordable meals and snacks.
- 508 pregnant women, families with children, adults without children, and elderly reported that they have changed one or more behaviors related to managing food resources since participating in an EFNEP educational program.
- 227 pregnant women, families with children, adults without children, and elderly reported that they were more food secure after participating in an EFNEP educational program about strategies to manage family food resources.
- 56 pregnant women, parents with children, and other adults who participated in community programs or accessed community resources enhanced their food security since participating in an EFNEP educational program.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Total Expenditures:
(By FTEs and Source of Funding)

	FTEs	Smith-Lever Act	State Match	FSNEP Match
Smith-Lever	2.70	\$26,329	\$226,115	--
EFNEP/FSNEP	131.52	\$1,072,766	\$6,702,930	\$6,702,930

Scope of Impact: State Specific

Key Themes

Key Theme: HUMAN NUTRITION

Current Situation: The nation's largest food assistance program is the Food Stamp Program, which helps low-income people buy food. Yet only about half (50 to 60 percent) of eligible Wisconsin residents participate.

Wisconsin ranks last in the nation in access to school breakfast. Less than half (43 percent) of Wisconsin schools that offer lunch programs also offer breakfast

programs. Less than a quarter (24 percent) of low-income students who receive subsidized school lunch also receive school breakfast.

Documented Benefits: Over 60% of all WNEP educational contacts (178,538) focused on helping people choose more healthful food for themselves and their families, with special emphasis on eating fruits and vegetables, and selecting lower fat foods when eating away from home.

- Educators taught 284 lessons about choosing foods with less fat when eating in “fast food” restaurants. Pre- and post-lesson evaluations showed that participants were able to reduce the fat content of their menu choices by an average of 21 grams per meal. Educators reached 825 older adults with a series of nutrition lessons on topics such as choosing a healthful diet, eating plenty of fruits and vegetables, eating plenty of breads and other grain products, choosing and preparing foods with less fat and sugar, and balancing food eaten with physical activity. After the lessons, 80 percent of the older adults said that they could think of one specific thing they are doing differently as a result of the lessons. Approximately 1,000 children participated in lessons about the value of fruit in the daily diet. Before the lesson, only half of the children knew how many servings of fruit they should eat each day. After the lesson, 64 percent of the children knew the correct response. Before a series of lessons on the Food Guide Pyramid, only 14 percent of 200 children were able to correctly place five food groups on the Pyramid; after the lessons 82 percent of the children were able to do so.
- In Brown County, for example, educators taught 37 Native American adults with children and 12 adolescent youth a lesson about choosing foods with less fat when eating in “fast food” restaurants. Pre- and post-lesson evaluations showed that adult participants were able to reduce the fat content of their menu choices by an average of 18 grams per meal and teens by an average of 21 grams per meal. At the end of the lesson, 95% and 92% of adult and teen participants, respectively, indicated at least one food choice change they are willing to make when they eat in fast food restaurants.
- WNEP has worked with 42 Milwaukee Public School (MPS) sites throughout FY03 providing nutrition education to 6,736 students. Eighty percent or more of those students attended elementary schools. The MPS sites included day school, after school, and summer programs. The students represented a very diverse urban population with 51% identified as African American, 27% white/Caucasian, 19% Hispanic, and 3% Asian. Pre- and post-evaluations/tests were administered to measure the impact of the nutrition education sessions. The results of those evaluations demonstrated that 72% of the students were able to place foods in the proper order on the food guide pyramid on the post test vs. 58% on the pre test; 86% could identify the number of vegetable servings needed each day on the post test vs. 40% on the pre test; and 79% of the students were now washing their hands before making a sandwich compared with 68% on the pre test.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Source of Funding: Smith-Lever Act funds, State matching funds, and FSNEP matching funds

Scope of Impact: State Specific

Key Theme: COMMUNITY FOOD SECURITY

Current Situation: The Wisconsin Nutrition Education Program (WNEP) works in local communities to provide nutrition education to under-represented, under-served low-income families – those families that receive or are eligible to receive food stamps. Educational programming related to food security is provided on the individual level (such as by teaching families how to stretch food dollars), and at the community level (such as by convening a local hunger task force).

In the most recent 3-year period reported, 1999 to 2001:

- One in 12 (8.4 percent) of Wisconsin households were food insecure – more than 475,000 people.
- One in 30 households (2.9 percent) experienced hunger.
- Food insecurity and hunger rates increased between 1999 and 2001 in the United States. Relative to other states, Wisconsin households have become more food insecure and hungry.
- People are also seeking more food assistance. For example, Food Stamp participation is on the rise in Wisconsin and nationally. In Wisconsin, participation increased 70 percent between May 1999 and May 2003. This recent increase has been among the highest in the nation.
- Use of food pantries and other emergency food outlets continues to rise. More than half of Wisconsin food pantries in the America's Second Harvest network reported seeing more clients in 2001 than in 1998. In 2002, requests for emergency food increased by an average of 19 percent in U.S. cities.

