2011 University of Wisconsin Extension Annual Report of Accomplishments and Results

Status: Accepted

Date Accepted: 06/19/2012

I. Report Overview

1. Executive Summary

Executive Summary

Wisconsin agriculture is a $59.16 billion industry and provides 354,000 jobs. Agriculture remains a vital part of the economy in nearly all 72 Wisconsin counties, contributing both jobs and income. The economic impact varies by county -- from Milwaukee County where agriculture contributes $6 billion to the county's economy, to Iron and Forest counties where agriculture contributes $7 million to each county's economy.

A March 2011 Wisconsin Cooperative Extension and University of Wisconsin-Madison research report describes the economic impacts of agriculture at the county level. Researchers found that since 2006, overall employment connected to agriculture has remained relatively stable. In general, Wisconsin agricultural employment patterns have been somewhat buffered from the larger macro economy, and for the recent recession, agriculture actually provided a modest statewide cushion against employment problems. This research was done to help agricultural leaders and elected officials make informed decisions that leverage Wisconsin's agricultural strengths.

About one in ten state residents works in a job related to agriculture, including farmers, farm employees, veterinarians, crop and livestock consultants, feed, fuel and crop input suppliers, machinery and equipment manufacturers and dealers, barn builders, agricultural lenders, employees in food processing businesses and all of the businesses needed to support the processing of products produced on the farm. Every job in agriculture supports another 0.89 job elsewhere in Wisconsin. The Economic Impacts of Agriculture in Wisconsin Counties study report and 68 county Agriculture Value and Economic Impact brochures are online at: http://www.uwex.edu/ces/ag/wisag

Wisconsin Cooperative Extension county educators and state specialists at the University of Wisconsin-Madison, UW-Platteville, UW-River Falls, UW-Stevens Point and UW-Superior conducted strategic planning during 2007 to 2008, engaging more than 600 diverse stakeholders from three American Indian tribes and all 72 counties. Campus and county faculty and staff analyzed community issue statements to determine how to address critical and emerging concerns. The needs identified through this process focused research and extension education for nearly 50 statewide self-directed teams.

The 2011 Wisconsin Cooperative Extension Annual Report of Accomplishments describes how statewide interdisciplinary teams provide research-based education and assistance to sustain and grow the state's vital agricultural economy -- and the $26.5 billion dairy industry at its heart -- across the new NIFA priorities and planned programs, including crops and agronomic plants food security results from the Wisconsin Agricultural Service Providers Evaluation Study (report forthcoming):

1. Global Food Security Food Availability: Crops and Agronomic Plants

2. Global Food Security Food Availability: Dairy and Livestock

* Incorporates: 3. Dairy 4. Helping Youth Understand Agricultural Issues

5. Global Food Security and Hunger: Food Accessibility
6. Food Safety
7. Childhood Obesity
8. Sustainable Energy

9. Climate Change
* Incorporates: 10. Nutrient Management

11. Enabling Vibrant and Resilient Communities
12. Natural Resources for Sustainable Community and Biological Systems
13. Family Financial Education
14. Youth Voices in Community Action and Governance

1. Global Food Security Food Availability: Crops and Agronomic Plants

For 2011, Wisconsin Cooperative Extension reports collaboration among colleagues and partners providing timely research-based education and assistance to improve food availability through enhancing economic and environmental sustainability of agribusinesses, managing and minimizing losses due to plant pests and diseases, and building capacity of the agriculture service and support industry. Results of in-depth evaluation of agriculture service providers is described in the evaluation studies section of this report. Evaluation results indicate that Wisconsin Cooperative Extension recommendations have improved agricultural service providers' or their clients' profitability (78%). Other benefits include expanding professional networks, reducing their own or their clients' environmental impact, and increasing or maintaining their client base.

Sweet corn field trials reduce fertilizer rates:Wisconsin ranks second in the nation for production of sweet corn for processing, growing more than 88,000 acres annually, nearly one-fourth (24%) of total U.S. processing sweet corn acreage (USDA 2008). Wisconsin Cooperative Extension publication A2809 Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin recommends applying 70 to 150 pounds of nitrogen per acre (N/ac), depending on soil organic matter content, to grow 2 to 10 tons of sweet corn per acre. Current production practices have growers applying 200 pounds N/ac on irrigated sweet corn. Field test results support extension's lower N rate recommendations and growers are adopting them, maintaining top yields while cutting production costs and protecting sensitive groundwater resources from excess nitrogen.

Wisconsin Crop Management Conference: Wisconsin Cooperative Extension provides the 3-day educational program of the annual Wisconsin Crop Management Conference in partnership with University of Wisconsin-Madison College of Agricultural and Life Sciences and Wisconsin Crop Production Association colleagues. In 2011, 30 county extension agents, campus specialists and researchers presented educational sessions relevant to issues faced by the 1,598 participating Great Lakes Region growers and their crop advisors, agronomic retail and wholesale suppliers -- along with a look at areas relevant for the upcoming growing season. Wisconsin Department of Agriculture, Trade and Consumer Protection, Department of Natural Resources, and USDA Natural Resource Conservation Service staff provide regulatory and program updates.

Extension Integrated Pest Management and other specialists reinforce this work through regional professional development trainings for Wisconsin's 620 Certified Crop Advisors who earn 40 hours of continuing education units every 2 years to remain certified.

2. Global Food Security Food Availability: Dairy and Livestock

Wisconsin Cooperative Extension statewide interdisciplinary teams provide research-based education and assistance to sustain and grow the state's vital agricultural economy and the $26.5 billion dairy industry. To increase profitability, productivity and quality of life among farmers and rural communities, colleagues and partners provide timely education and technical assistance for minimizing losses due to animal diseases through on-farm management teams, enhancing the economic and environmental sustainability of agribusinesses through farm succession planning, and building the capacity of the agriculture service and support industry by training the next generation of farmers and agricultural providers.

Management teams: On-farm teams include milk quality, herd health, farm succession and business planning, modernization, and the new Grow Wisconsin Dairy Farm Management Team partnership among the Wisconsin Cooperative Extension Center for Dairy Profitability and county offices, the Wisconsin Department of Agriculture, Trade and Consumer Protection and Wisconsin Technical Colleges. Teams include veterinarians, nutrition and crop consultants, milking equipment field representatives, agricultural lenders, farm owners and managers, and a county extension facilitator. In 2011, county agents facilitated Grow Wisconsin Dairy Farm Management Teams on 37 farms with 7,568 cows. Team suggestions led to changes such as increased milk production, decreased somatic cell count (SCC) and increased premiums, barn renovation, improved calf management and health. For example, 6 Manitowoc County farmers reduced SCC by around 110,000, resulting in significant milk quality premiums, improved milk production, lower veterinary costs and less antibiotic use.

Farm succession planning: While half of Wisconsin farmers are nearing retirement, most do not discuss farm succession plans with anyone. In 2011, 9 Cooperative Extension county agriculture agents and 2 campus specialists developed and delivered 5 comprehensive regional Transferring the Farm in a High-Stakes Era workshops, providing research-based tips and tools for more than 200 farmers. Wisconsin Cooperative Extension Heart of the Farm and Annie's Project trainings reached another 265 hard-to-reach women farm owners with farm succession planning. Providing education to assist with the succession of farm businesses and retaining on-farm jobs is extremely important in rural Wisconsin.

National 4-H Dairy Conference: Wisconsin Cooperative Extension 4-H Youth Development outreach staff coordinated the 2011 National 4-H Dairy Conference exploring careers in agriculture and related fields in collaboration with a national committee of dairy specialists, industry leaders, recent alumni youth, and 4-H dairy project volunteers. All 120 youth delegates explored dairy-related careers while attending seminars on the UW College of Agricultural and Life Sciences campus, sparking an interest in attending this or another college to pursue a specialized educational degree. More than half (54%) indicated they would pursue a career in agriculture.

3. Dairy

The 2011 planned program Dairy is incorporated into the Wisconsin Cooperative Extension 2011 Global Food Security Food Availability: Dairy and Livestock annual report of accomplishments and multi-state supplement submitted to NIFA.

4. Helping Youth Understand Agricultural Issues

The 2011 planned program Helping Youth Understand Agricultural Issues is incorporated into the Wisconsin Cooperative Extension 2011 Global Food Security Food Availability: Dairy and Livestock annual report of accomplishments and multi-state supplement submitted to NIFA.

5. Global Food Security and Hunger: Food Accessibility

For 2011, Wisconsin Cooperative Extension reports efforts of colleagues and partners providing timely research-based education and assistance to improve food accessibility by strengthening local food markets and systems through training and support for farmers' market managers, and increasing the food supply for vulnerable populations through a partnership increasing school breakfast access.

The success of small-scale agriculture requires an effective stream of micro-enterprises from the farm gate to small-scale processors, marketers, restaurants and local food system networks. In 2011, 217 farmers' markets were critical outlets for many agricultural producers in Wisconsin. Although the number of farmers' markets continues to grow, not all markets are successful. To create economic opportunities for farmers, markets must provide a consistent customer base and reliable income. Many managers are volunteers, lacking the skills or knowledge base to build a strong and sustainable market.

Training and supporting farmers' market managers: Farmers' market managers play a vital role in the success and sustainability of small and medium-sized farms in Wisconsin. Providing successful markets for these growers to sell their products keeps them viable. Since 2006, Wisconsin Cooperative Extension county educators have been assessing the needs of farmers' market managers, providing training, resources and support to improve managers' marketing and promotion skills needed to realize their markets' full potential. In 2011, the Waukesha County commercial horticulture educator Kristin Krokowski helped establish the Wisconsin Farmers Market Association and develop a web site to support managers and promote their markets, working with the Wisconsin Department of Agriculture, Trade and Consumer Protection so customers can locate each of 207 markets using a clickable map: http://www.wifarmersmarkets.org

Increasing breakfast access for hungry children: Research shows that children who eat breakfast demonstrate both increased ability to learn, and improved behavior in the classroom. To ensure that more Wisconsin children receive proven benefits of eating a healthy breakfast, Cooperative Extension partners with the Department of Public Instruction to help schools with breakfast programs increase their student participation, support other schools in starting breakfast programs, and share research-based resources. Wisconsin's school breakfast challenge efforts also help schools find new ways to increase breakfast participation through non-traditional service such as grab and go or breakfast in the classroom. The Food Research and Action Center School Breakfast Scorecard rates states' performance in school breakfast programs, and Wisconsin achieved double-digit growth in the number of children receiving free or reduced-priced breakfasts (up by 10.6%) -- providing a healthy start to the day for 42.6% of low-income students, and putting Wisconsin in the top five performing states for greatest percent change in low-income students participating.

6. Food Safety

For 2011, Wisconsin Cooperative Extension reports efforts of colleagues and partners providing timely research-based education and assistance to improve the safety of the food supply through training and supporting small acidified food processors and small meat processors. While face-to-face programs are a hallmark of Cooperative Extension, educators reach Wisconsin residents round-the-clock through web-based materials and print publications. Online resources keep consumers up-to date on food preservation, safety and storage. An easy-to-use web site dedicated to providing the latest information on food preservation and other food safety topics can be found at: http://www.foodsafety.wisc.edu

Training and supporting small food processors: Helping small food processors is an excellent

way to increase the availability of safe, wholesome products made in Wisconsin. Committed to providing small food processors ongoing training and support in the critical area of food safety, Wisconsin Cooperative Extension partnered with the Department of Agriculture, Trade and Consumer Protection to develop a training program for these small processors. Since 2009, 333 small business owners and entrepreneurs have completed Wisconsin Acidified Canned Foods Program trainings as they prepare to develop and market their products. Cooperative Extension training and support has also allowed these businesses to develop new products and has provided economic growth for local economies. Along with needed trainings, a web site now helps small food processors navigate the course of "recipe to reality," providing convenient information on licensing and product testing, sample process forms, and contact information for process approval: http://www.foodsafety.wisc.edu/ssp_acidified_canned_food.html

Master Meat Crafter: Working within a small margin of error, meat processors must thoroughly understand what pathogens must be controlled and how most effectively to control them. Food safety ranks as a top priority for all meat and poultry processors tasked with the daily challenge of producing safe, high-quality nutritious foods. Initiated and organized by extension meat specialist Jeff Sindelar in partnership with the Wisconsin Department of Agriculture, Trade and Consumer Protection, a unique new meat processing certification program began at the University of Wisconsin-Madison Meat Science Laboratory in 2010. The Master Meat Crafter Training Program addresses food safety education and practical application throughout the program's 2.5 years. Having been exposed to food safety principles ranging from new antimicrobials and their application to how thermal processing design improves process lethality, the first 18 participants gained a deep and thorough understanding of food safety from micro lab to meat plant. As a result, they take home a thorough and comprehensive understanding of pathogenic bacteria as well as tools to improve their own food safety programs:
http://www.uwex.edu/ces/animalscience/meats/index.cfm

7. Childhood Obesity

For 2011, Wisconsin Cooperative Extension reports efforts of Family Living Programs campus and county faculty and staff, colleagues and partners providing timely research-based education and assistance for preventing childhood obesity through developing and implementing behavioral interventions that improve nutrition and increase physical activity, as well as building capacity among community partners to address issues related to nutrition and childhood obesity. Diverse participants make informed, science-based decisions regarding nutrition, childhood obesity, health and physical activity.

Raising Healthy Eaters: The Healthy Eating Index indicates that 76% of children ages 2 to 5 have poor diets that put them at risk of obesity (USDA, DHHS). Effective research-based interventions are needed to prevent obesity among preschoolers. In 2006, Wisconsin Cooperative Extension Family Living Programs developed the Raising Healthy Eaters (RHE) curriculum to teach parents how to help young children develop healthy eating behaviors. Trained educators and child care providers reported that RHE works well, but original evaluation did not capture impact. In 2011, Walworth County family living educator Jenny Wehmeier worked with UW-Madison nutrition education extension specialist Gayle Coleman to revise RHE evaluation using curriculum goal-setting components to capture impact. For example, Wehmeier found: Raising Healthy Eaters participants reported that after the lessons, they now serve regular family meals, give their children smaller portions, let them decide how much to eat rather than forcing them to eat, and keep the TV off during meals. They now buy more fruits and vegetables for meals and snacks, and no longer buy unhealthy foods so those are not in the house. They are cooking their own food more often, using recipes, and engaging their children in helping cook.

Mobilizing rural communities to prevent childhood obesity: Nearly $150 billion per year is spent to treat obesity-related medical conditions. The White House Task Force on Childhood Obesity Report to the President, Solving the Problem of Childhood Obesity within a Generation, presents an action plan for

the prevention of childhood obesity: (1) empower parents and caregivers; (2) provide healthy food in schools; (3) improve access to healthy, affordable foods; and (4) increase physical activity. The goal is to reduce childhood obesity to just 5% by 2030. A unique 7-state project is investigating rural communities' abilities to provide environments that sustain healthy eating and promote physical activity among 4-year-old low-income children. University scientists, researchers and extension specialists from multiple disciplines are developing community readiness, needs assessment and online distance learning tools to document best practices for extension staff working to prevent childhood obesity. Through a competitive proposal process, Crawford and Iron counties were chosen as project sites based on their commitment and established community partnerships for preventing childhood obesity.

8. Sustainable Energy

The new Wisconsin Cooperative Extension BioEnergy and the BioEconomy Team is a cross-program area effort. More than 20 active team members are conducting integrated research and extension programs, building capacity for sustainable energy among extension colleagues and communities. UW-Madison Environmental Resources Center sustainability studies scientist Sharon Lezberg is collaborating with 50 North Central Region colleagues to develop the BioEnergy and Renewable Energy Community Assessment Toolkit and Energy Independence, BioEnergy Generation and Environmental Sustainability curricula. Curriculum development teams are working on three courses: BioEnergy and Sustainability, On-Farm Energy Conservation and Efficiency, and Anaerobic Digestion.

Building regional capacity for sustainable energy: Southwest Wisconsin has an opportunity to develop renewable energy both for use within the 9-county region as well as to supply nearby urban areas. Wisconsin Cooperative Extension community development agent Ela Kakde engaged graduate students and key stakeholders with ties to communities, government and industry, campus and county colleagues and UW-Madison Urban and Regional Planning (URPL) as project partners to create a 3-year Renewable Energy Opportunity Plan for Southwest Wisconsin. Kakde secured nearly $45,000 in startup funds. For the URPL graduate workshop, she coordinated educational partners and resources for 18 students to inventory renewable energy sources of solar, wind and biomass, assess energy demand, infrastructure, potential for growth and jobs creation. The students' report of the first phase developing a regional sustainable energy economic development plan is valued at about $80,000 of consultant time. Project partners have committed funding toward the next phase. Results also led to partnerships that include support in securing a $132,305 USDA NIFA Hatch Grant for the project titled Bioenergy feedstock supply in Southwest Wisconsin: A network approach to research and extension.