Documented Benefits:

- At the state level, UW-Extension contributes as an active member of the Wisconsin Food Security Consortium. Accomplishments in 2003 include partnering with the Department of Health and Family Services to create an online, interactive tool and mapping for identifying local resources and gaps in service for the food stamp eligible population; creating an annual Hunger Report

Card designed to report on the state of hunger and food insecurity in Wisconsin; and examining federal and state policies in improve capacity to distribute emergency food. Further work has focused on a school survey to ascertain local assessments of food security.

- UW-Extension WNEP continues to provide poverty awareness education and training on strategies for working with low-income audience.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Source of Funding: Smith-Lever Act funds, State matching funds, and FSNEP matching funds

Scope of Impact: State Specific

Evaluation of the Success of Multi-State and Joint Activities

Dr. Susan Nitzke, Department of Nutrition Sciences, continues her leadership for research affiliated with a five-year multi-state Hatch and Extension project on Stages of Change and fruit/vegetable behaviors of young adults. She is the principle investigator for a complementary multi-state IFAFS project that applies Stages of Change and other constructs of the Transtheoretical Model to a set of tailored newsletter-based interventions that is being extensively evaluated to determine the effectiveness of this approach in reaching economically disadvantaged young adults.

Budget: \$14,437

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**GOAL 4: GREATER HARMONY BETWEEN AGRICULTURE AND THE
ENVIRONMENT**

Overview

Better use of natural resources and protection of the environment was one of the priority issues identified through Wisconsin's 1999 state strategic planning process. This issue continues to be a priority concern. Agriculture and residential areas are competing for the same land area and citizens are demanding more sensitivity to environmental resources, especially surface and groundwater. For 2003, Wisconsin's Agriculture and Natural Resources faculty and staff continued to address this priority issue.

Total Expenditures:
(By FTEs and Source of Funding)

FTEs	Smith-Lever Act	State Match
61.53	\$600,000	\$5,152,904

Key Theme: NUTRIENT MANAGEMENT

Program: Improving Agricultural Management to Protect the Environment

Current Situation: UW-Extension campus and county based faculty and staff, working with many partners have helped Wisconsin's agricultural producers become better stewards of the land and resources. Generally, UW-Extension's programs have focused on improved management of nutrients and pesticides. As a result, producers have saved money while reducing environmental impacts. Newer research shows that the amount of nutrients generated on livestock farms can be influenced by making ration changes. This has become a newer area for educational programs. Another new audience is custom manure applicators that estimates suggest may be applying 35 to 40 percent of Wisconsin's dairy manure. Although many teams address environmental issues, the Nutrient Management Team and Land Use Team have been most involved in delivering educational programs.

Documented Benefits:

- 627 farmers gained knowledge of nutrient management practices by attending farmer training sessions or through one-on-one consultation.
- 179 ag consultants gained knowledge of nutrient management practices by attending trainings for professionals.
- 77 farmers implemented a nutrient management plan
- 73,100 acres of farmland had nutrient management plans being implemented
- 320 farmers/ag consultants gained knowledge of animal feeding/ration balancing and impact on nutrient management.
- 71 farmers/ag consultants implemented new animal ration balancing procedures to avoid excess feeding of nutrients
- 252 custom haulers gained knowledge by attending sessions for custom applicators
- 122 farmers/elected officials gained knowledge of nutrient management requirements for operations reaching CAFO status
- Crops and Soils Agents Ted Bay and Jerry Clark and Community, Natural Resources and Economic Development Agent Kevin Erb work extensively with custom manure applicators. Three years ago, these educators worked with custom manure applicators to form the Professional Nutrient Applicators Association of Wisconsin (PNAAW). In 2003, these educators collaborated with PNAAW to host a two-day manure handling Expo. The Expo included equipment demonstrations, residue management, odor control and manure spill response training. The Expo was attended by approximately 600 custom applicators and their farm clientele from the upper Midwest and Canada. Extension specialists presented research findings on manure incorporation and its impact on residue management and odor control. The spill response training using thousands of gallons of liquid manure was conducted in partnership with the Wisconsin DNR. In December, a PNAAW member firm that had attended the Expo spill response training had a manure tank that experienced a mechanical failure while crossing a major Wisconsin river releasing approximate 2000 gallons of manure on the bridge span. Quick reaction by the employee kept 2/3 of the total tank load from spilling onto the bridge and effective containment and clean up prevented 99% of the manure that was released from reaching the river. A disaster was avoided. The local DNR Spills Coordinator was impressed with the quick and thorough action and the professionalism of the response to this accident. In her opinion, without the Expo training, this could have resulted in a major public relations disaster for the entire livestock industry.
- Greg Blonde, Waupaca County Agriculture Agent completed a survey of farmers that had participated in local nutrient management training from 1999 through 2002. Fifty-nine Waupaca County farms in three watersheds have improved their understanding of nutrient management principles. Ninety two percent of respondents indicated that nutrient management trainings were useful or very useful at helping them better understand principles/practices in their farm nutrient management plan. Survey respondents indicated that on average they were using two new and improved (and five old) nutrient management practices. Eighty-three percent indicated that they had reduced commercial fertilizer use