Anaerobic digestion research and training: Since large-scale implementation is relatively recent, training is needed for safe production and use of biogas. While multi-million dollar systems only run economically on the waste from 500 or more cows, hundreds of thousands of very small farms worldwide use small-scale biodigesters costing only a few hundred dollars in climates as harsh as Wisconsin's. UW-Madison Cooperative Extension biowaste specialist Rebecca Larson works with USDA, campus, county and Michigan State University colleagues, industry partners and farmers assessing on-farm economic and environmental benefits of small-scale anaerobic digesters, building a mobile dry biodigester to compare with wet biodigestion, and comparing 9 on-farm solid-liquid separation systems coupled with digesters. In 2011, they presented the nation's first Small-Scale Anaerobic Digester Conference for more than 60 dairy producers and agency staff on technology processes and value-added products. Their 3-day Anaerobic Digester Operator Training for 40 large-scale dairy producers, operators and agency staff incorporated an on-farm digester tour to demonstrate safety protocols and system components.

9. Climate Change

For 2011, Wisconsin Cooperative Extension reports collaboration among the interdisciplinary Energy Conservation and Renewable Energy Team, Estuary and Coastal Wetlands Protection Team, Nutrient Management Team, Sustainability Team, colleagues and partners providing timely research-based education and assistance to adapt to and mitigate climate change impacts through developing, implementing and evaluating outreach programs to reduce carbon, nitrogen, energy and water footprints in their communities. Supporting this work is the interagency Wisconsin Initiative on Climate Change Impacts: http://www.wicci.wisc.edu

Nutrient Management Farmer Education (NMFE): Improving nutrient management practices improves farm profitability and reduces harmful effects of nitrogen and phosphorus on water quality. This can likewise reduce a harmful byproduct of increased flooding, by leaving less nitrogen in the soil for saturated cropland to convert to the greenhouse gas nitrous oxide. Three NMFE components -- on-farm research, training and grant funding -- intertwine to reach both farmers who seek out research-based education as well as those who lack the means to do so and can benefit the most by adopting best management practices. An interdisciplinary working group incorporates the latest on-farm research recommendations from UW-Madison, Platteville, River Falls, Stevens Point, Discovery Farms, Pioneer Farm and county agriculture agents in updating the NMFE curriculum and training interagency instructors. Price-adjusted maximum economic return on nitrogen fertilizer and Wisconsin Phosphorus Index field values are calculated using the SNAP-Plus nutrient management planning and soil loss assessment software program and new iPhone apps developed and maintained by the UW-Madison Soil Science Department. As of 2011, at least 844,500 acres of cropland and grazing land are covered under a nutrient management plan that meets all local, state and federal regulations. The farmer value is $5.9 million for plans and $2.1 million for tax credits.

Climate Impacts Workshops: Communities and agencies find themselves needing to adapt to immediate climate impacts and plan for future climate scenarios, yet lack local climate science and planning information. Wisconsin Cooperative Extension partnered with the National Oceanic and Atmospheric Administration, Ohio Department of Natural Resources, and Great Lakes Sea Grant Network to secure Great Lakes Restoration Initiative funding for conducting Climate Impacts Workshops modeled after workshops developed by the National Estuarine Research Reserve System. Workshop content was customized and shaped through input from local planning teams and the Wisconsin Initiative on Climate Change Impacts. In 2011, two 1-day workshops provided the latest climate science, examples of Great Lakes community vulnerabilities, climate planning processes and strategies, planning tools and resources for 126 planners and other professionals working on land use, public health, stormwater, emergency preparedness, utilities, and natural resource management issues. This same curriculum was presented at six more workshops reaching another 671 professionals and community leaders with specific climate information tailored to their disciplines and communities.

10. Nutrient Management

The 2011 planned program Nutrient Management is incorporated into the Wisconsin Cooperative Extension 2011 Climate Change annual report of accomplishments and multi-state supplement submitted to NIFA.

11. Enabling Vibrant and Resilient Communities

Wisconsin Cooperative Extension provides research-based education to support community economic development through counseling, presentations, professional development workshops, conferences, and mentoring offered to community leaders, businesses, local, state and tribal government entities and economic development organizations.

Economic Development Washington County: When Washington County's economic development organization needed a new direction, county extension agent Paul Roback helped develop a next-level economic development strategy aimed at creating a more resilient and diverse local economy, and he then assisted the organization in launching and making the strategy successful. In the first 10 months after initiating the new strategy, the Economic Development Washington County organization secured $41 million in new private investment in equipment and real estate. Additionally, 304 new jobs were created.

Tri-county economic development: When Waushara County's economic development organization needed a staff member to implement its strategy, but could not afford one, Waushara County extension agent Patrick Nehring suggested combining forces with the volunteer economic development corporations of two adjacent counties, and eventually he succeeded in nursing this merger to life -- with the result that $2 million in business assistance grants, more than $15 million of private investments in local businesses, and more than 450 new jobs were attracted to the three-county area.

12. Natural Resources for Sustainable Community and Biological Systems

Communities turn to Wisconsin Cooperative Extension to help leverage social, human, financial, physical, and natural capital to sustain community and economic vitality and to sustain the vital natural resource base that is the foundation of Wisconsin's economy and quality of life. Cooperative Extension teams, centers, colleagues and partners provide research-based education at both the state and community levels to address and support the vitality of communities dependent on healthy natural resource systems through informed decision making by communities, local, state and tribal governments, community organizations, businesses and agriculture. A variety of educational activities are used including presentations; professional development through workshops, conferences, teleconferences and webinars; dissemination of teaching materials through web sites, publications, CDs and DVDs; and facilitation and planning processes.

Volunteer stream monitoring: The statewide Water Action Volunteers (WAV) monitoring program enlists citizens willing to help their communities maintain the health of local streams. These volunteers collect data on water clarity, dissolved oxygen, stream flow, water temperature, salt content and other measures of stream health. The three-pronged result of the WAV monitoring program is that valuable scientific fieldwork is accomplished, volunteers gain an environmental education, and almost without exception, volunteers become energetic advocates for the environment. Water Action Volunteers spent an estimated 2,542 hours monitoring streams in Wisconsin in 2011, and their volunteer labor was valued at about $45,000.

Coverts Cooperators Land Management Program: Nonindustrial private landowners control about 65% of Wisconsin's forested land, and they control an even higher percentage of the total land base. Yet more than half of these individuals have not initiated any kind of land management program. The Wisconsin Coverts Project, begun in 1994, aims to improve this situation by demonstrating various forest habitat management practices to private landowners, and by developing a corps of landowner volunteers who will help other landowners manage their land in a sustainable manner. In 2011, 29 Coverts Cooperators, who own or are responsible for managing 5,442 acres, were trained. Over the past 18 years, the project has trained 505 landowners who manage 346,860 acres -- landowners who, in just the first year following their training, provided land management information to at least 9,500 additional landowners.

13. Family Financial Education

Wisconsin Cooperative Extension educators provide financial education to Wisconsin residents through a variety of means. The Money $mart in HeadStart Program, for instance, identifies an underserved audience of low-income individuals by partnering with the HeadStart Program, and makes use of newsletters, workshops and one-on-one financial coaching to provide these people with the basics of setting goals, creating a spending plan, managing debt, tax refunds and credits, saving, banking, credit, household organization, and record keeping.

Financial education to improve food availability for low-income families: The statewide Family Financial Education and Management Team works with local public and private entities to create partnerships that provide financial education to people who need it -- and supports and assesses that education with research-tested resources. In 2011, extension educators targeted individuals eligible to receive FoodShare and offered them financial education designed to help them gain the money management and shopping skills necessary to buy sufficient nutritious food for themselves and their families.

14. Youth Voices in Community Action and Governance

The Youth Voices in Community Action and Governance Team provides research-based training, educational resources, and experiences with participatory democracy and juvenile justice -- engaging youth in community decision-making and community governance; working with elected officials to establish youth positions on public boards and standing committees, councils, and Teen Courts; and training adults to effectively work with youth as partners.