with an average savings of \$2,300 per farm and 45% lowered phosphorous in dairy cattle diets with an average savings of \$520 per farm.

- In Jefferson County, Crops and Soils Agent Matt Hanson has been researching on-farm nitrogen (N) management. His studies (seven farms in four counties) show that side-dressing N to corn when it is 12-20 inches in height can minimize N loss to the environment because the crop has an established root system and can most efficiently utilize N when the corn plants need it most. The studies show that N application rates above 100 pounds per acre do not result in a yield increase that offsets the cost of the additional N. The data suggests that in corn following soybean rotations, if N is side-dressed when the corn is 12-20 inches tall, N application rates can be reduced by at least 40 pounds per acre from current UW recommendations with no impact on yield. This could save producers a minimum of \$6-10 per acre and reduce the potential of surface and/or groundwater contamination.
- In Outagamie County, Dairy and Livestock Agent Zen Miller has promoted feeding less phosphorous in dairy cattle rations. Outagamie County has 38,000 cows on 640 square miles of land. Non-point pollution is a constant concern as water flows into the Wolf and Fox Rivers and finally into Green Bay. Data was collected from TMR rations from twelve farms. Two farms that showed ration phosphorous levels above .60% reformulated to .40% with savings of \$2,000 to \$4,000 per year in phosphorous costs alone. Manure samples from these two farms showed reductions in phosphorous levels.
- In Portage County, Crops and Soils Agent Tim Connell worked with the World Wildlife Fund (WWF) and the Wisconsin Potato and Vegetable Growers Association (WPVGA) to identify and accelerate the adoption of pest management practices to reduce the ecological footprint of potato production in Wisconsin. The project has evolved to a certification program and an eco-labeled product called Protected Harvest with potatoes being marketed under the brand Healthy Grown. The certification standards have been established in nine areas: field management and scouting, information sources, soil and water quality, weed, insect, and disease management and storage. In 2003, Protected Harvest's third year of production, eleven Wisconsin potato growers certified 3998 acres of potatoes to be sold as Healthy Grown. Using the bio-IPM program growers reduced the toxicity units on Healthy Grown potatoes by over 64% compared to conventionally grown potatoes.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Scope of Impact: State Specific

Evaluation of Success of Multi-State and Joint Activities

Fred Madison, Vance Haugen, Paul Dietmann and Tom Cadwallader work with the North Central Sustainable Agriculture Research and Education Program (SARE)

professional development program. The SARE Professional Development Program (PDP) reaches across all of the states in the North Central region. Collaborating across state lines has increased the program's viability and sharing of professional development efforts. The PDP has provided training in sustainable agriculture for UW-Extension Agents, Land Conservation and NRCS staff. \$4000 in scholarships to attend various organic/sustainable agriculture professional development programs were awarded in 2003/2004.

Participation: Fred Madison - .10 fte, Vance Haugen - .10 fte, Paul Dietmann - .05 fte, Tom Cadwallader - .05 fte

A multi-state professional improvement effort in soil health/ecology was initiated in the fall of 2001. The first year was primarily devoted to planning and professional development with agents traveling to Michigan for training. A producer training was held at the Hancock Experiment Station in 2003.

Participation: William Bland - .05 fte, Leslie Cooperband -.05fte, Mark Kopecky - .05 fte, Kevin Schoessow and Don Genrich - .05 fte

A conference for students of sustainable agriculture was conducted at the University of Wisconsin-Madison. The conference drew 170 students and faculty representing Ohio, Indiana, Michigan, Illinois, Iowa, Missouri, Kansas, Minnesota, North Dakota and Wisconsin. The initial project concluded July 1, 2003.