Attitudes toward youth community involvement: A quarter of youth believe their communities do not value them, and they may be right, for less than 25 percent of urban adults have a great deal of confidence that adolescents can represent their communities effectively, according to studies done in 2000 and 2003. Yet there is evidence that some adults feel government would be more effective if youth were involved. Extension staff identified opportunities for youth involvement in advisory roles or as voting members on government committees, in organizations, and on Teen Courts. The result (according to focus groups) was that youth were motivated to make meaningful contributions to the community, felt valued, felt as if they had a real voice in community affairs, and took on roles that helped them develop skills in communication, teamwork, and decision making.

Teen Court: Wisconsin Cooperative Extension county youth development educators, 4-H program advisors, trained youth and adult volunteers and community partners (such as county and tribal health, police and sheriff departments) are supporting 20 of 41 Wisconsin Teen Courts where first-time misdemeanor offenders can appear before a trained jury of their peers. Where traditional juvenile courts might simply impose a small fine, Teen Courts create and "sentence" offenders with learning sanctions such as performing community service, attending classes relevant to their offenses, and writing apology letters to those they have wronged.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	91.0	0.0	2.0	0.0
Actual	157.9	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review

2. Brief Explanation

Merit review is ongoing as statewide self-directed teams develop specifics for the duration of planned programs. At the state level, program area administrators review and oversee team programming. Teams co-chaired by campus and county faculty set the direction for their initiatives, complete a statewide team plan of work, develop research-based educational resources, and report progress toward planned outcomes.

Merit reviews are conducted jointly by team leaders, program directors, and multi-state and regional partners. Teams use reviewers' recommendations to improve program quality and relevance for the intended audience, and include review comments in annual accomplishment reports and plans of work.

Wisconsin Cooperative Extension curricula and publications are peer reviewed by research and extension faculty, government or industry colleagues and professionals as appropriate to the content, purpose and intended audience. Translations are also reviewed for cultural appropriateness and reading level. Scholarly peer review and cultural review assure the quality and relevance of educational materials and outreach scholarship.

At the county level, local programming addresses priority issues identified through strategic program planning. Local elected officials review county programs as part of their oversight of extension programming.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups

- Survey of traditional stakeholder individuals
- Survey of the general public

Brief explanation.

Wisconsin Cooperative Extension initiates a multi-year planning process every five years. UW-Extension engaged in statewide 5-year planning during 2007 and 2008. This process is the primary, institution-wide effort to seek broad-based stakeholder input. Extension's program development model provides the overall framework for soliciting, analyzing, and summarizing stakeholder input. The model includes situation analysis, priority-setting, inputs, outputs, anticipated outcomes and evaluation planning.

Cooperative Extension campus and county faculty and staff participate in regular grower, producer, consumer, network, agency, school, local, state and tribal government, business and community coalition meetings to stay informed of key stakeholders' changing needs. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

Stakeholder identification and involvement were key components of Wisconsin Cooperative Extension's multi-year planning process. While county offices had latitude in tailoring their planning process to their unique needs, they were strongly encouraged to use methods that solicited feedback from their communities' diverse populations and from both internal and external stakeholders of extension. Ongoing county civil rights reviews examine the methods used during the stakeholder identification phase and formulate recommendations intended to strengthen this aspect in future planning initiatives.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals

- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public

Brief explanation.

Input has been gathered from diverse and under-represented audiences statewide through focus groups, interviews, listening sessions and case studies of youth-adult partnerships. When appropriate, teams develop culturally sensitive educational strategies; translate or interpret materials into appropriate languages; and partner with agencies and groups representing the needs of under-served and under-represented populations. In addition, statewide team efforts must be viewed in relation to the local context, where all 72 of Wisconsin Cooperative Extension county offices have civil rights plans designed to reach those traditionally under-served.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

Brief explanation.

Results from stakeholder input identified priority issues. County issue statements were analyzed and summarized by types of capital, were reviewed by teams and presented at a planning summit in April 2008. This planning set direction for extension and research to address priority issues, is being incorporated into budget and staffing decisions through nearly 50 statewide self-directed teams, and shaped team implementation and evaluation plans through the 2011 reporting year.

Brief Explanation of what you learned from your Stakeholders

Stakeholders from three American Indian tribes and Wisconsin's 72 counties identified more than 400 issues. An analysis of these issues identified the following themes:

Economic and Capital: Improve individual/family financial security; Increase business profitability; Improve conditions that support local economy.

Human and Cultural Capital: Life skills development; Optimal conditions for child

development created; Family relationships enhanced; Physical needs met; Diverse populations gain social, economic power; Diverse perspectives positively influence community.

Natural Capital: Individual actions conserve, protect, and enhance natural environment; Healthier natural environment results from community action.

Social and Organizational Capital: Skills developed for community benefit; Organizations developed to benefit community; Citizens act to improve community.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
8710295	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	6532605	0	0	0
Actual Matching	6583914	0	0	0
Actual All Other	40069	0	0	0
Total Actual Expended	13156588	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	6077796	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Dairy
2	Nutrient Management
3	Youth Voices in Community Action and Governance
4	Helping Youth Understand Agricultural Issues
5	Family Financial Education
6	Enabling Vibrant and Resilient Communities
7	Natural Resources for Sustainable Community and Biological Systems
8	Global Food Security Food Availability: Crops and Agronomic Plants
9	Global Food Security Food Availability: Dairy and Livestock
10	Global Food Security and Hunger: Food Accessibility
11	Food Safety
12	Childhood Obesity
13	Climate Change
14	Sustainable Energy

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Dairy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	23.3	0.0	0.0	0.0
Actual Paid Professional	0.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The 2011 planned program Dairy is incorporated into the Wisconsin Cooperative Extension 2011 Global Food Security Food Availability: Dairy and Livestock annual report of accomplishments and multi-state supplement submitted to NIFA.

2. Brief description of the target audience

Wisconsin Cooperative Extension Dairy Team's Dairy Replacements, Feeding and Nutrition, Milk Quality, Hispanic Labor, Modernization and Reproduction Genetics work groups deliver statewide and multi-state educational programs working with a variety of audiences including producers, agribusiness professionals, farm services, 4-H youth, and locally elected officials. Trained educational partners and volunteers make additional teaching contacts.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, online newsletters and shared resources such as statewide WisLine webinars, eXtension and the national Extension Disaster Education Network (EDEN) to quickly address critical timely issues such as farming through difficult times and extreme milk price volatility. Interdisciplinary colleagues and other professionals in this network include Farm and Risk Management Team, Nutrient Management Team, Livestock Team, Team Forage and regional grazing networks, Team Grains Organic Farming work group, Emerging Agricultural Markets Team, UW-Extension county educators and state specialists with the Center for Dairy Profitability, Dairy Forage Research Center, Local Government Center, Discovery Farms, Pioneer Farm, and extension specialists and researchers at UW-Madison, UW-Platteville, UW-River Falls, UW-Stevens Point and agricultural research stations.

Bilingual dairy worker training modules and cow-side exam DVD developed with the UW-Madison Babcock Institute for International Dairy Research and Development, UW-Madison School of Veterinary Medicine, and UW-Extension Distance/Education Digital Media help dairy and heifer producers communicate critical management and disease-prevention concepts for developing milking, reproductive care, calf management, herdsmanship and farm safety skills among Wisconsin and regional Spanish-speaking dairy workers.

Educational partners include 4-H clubs and trained volunteers, high schools, farm business instructors, community and technical colleges, dairy business leaders and public officials, forage councils, Professional Dairy Producers of Wisconsin, Dairy Business Association, veterinarians, farm news media, county land and water conservation departments, Wisconsin Department of Agriculture, Trade and Consumer Protection, Wisconsin Department of Commerce Dairy 2020, Wisconsin Farm Bureau, Midwest Forage Association, USDA Natural Resources Conservation Service and Farm Service Agency, AgSource Dairy Herd Improvement Cooperative.

Ultimate beneficiaries include youth, aspiring farmers and entrepreneurs, small-scale, risk-averse, beginning and retiring dairy and heifer producers, dairy herd owners and managers, women in agriculture, Spanish-speaking dairy workers and their families, cheesemakers, farm support businesses, agency professionals, local government units, nonfarm neighbors, dairy product consumers in Wisconsin and around the world.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: {No Data

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Dairy farmers will modernize to improve labor efficiency, economic efficiency and animal comfort.
2	Dairy farmers will make informed decisions about modernization.
3	Dairy farmers will implement dairy herd health management strategies based on UW-Extension recommendations.
4	Dairy farmers will implement improved dairy production management practices by adopting UW-Extension recommendations.