Participation: Thomas Parslow - .05 fte Chad Kruger - .25 fte

Budgeted: \$46,520

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**GOAL 5: ENHANCED ECONOMIC OPPORTUNITY AND QUALITY OF LIFE FOR
AMERICANS**

Overview:

Wisconsin Cooperative Extension focused Goal 5 on expanding the role of youth as community leaders and active citizens. This includes providing youth with training and experiences with democratic practices, engaging youth in community decision-making and community governance, working with elected officials to establish youth positions on public boards and councils, and training adults on effectively working with youth as partners.

Total Expenditures:

(By Source of Funding and FTEs)

FTEs	Smith-Lever Act	State Match
12.47	\$121,601	\$1,044,315

Key Themes

Key Theme: OTHER - CIVIC CAPACITY BUILDING

The focus is to engage youth in public work and give them experiences with self-governance. Skill development and community contribution are intended outcomes. Following are selected impact statements consistent with this theme.

Documented Benefits:

- Statutes and policies have been changed in seven counties to permit young people, under the age of 18, to be seated on local government committees
- Youth now serve on local government boards and committees in seven counties
- 25 Youth Courts, where teens function as panels of judges with the authority to determine penalties for first-time juvenile offenders, now operate in Wisconsin.
- Youth Courts in Wisconsin have an average repeat-offender rate of 13%

VERNON County has three youth serving on the Viroqua Partners Board, five youth became members of separate committees of the Kickapoo School board, and one youth

joined the Syttende Mai Board of Forward Westby (Chamber of Commerce). Twelve adults participated in preparations to have youth serve as equals on these boards.

JACKSON County has five youth serving on the Extension Education Committee, a subcommittee of the County Board of Supervisors. These youth state that they have developed better communication skills, are more likely to state their opinion in a group and can communicate with adults more effectively, and have gained a better understanding of county government. As a result of the successful pilot program with the Extension Education Committee, the County Law Enforcement committee has now asked UW-Extension to assist them in involving youth in their committee.

DOUGLAS County has four youth serving as members of the Superior City Council and six youth serving on the Douglas County Board of Supervisors. Public officials have indicated their satisfaction with the process and recognized that young people can articulate issues and add valuable contributions in the local government decision making process. The local United Way Board of Directors has also agreed to appoint a youth to serve on their board.

WAUPACA County has seven youth serving on Waupaca City Council committees. City ordinances were changed to permit youth membership and voting rights. Two youth also serve on Waupaca County Board committees, and one youth serves on the board of the Waupaca Community Foundation.

WAUKESHA County's New Berlin Youth Advisory Board surveyed 1,700 middle and high school students in that community and found 71% wanted the city to establish a teen center. The Youth Board presented the findings to the New Berlin Common Council and is now working to build a comprehensive proposal for city funding.

MILWAUKEE County has 28 youth sworn into service as Milwaukee County Youth Commissioners, functioning as a subcommittee of the Milwaukee County Board of Supervisors.

Evidence: County and campus-based faculty and staff report their work against desired outcomes through Cooperative Extension's Plans and Reports system. They also submit more detailed success stories of their work.

Scope of Impact: State Specific

Multi-State Activities

Wisconsin had several staff involved in planning for a national Youth in Governance initiative. Greg Hutchins, Matt Calvert, Tom Riese, Shep Zeldin, Merry Klemme, Deb Moellendorf, Rene Mehlberg. A national design team met, and a concept paper was created. The concept paper is currently being discussed by State 4-H Program Leaders and funding is being sought to support a national project..

Budgeted: \$26,943

2. Stakeholder Input Process

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Stakeholder Input Process:

1. Actions taken to seek stakeholder input that encourages their participation:

Multiple approaches were taken to seek stakeholder input. The approaches included formal surveys, focus groups, key informant approaches, advisory councils (collaborating groups, agencies, and organizations) and combinations of the preceding methods. Efforts were made to ensure that the stakeholders involved were representative of the total community in terms of ethnicity, geographic location, family status, income level, age, gender, disability status, and users/nonusers of existing educational programs.

2. Process used to identify individuals and groups who are stakeholders and to collect input from them:

A ninety-four page booklet " Guidelines for Program Priority Setting," an eighty-six page booklet "Trends Analysis," and a video tape "Planning for Our Future" were developed by a statewide committee of county-based faculty/staff and campus faculty with research and extension appointments. The materials were used to train Cooperative Extension county-based faculty/staff and campus-based faculty with research and extension appointments. The materials were also used with county government oversight committees and advisory committees to help them better understand the importance of seeking a broad base of stakeholder input at the community level. The materials were distributed in print form and are also available on the WWW at the following URL:
<http://www.uwex.edu/ces/pdande/ProgramPlanning/statewide.html>.