Outcome #1

1. **Outcome Measures**

Dairy farmers will modernize to improve labor efficiency, economic efficiency and animal comfort.

Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

Dairy farmers will make informed decisions about modernization.

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Dairy farmers will implement dairy herd health management strategies based on UW-Extension recommendations.

Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

Dairy farmers will implement improved dairy production management practices by adopting UW-Extension recommendations.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Newer colleagues)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Nutrient Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	11.6	0.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

The 2011 planned program Nutrient Management is incorporated into the Wisconsin Cooperative Extension 2011 Climate Change annual report of accomplishments and multi-state supplement submitted to NIFA.

2. Brief description of the target audience

Wisconsin Cooperative Extension Nutrient Management Team issues-based subgroups deliver statewide and multi-state educational programs and technical assistance working with a variety of

audiences including colleagues, producers, commercial applicators, manure and fertilizer dealers, agency professionals, locally elected officials and other community members. Nutrient Management Farmer Education students include county and district conservationists, crop consultants, farmers participating in federal cost-share programs, expanding or installing new facilities or referred to UW-Extension Cooperative Extension for training by conservationists. Trained educational partners and volunteers make additional teaching contacts.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, online newsletters and shared resources such as statewide WisLine webinars, eXtension and the national Extension Disaster Education Network (EDEN) to quickly address critical timely issues such as catastrophic manure spills, sudden snowmelt and flooding. Interdisciplinary colleagues and other professionals in this network include Dairy Team, Team Forage, Team Grains, Emerging Agricultural Markets Team, Agriculture and Natural Resources Extension and Community, Natural Resource and Economic Development county educators and state specialists in the UW-Madison departments of Dairy Science, Animal Science, Soil Science, Agronomy, Agricultural and Applied Economics, Biological Systems Engineering, Environmental Sciences, Nutrient and Pest Management Program, agricultural research stations, Discovery Farms, Environmental Resources Center, Local Government Center, UW-Platteville Pioneer Farm, UW-River Falls, UW-Stevens Point Groundwater Information Center and USDA Dairy Forage Research Center, geologists and hydrogeologists at the Wisconsin Geological and Natural History Survey, UW-Green Bay, UW-Oshkosh and U.S. Geological Survey.

Educational partners include professional nutrient applicators and regulators throughout the Great Lakes region, agricultural chemical dealers, local, state and federal agency personnel, farmers, crop consultants and other farm service professionals, high schools, 4-H clubs and volunteer leaders, area technical colleges, local dairy business leaders and public officials, county land and water conservation departments, regional planning commissions, well drillers, Northeast Wisconsin Karst Task Force, Professional Nutrient Applicators Association of Wisconsin, Wisconsin Department of Agriculture, Trade and Consumer Protection, Wisconsin Department of Natural Resources, U.S. Department of Agriculture Natural Resources Conservation Service Environmental Quality Improvement Program (NRCS EQIP) and Conservation Stewardship Initiative (CSI), farm news media and others.

Ultimate beneficiaries include small-scale and limited-resource dairy, livestock and poultry farmers, rural communities, private well owners, new parents and their babies, farm service providers, agricultural entrepreneurs, nonfarm neighbors, lakeshore dwellers, fishers, water recreation enthusiasts, wildlife and future generations.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	3	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Farmers will implement nutrient management strategies to reduce nutrient over application.
2	Acres of cropland and grazing land will be covered under a nutrient management plan based on UW-Extension training and recommendations.
3	Nutrient management strategy implementation will result in increased/enhanced farm profitability
4	Wisconsin agricultural professionals will develop skills and build professional credibility.
5	Applied research projects and on-farm demonstrations of nutrient management strategies will be used to improve UW-Extension nutrient management recommendations and educational programs.

Outcome #1

1. **Outcome Measures**

   Farmers will implement nutrient management strategies to reduce nutrient over application.

   Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

   Acres of cropland and grazing land will be covered under a nutrient management plan based on UW-Extension training and recommendations.

   Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

   Nutrient management strategy implementation will result in increased/enhanced farm profitability

   Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

   Wisconsin agricultural professionals will develop skills and build professional credibility.

   Not Reporting on this Outcome Measure

Outcome #5

1. **Outcome Measures**

   Applied research projects and on-farm demonstrations of nutrient management strategies will be used to improve UW-Extension nutrient management recommendations and educational programs.

   Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Youth Voices in Community Action and Governance

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual Paid Professional	6.5	0.0	0.0	0.0
Actual Volunteer	799.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
233018	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
233018	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Youth Voices in Community Action and Governance Team provides research-based training, educational resources, and experiences with participatory democracy and juvenile justice -- engaging

youth in community decision-making and community governance; working with elected officials to establish youth positions on public boards and standing committees, councils, and Teen Courts; and training adults to effectively work with youth as partners.

Attitudes toward youth community involvement: A quarter of youth believe their communities do not value them, and they may be right, for less than 25 percent of urban adults have a great deal of confidence that adolescents can represent their communities effectively, according to studies done in 2000 and 2003. Yet there is evidence that some adults feel government would be more effective if youth were involved. Extension staff identified opportunities for youth involvement in advisory roles or as voting members on government committees, in organizations, and on Teen Courts. The result (according to focus groups) was that youth were motivated to make meaningful contributions to the community, felt valued, felt as if they had a real voice in community affairs, and took on roles that helped them develop skills in communication, teamwork, and decision making.

Teen Court: Wisconsin Cooperative Extension county youth development educators, 4-H program advisors, trained youth and adult volunteers and community partners (such as county and tribal health, police and sheriff departments) are supporting 20 of 41 Wisconsin Teen Courts where first-time misdemeanor offenders can appear before a trained jury of their peers. Where traditional juvenile courts might simply impose a small fine, Teen Courts create and "sentence" offenders with learning sanctions such as performing community service, attending classes relevant to their offenses, and writing apology letters to those they have wronged.

2. Brief description of the target audience

The Youth Voices in Community Action and Governance Team provides research-based education, resources and capacity-building support to youth and adult volunteers.

Of 2,865 adults reached through direct teaching methods in 2011, 90.7% were white, 2.8% were American Indian, 1.4% were African American, 1.0% were Asian American, and 4.1% were of other identity; 62.9% were female and 37.1% male. Of these, 2.4% (69) identified as Latino/a, who may be of any race. In 2011, 12,540 youth enrolled in 4-H Citizenship and Civic Education. Community partners such as Boys and Girls Clubs and 799 trained adult and teen volunteers made additional teaching contacts.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, blogs and online newsletters, shared resources and regular monthly statewide teleconferences to ensure consistent messages. Colleagues and other professionals in this network include 4-H youth development, family living, community resource development and agriculture campus and county educators and 4-H program advisors.

Youth and adult volunteerswork together in positions of shared responsibility, making decisions and taking actions to strengthen communities, organizations, coalitions and programs. Youth include middle and high school students trained to serve in Teen Courts hearing misdemeanor cases of their peers, on junior fair boards, dairy and exhibits committees, 4-H boards of directors, 4-H leader councils, school board committees, 4-H after-school program steering committees, community service, trails, triathlon and other city council committees, county boards of supervisors and standing committees, and grassroots community action coalitions such as the 8-county Superior Days delegation: http://www.superiordays.com/Youth.html

Community partners include coalitions and government bodies that create meaningful roles for young people in making decisions and sharing governance with adults, such as 4-H clubs and groups, 4-H after-school programs, 4-H leader boards, steering committees and advisory groups, Future Farmers of

America, schools, school boards and school districts, city councils, police and sheriff departments, county fair boards and boards of supervisors, service groups, nonprofit organizations that provide volunteer positions for youth, and the multi-agency coalition Youth as Partners in Civic Leadership (YPCL). Demographic information from 2009 evaluation indicates diversity of the 149 YPCL Conference participants: Latino/a 6%, American Indian 10%, African American 21%, white 56%, and other or multi-ethnic identity 8%.

Educational partners include the Wisconsin Association of County Extension Committees (WACEC), National Youth in Governance Initiative, Wisconsin and National Association of Youth Courts, county juvenile courts and juvenile justice committees, county and tribal health departments, and the 8-county Superior Days coalition.

Ultimate beneficiaries include library patrons, teens using drop-in centers, skaters, dancers, hikers, triathletes, 4-H club and fair participants, after-school program participants and their parents and parents' employers, first-time juvenile offenders and their parents and communities.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2685	0	12540	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Young people work in local groups in partnership with adults to make decisions with consequences for the organization, community or public.
2	Skilled and experienced youth and adults are prepared and available for community decision-making and leadership roles.
3	Communities, organizations, coalitions, and programs are strengthened by the involvement of youth in decision-making and action.
4	Community organizations, coalitions, and government bodies improve practices and policies that support youth engagement.

Outcome #1

1. Outcome Measures

Young people work in local groups in partnership with adults to make decisions with consequences for the organization, community or public.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The delay in youth assuming adult responsibilities is especially pronounced in political and organizational forums in the community. A national sample of youth assets conducted by the Search Institute in 2000 documented that only 25% of youth perceive that their communities value youth, and only 28% believe that youth are given useful roles in the community.

Research on youth programs that meet adolescent needs emphasizes that it is important to support youth in activities that make a difference in communities, and to take young people seriously (National Research Council, 2002). Despite increased emphasis on such efforts, much of the general public does not perceive youth as having the motivation or competence to contribute to civic life. Studies show that less than 25 percent of urban adults have a great deal of confidence that adolescents can represent their community in the city council or serve as voting members of a community organization (Zeldin et al, 2003).

Community members throughout the state emphasized the need for young people to become active citizens. Citizens saw engaging youth in decision-making as a way to tackle community problems. They felt that government would be more effective with youth involvement. And they emphasized the need to help youth take on leadership roles.

What has been done
Extension staff identified strategic opportunities for youth engagement in community decision-making, then trained youth and adults in effective partnership practices, and implemented and supported a wide range of programs based on local conditions. Examples include community coalitions with youth and adult members, opportunities for youth to serve in advisory roles or as voting members on government committees, organizational leadership groups, within 4-H and

other organizations, and on teen courts.

Results
The 2011 4-H Youth Leadership Evaluation included nine focus groups, which yielded key findings, including these:

Youth are motivated by opportunities to make a meaningful contribution towards addressing authentic needs and issues (e.g. Buffalo County youth felt a responsibility to step into leadership roles: "Knowing no one else is willing to do it helps me make the decision to do it, and also knowing that there is impact on others.")

Youth feel valued and have a real voice in programming and partnership (e.g. Washington County Ambassadors take ownership of the success and failure of club and county 4-H activities. One ambassador contrasted 4-H with some other experiences: "The adults always try to take control and pipe in. In 4-H, the adults let the youth run the meetings. Adults step back and let the youth take the lead.")

Young people are engaged in significant roles that aid them in practicing communication, teamwork, and decision-making skills (e.g. Iowa County Ambassadors perceived the importance of being an active contributor: "You have to be involved to get anything out of it;" and "We get things from the community and we do things for the community.")

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Skilled and experienced youth and adults are prepared and available for community decision-making and leadership roles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Since 2005, Lincoln County Teen Court has offered youth 12 to 16 years old an alternative to the regular juvenile court process when they are in trouble with the police for the first time and are charged with a nonviolent offense. Rather than going to juvenile court, a young offender can go through teen court and avoid what might have been the first stain on his or her legal record. The respondents who choose the Teen Court option come before a panel of their "peers." The average recidivism rate for Teen Courts across Wisconsin is 10%, compared to 33% for youth courts overall in Wisconsin. In 2005 and 2006, few cases were heard because the new court had no reputation. From 2007 to 2010 we had a substantial increase in the number of cases heard and sustained that increase due to the improvement of the program's reputation. In 2011 the number of juvenile cases decreased but the number of cases referred to Teen Court remained constant.

What has been done
Amanda Kostman, 4-H youth development program advisor in Lincoln County, worked with the local school staff to recruit panel members to replace those who graduated the prior year from the two school districts. Kostman wrote a Lincoln County Social Services Safe and Stable Families Grant, and she submitted a request to the Merrill Noon Optimist and Rotary Clubs to secure funds to cover program costs for the entire year. The 32 youth recruited to serve as panel members attended official trainings in March and April, and also attended hearings and were trained in small groups before and after actual hearings.

Results
In 2011, Lincoln County Teen Court heard 23 cases and had 30 active panel members serve on cases. Only 1 of the 23 cases heard was referred back to court for noncompliance. All participants (panel members, respondents, parents) were asked to complete a survey at the conclusion of the program. Many reported that the Teen Court experience affected their lives in positive ways--80 percent reporting a positive effect on their communication with peers, 100% on their academic performance, 100% on their decision to become/remain a law abiding citizen, 80% on their selectivity of friends, 80% on their problem solving skills, 100% on their conflict resolution skills, 80% on their public speaking skills, 80% on their self-confidence, 80% on their attitudes toward the criminal justice system, 80% on their civic participation in the community, and 80% reported on their civic participation in the school. One hundred percent of young offenders reported that Teen Court helped them become more responsible, 80% that it helped them make more thoughtful decisions, 80% that it helped them increase communication with parents, and 100% that it made them more likely to be a law-abiding citizen. Quotes: "It was a very fun experience and it was a very good lesson for me." "They were very clear and I was able to understand when going through the court process." "(Teen Court) gave me second chance and helped me avoid a big fine."

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. **Outcome Measures**

   Communities, organizations, coalitions, and programs are strengthened by the involvement of youth in decision-making and action.

   Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

   Community organizations, coalitions, and government bodies improve practices and policies that support youth engagement.

   Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Public Policy changes
- Government Regulations

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Helping Youth Understand Agricultural Issues

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	7.0	0.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

The 2011 planned program Helping Youth Understand Agricultural Issues is incorporated into the Wisconsin Cooperative Extension 2011 Global Food Security Food Availability: Dairy and Livestock annual report of accomplishments and multi-state supplement submitted to NIFA.

2. Brief description of the target audience

The interdisciplinary Helping Youth Understand Agricultural Issues Team provides research-based

education, resources and capacity-building support to colleagues, educational partners, youth and adult volunteers. Trained volunteers and educational partners such as Future Farmers of America and Boys and Girls Clubs make additional teaching contacts.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, online newsletters, shared resources and regular monthly statewide teleconferences to ensure consistent messages. Colleagues in this network include 4-H Youth Development and Agriculture and Natural Resources Extension county faculty and staff, Community, Natural Resource and Economic Development and basin educators, campus specialists at the UW-Madison College of Agricultural and Life Sciences and School of Veterinary Medicine, UW-Platteville and UW-River Falls, 4-H program advisors and counterparts nationwide.

Educational partners include older 4-H youth and alumni, parents, guardians and extended families, trained youth and adult volunteers, Wisconsin 4-H Foundation, dairy and livestock industry coaches, Wisconsin Pork Producers, Wisconsin Livestock Breeders, Wisconsin Cattlemen, Wisconsin Beef Council, Wisconsin Sheep Breeders, Purebred Dairy Cattle Association, Wisconsin Junior Holstein Association, Holstein Foundation, Wisconsin State Horse Council, Wisconsin 4-H Horse Association, 4-H horse leaders, Wisconsin International Poultry Club, fair superintendents and committees, junior fair boards, Wisconsin State Fair, World Beef Expo, Future Farmers of America, 4-H and FFA livestock committees, auction committees, Boys and Girls Clubs, middle school, High school and school district agriculture teachers and FFA advisors, technical colleges, United Migrants Opportunity Service, county Farm Bureaus and Wisconsin Farm Bureau Federation, Wisconsin Federation of Cooperatives, Wisconsin Agribusiness Council, county land and water conservation departments, Wisconsin Department of Agriculture, Trade and Consumer Protection and Department of Natural Resources, farm media, grower and producer associations, meat processors, garden clubs, farm support services and bankers, rural insurance, veterinary clinic and lab technicians, farmers, truckers, farm implement dealers, hospitals, sheriff's departments and others.

Ultimate beneficiaries include 4-H club, project and fair participants, elementary, middle and high school students, youth at risk behaviorally or academically, Spanish-speaking youth, their peers, families and communities.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: {No Data

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Community partners such as Future Farmers of America, Boys and Girls Clubs and trained 4-H volunteers make additional teaching contacts to those projected in the standard outputs table.