3. How was collected input considered?

Input from the local stakeholders was used to identify local issues and concerns. The local issues and concerns were gathered on a statewide basis and made available for review by all county-based faculty/staff and campus-based staff with research and extension appointments. The information is available in the Cooperative Extension Planning and Results System at the following URL:
<http://www.uwex.edu/ces/prs/>. The county "issues and concerns" and the "Trends Analysis" document noted above served as the foundation for the creation of programming teams made up of county-based faculty/staff and campus-based staff with research and extension appointments. The teams prepared a plan of

work that identified resources that were available or would be developed by the teams. The teams are identified at the following URL: <http://www.uwex.edu/ces/admin/2004Teams/TEAMDEFS.html>. The team plan of work and related materials are intended to be a dynamic document that will change and evolve as additional stakeholder input is provided.

At the county level the stakeholder identified "issues and concerns" and the plans of work/resources identified by the statewide teams served as the basis for identifying an initial list of county specific program priorities. The priorities are adapted as additional county stakeholder input is received.

On a four-year basis stakeholder input is requested in a rigorous and formal process at the county level and on a statewide basis. Input is also requested on a continuous basis, using many of the same approaches identified above. The continuous input is analyzed at the county level and provided to the statewide teams via the WWW sites maintained by each team. Additional input is also provided via participation in team meetings, seminars, audio conferences, and newsletters. Stakeholder input continuously shapes the plans of work and the program priorities of county-based faculty/staff and campus-based faculty with research and extension appointments.

The stakeholder input process is very helpful in refocusing and reaffirming priorities on an ongoing basis. The process is also critical in identifying emerging issues. However, some stakeholder groups have had difficulty seeing beyond the critical issues they face today. As a consequence, the "Trends Analysis" document prepared by county-based faculty/staff and campus-based faculty with research and extension appointments has been very important in helping stakeholders see beyond their immediate crisis and strategically plan for the future.

3. Program Review Process: Merit Review

Wisconsin Cooperative Extension has made no significant changes in their merit review processes since their 5-Year Plan of Work.

4. Evaluation of the Success of Multi and Joint Activities

This information is listed under each Goal.

5. Multistate Extension Activities

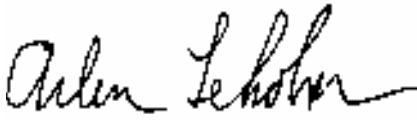
U. S. Department of Agriculture
Cooperative State Research, Education and Extension Service
Supplement to the Annual Report of Accomplishments and Results
Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)

Institution UW-Extension
 State Wisconsin

Check one: ☒ Multistate Extension Activities
☐ Integrated Activities (Hatch Act Funds)
☐ Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
<u>Goal 1</u>	<u>\$0</u>	<u>\$50,573</u>	<u>\$163,696</u>	<u>223,005</u>	<u> </u>
<u>Goal 2</u>	<u>\$0</u>	<u>\$ 7,083</u>	<u>\$ 13,650</u>	<u>9,512</u>	<u> </u>
<u>Goal 3</u>	<u>\$0</u>	<u>\$13,940</u>	<u>\$ 48,364</u>	<u>14,437</u>	<u> </u>
<u>Goal 4</u>	<u>\$0</u>	<u>\$66,937</u>	<u>\$ 50,391</u>	<u>46,520</u>	<u> </u>
<u>Goal 5</u>	<u>\$0</u>	<u>\$36,484</u>	<u>\$ 36,484</u>	<u>26,943</u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	<u>\$0</u>	<u>\$175,017</u>	<u>\$312,585</u>	<u>\$320,417</u>	<u> </u>


 Arlen Leholm, Dean and Director

3/31/04
 Date

6. Integrated Research and Extension Activities

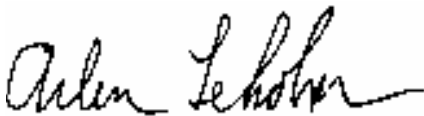
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Check one: ☐ Multistate Extension Activities
☐ Integrated Activities (Hatch Act Funds)
☒ Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
<u>Goal 1</u>	<u>\$0</u>	<u>\$500,000</u>	<u>\$500,000</u>	<u>\$500,000</u>	
Total	<u>\$0</u>	<u>\$500,000</u>	<u>\$500,000</u>	<u>\$500,000</u>	


 Arlen Leholm, Dean and Director

3/31/04
 Date