Year	Actual
2011	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants in agriculture-related projects will develop life skills such as organization and communication, and engage in positive use of time.
2	Participants will understand and be able to articulate the reasons for certain types of care, management and production of their projects.
3	Participants will recognize and explore career and business opportunities in Agriculture and related fields.

Outcome #1

1. **Outcome Measures**

   Participants in agriculture-related projects will develop life skills such as organization and communication, and engage in positive use of time.

   Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

   Participants will understand and be able to articulate the reasons for certain types of care, management and production of their projects.

   Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

   Participants will recognize and explore career and business opportunities in Agriculture and related fields.

   Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Public Policy changes
- Government Regulations

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Family Financial Education

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
704	Nutrition and Hunger in the Population	10%			
801	Individual and Family Resource Management	90%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	0.0	0.0
Actual Paid Professional	7.9	0.0	0.0	0.0
Actual Volunteer	782.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
293924	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
293924	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Wisconsin Cooperative Extension educators provide financial education to Wisconsin residents

through a variety of means. The Money $mart in Head Start program, for instance, identifies an underserved audience of low-income individuals by partnering with the Head Start program, and makes use of newsletters, workshops and one-on-one financial coaching to provide these people with the basics of setting goals, creating a spending plan, managing debt, tax refunds and credits, saving, banking, credit, household organization, and record keeping.

Financial Education to Improve Food Availability for Low-income Families

The statewide Family Financial Education and Management Team works with local public and private entities to create partnerships that provide financial education to people who need it--and supports and assesses that education with research-tested resources. In 2011, extension educators targeted individuals eligible to receive FoodShare and offered them financial education designed to help them gain the money management and shopping skills necessary to buy sufficient nutritious food for themselves and their families.

2. Brief description of the target audience

The Family Financial Education and Management Team provides research-based training and support to agency partners, professionals, coaches, volunteers, families, and individuals young and old.

Of 18,329 adults reached through direct teaching methods in 2011, 75.8% were white, 13.0% were African American, 6.1% were Asian American, 1.5% were American Indian, and 3.6% were of other identity; 61.7% were female and 38.8% male. Of these, 6.9% (1268) identified as Latino/a, who may be of any race. Community partners and the 782 volunteers trained made additional teaching contacts. In 2011, 3,026 youth participants increased their financial literacy, and another 7,151 enrolled in 4-H Consumer Sciences curricula. Community partners and the 782 volunteers trained made additional teaching contacts.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	18329	0	10177	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	4	4

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants will increase their knowledge of financial concepts and personal financial skills.
2	Participants will increase their use of positive financial practices.
3	Participants will sustain their use of positive financial practices.

Outcome #1

1. Outcome Measures

Participants will increase their knowledge of financial concepts and personal financial skills.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Participants will increase their use of positive financial practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1073

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Many families with limited financial resources do not have dependable access to sufficient food for active, healthy living--they are at times unable to afford balanced meals, must cut meal size, or go hungry. The "Money for Food" curriculum (MFF) teaches good food shopping practices, how to save money when eating away from home, and how to choose low-cost nutritious foods that are recommended in the 2010 Dietary Guidelines for Americans.

What has been done
Education provided in FY 2011 was to learners who were FoodShare recipients or eligible to receive FoodShare, and was designed to prepare them to manage money wisely and so be able to afford, and to actually purchase, adequate nutritious food for themselves and their families throughout each month. Each of the twelve short interactive lessons in the "Money for Food" curriculum had an accompanying evaluation.

Results
Money for Food was taught to 19,511 learners, most being parents of infants or older children. The majority of learners were reached at WIC programs, alternative high schools, emergency

food programs, food pantries, community action agencies, senior meal programs, public health clinics, and transitional housing.

Results of evaluations administered in a variety of group settings demonstrate significant learning: After a lesson on tracking family income and expenditures, 100% of 51 adult participants said they now had a plan for keeping track of money coming in and being spent for their family. After a lesson on building a personal family spending plan, 88% of 143 adult participants said they had learned a new way to spend less on a basic family expense, and 80% of the 277 adult participants said that they were going to start using a family spending plan. After the lesson on the advantages of planning meals ahead, 79% of 214 participants said they were going to start to plan more meals ahead of time. After the lesson on ways to get the most for your food dollars at the grocery store, 82% of 487 participants said they had learned at least one new way to get more for their money when shopping for food.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population
801	Individual and Family Resource Management

Outcome #3

1. Outcome Measures

Participants will sustain their use of positive financial practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Financial education holds the promise of helping families increase their overall financial security. Money $mart in Head Start (M$iHS) is an example of such a program serving lower-income Wisconsin households with young children.

A difficulty in delivering financial education programs is finding trusted, cost-effective ways to

reach underserved households. M$iHS solves the problem by forming partnerships with community-based Head Start programs. Head Start is a trusted channel for connecting children and families to a variety of developmental and educational services, and it shares UW-Cooperative Extension's mission of improving family wellbeing.

Surveys from 507 households enrolled in Head Start in Wisconsin counties offering the M$iHS program in the fall of 2010 underscore the population's financial vulnerability:

Two-thirds of respondents had annual take-home incomes of less than $20,000.
Only 6% had a rainy day fund with 3 months' worth of expenses (43% of the general Wisconsin population had such a fund).
60% reported having difficulty paying some of their loans or debts, and 36% reported paying their bills late "almost always" or "often."
Nearly one-third had received three or more calls from a creditor in the last three months.

What has been done
Beginning with the 2009-2010 school year, Cooperative Extension offices began partnering with local Head Start programs on the M$iHS initiative. Seven Wisconsin counties participated in the initial pilot during the 2009-2010 school year, and the program expanded to nine additional counties during the 2010-2011 school year.

The program offered monthly newsletters, financial education workshops, and financial coaching to parents with children enrolled in Head Start. Eight monthly newsletters covered setting goals, creating a spending plan, managing debt, tax refunds and credits, saving, banking, credit, and household organization and record keeping. The program offered two financial education workshops, one of which focused on budgeting and saving, the other on credit management. Counties offered the workshops based on the needs of parents, ranging from daytime to evening sessions. People often learn something new but struggle to follow through, and for this reason M$iHS programs offered financial coaching to parents, providing one-on-one support.

Results
Of nearly 500 parents in the Money $mart in HeadStart program, about 160 completed both the baseline and follow-up survey. The surveys indicated that after having participated in the program 12% of parents had less debt, 6% had fewer bill collectors calling, 32% had downloaded a credit report, and 92% had produced a written budget.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Bankruptcy Filing, Foreclosure)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Enabling Vibrant and Resilient Communities

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	50%			
801	Individual and Family Resource Management	10%			
802	Human Development and Family Well-Being	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
805	Community Institutions, Health, and Social Services	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	24.0	0.0	0.0	0.0
Actual Paid Professional	28.4	0.0	0.0	0.0
Actual Volunteer	1877.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
1242729	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1242729	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The UW Cooperative Extension Community provides research-based education to support community economic development through counseling, presentations, professional development workshops, conferences, and mentoring offered to community leaders, businesses, local, state and tribal government entities and economic development organizations.

Economic Development Washington County

When Washington County's economic development organization needed a new direction, the county extension agent, Paul Roback, helped develop a next-level economic development strategy aimed at creating a more resilient and diverse local economy, and he then assisted the organization in launching and making the strategy successful. In the first 10 months after initiating the new strategy, the Economic Development Washington County organization secured $41 million in new private investment in equipment and real estate. Additionally, 304 new jobs were created.

Tri-County Economic Development

When Waushara County's economic development organization needed a staff member to implement its strategy, but couldn't afford one, Waushara County Extension Agent Patrick Nehring suggested combining forces with the volunteer economic development corporations of two adjacent counties, and eventually he succeeded in nursing this merger to life--with the result that $2 million in business assistance grants, more than $15 million of private investments in local businesses, and more than 450 new jobs were attracted to the three-county area.

2. Brief description of the target audience

Wisconsin Cooperative Extension faculty and educators reach a variety of audiences including other Cooperative Extension staff, community leaders, businesses, economic development organizations, nonprofit organizations, boards of directors, boards and councils of counties and municipalities, leadership organizations and associations, tribal governments, underserved communities and audiences, local planning boards and departments, school districts, youth and families, local news media and others. Program partners are also often part of the target audience, including the workforce development boards and the Wisconsin Department of Workforce Development, Wisconsin Economic Development

Corporation, Wisconsin Department of Natural Resources, Wisconsin Department of Agriculture Trade and Consumer Protection, Wisconsin Association of Business Improvement Districts, Alliance for Sustainability, Focus on Energy Program, Wisconsin Counties Association, Wisconsin Towns Association, Wisconsin League of Municipalities, and regional planning commissions.

Of 53,539 adults reached through direct teaching methods in 2011, 94.7% were white, 1.9% were American Indian, 1.4% were Asian American, 1.4% were African American, and 0.6% were of other identity; 47.6% were male and 52.4% female. Of these, 4.4% (2,354) identified as Latino/a, who may be of any race. In 2011, community partners and the 1,877 volunteers trained made additional teaching contacts.

3. How was eXtension used?

Wisconsin Cooperative Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues. Specific eXtension Communities of Practice extension specialists helped establish for this planned program include:

eXtension Entrepreneurs and Their Communities Community of Practice: This CoP launched its web site during the national eXtension launch in February 2008. Designed to serve two distinct audiences, this web site meets the needs of entrepreneurs and prospective entrepreneurs seeking information about starting or expanding an enterprise. Users access the site and are greeted by home state-appropriate pages that offer access to information briefs, online tutorials, frequently asked questions (FAQs) and an ask an expert feature. The site is also used as a resource library by intermediaries who support the entrepreneurs they work with. Another audience this site has developed content to serve are those community stakeholders who work broadly to support entrepreneurship as a community economic development strategy. Similar research-based information is accessed by home state-appropriate pages that contain information briefs, online tutorials, frequently asked questions (FAQs) and an ask an expert feature. The site also publicizes and archives a regular series of webinars that alternately address topics of interest to each audience. Participating resource providers are mostly extension faculty at the nation's land-grant universities. As no one institution is fortunate enough to have all of the resources necessary to meet the demands of these audiences, the member universities and their contributors leverage each others' expertise to offer a vast set of collective expertise. Access to this nationwide cadre of support is 24 hours a day, 7 days a week, 365 days a year at: http://www.extension.org

eXtension Family Caregiving Community of Practice: This Family Caregiving web site became live during the national launch of eXtension in February 2008. Each time someone from Wisconsin accesses the Family Caregiving site, it has the Wisconsin Cooperative Extension logo and information on how to connect with the local office. In a metrics report from eXtension, the Family Caregiving site recorded 64,879 page views from March 2008 to January 2009. National partners say they value eXtension as a comprehensive resource for the clients they serve. For example, trained case managers access fact sheets on key caregiver identity change concepts such as the stress burden and the caregiving experience when using the Tailored Family Caregiver Assessment and Referral TCARE (TM) process. Professionals access research-based information on multiple caregiver topics, increasing national visibility of eXtension as a one-stop educational family caregiver resource. In turn, this national Family Caregiving web site housing extension educational resources provides family caregivers access to research-based information on multiple caregiver topics through frequently asked questions, ask the expert, and online learning opportunities at: http://www.extension.org

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	53539	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	6	6

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants, organizations and communities will have increased or leveraged resources.
2	Participants, organizations and communities will have adopted best practices as a result of the Extension educational program.
3	Organizations, governmental entities, businesses and communities will create, retain, or expand sustainable community economic, social or human opportunities for people.

Outcome #1

1. Outcome Measures

Participants, organizations and communities will have increased or leveraged resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	41000000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In 2010, Washington County Community Development Educator Paul Roback collaborated with the executive director of Economic Development Washington County (EDWC) to help more than fifty key community stakeholders develop a next-level economic development strategy aimed at creating a more resilient and diverse local economy. The EDWC board unanimously approved the strategy, and unveiled it at a public event in February 2011. To ensure its successful implementation, the executive director asked Paul to assist in designing and launching an enhanced organizational structure for EDWC.

What has been done
Paul collaborated with EDWC to develop volunteer position descriptions, committee descriptions, work plans, and timelines for launching committees. He helped committee chairs identify potential committee members who had the skills needed for success, helped establish committee responsibilities, and helped create a work plan template for committees. He then assisted committee chairs and EDWC staff in refining drafts of specific work plans. He also collaborated with the executive director in presenting a half-day workshop that familiarized new committee members with the Next-Level Strategy and its anticipated results, and with EDWC's organizational structure and committee policies.

Results
Three new committees have been formed and have met regularly for the past 10 months. Each has a diverse and talented mix of members, many of whom had not previously volunteered to help with the organization's work. Committees have developed work plans to achieve the goals identified in the three-year strategy. The Marketing Committee is nearly ready to reveal a new-

brand package, for the organization, part of which is a new website. The Toolbox Committee designed a first-ever brownfield program for the county and has applied for two USEPA brownfield grants. The Economic Gardening Committee has laid the foundation to design an economic gardening strategy for the county. In the first 10 months following implementation of the new strategy, EDWC secured $41 million in new private investment in equipment and real estate. Additionally, 304 new jobs have been created. Both of these results exceed expectations detailed in the strategy plan. Evaluation by the EDWC executive director indicates that the talent matrix that Roback designed was effective in identifying individuals with the desired technical skills, though it did not take into account personality, passion, meeting preferences, and work styles--characteristics important for success. So committee membership will be reviewed and adjusted in early 2012. After evaluating the project, the executive director commented to Paul, "Thanks so much for helping to make 2011 such a strong year!"

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

Participants, organizations and communities will have adopted best practices as a result of the Extension educational program.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Organizations, governmental entities, businesses and communities will create, retain, or expand sustainable community economic, social or human opportunities for people.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	17000000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In spring of 2002 the Waushara County Economic Development Corporation comprised a board of unpaid volunteers and commanded minimal funding from the county. A consultant had created a strategic plan for the WCEDC, but this plan required--before any other steps could be taken--hiring a part-time staff person. Inadequate funds, however, made this impossible.

What has been done
Patrick Nehring, UW-Extension Waushara County CNRED agent, suggested combining forces with adjacent Green Lake and Marquette counties, which had similar demographic profiles, economies, and volunteer economic development corporations (EDCs). He contacted his extension counterparts in those counties and they, in turn, talked with their county EDCs and found them interested in the idea of working together--so they planned and facilitated a meeting of the three county EDCs in the fall of 2002. Over the course of the next year and a half, the three extension agents lead the county EDCs through a series of discussions about how to work together as a region. The EDCs formed a subcommittee and UW-Extension taught the committee's six members (two from each county) about organizational structures, and facilitated discussions that resulted in a plan to work together--a plan which was accepted by the county EDCs and presented to the county boards. The boards agreed to fund the formation of the Tri-County Regional Economic Development Corporation (TREDC), which was incorporated in December 2004 and had an executive director by September 2005. Nehring and his counterparts have continued to lend their expertise to the organization.

Results
Since September 2005 the TREDC has provided assistance to over 175 business projects in Green Lake, Marquette, and Waushara counties. As a result of TREDC assistance, more than 2 million dollars in grant funds have been obtained to assist tri-county businesses, more than 15 million dollars of private investment has been made in local businesses, more than 450 new jobs have been created, and more than 150 jobs have been retained in the tri-county area.

Extension agents have continued to support the efforts of the TREDC. When the executive director asked for educational assistance in planning an annual summit with the theme 'A Salute to Manufacturing,' and inquired how best to gather information from attendees while encouraging them to network, Jason Kauffeld, Green Lake County extension agent, taught him a focus group technique called the World Café, through which the director gathered feedback on the needs of local manufacturers. Results are being used to create a Tri-County Business Council.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Natural Resources for Sustainable Community and Biological Systems

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
104	Protect Soil from Harmful Effects of Natural Elements	15%			
112	Watershed Protection and Management	20%			
123	Management and Sustainability of Forest Resources	10%			
135	Aquatic and Terrestrial Wildlife	15%			
405	Drainage and Irrigation Systems and Facilities	10%			
605	Natural Resource and Environmental Economics	20%			
805	Community Institutions, Health, and Social Services	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	0.0	0.0
Actual Paid Professional	11.0	0.0	0.0	0.0
Actual Volunteer	1133.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
416038	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
416038	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Communities turn to Wisconsin Cooperative Extension to help leverage social, human, financial, physical, and natural capital to sustain community and economic vitality and to sustain the vital natural resource base that is the foundation of Wisconsin's economy and quality of life. Cooperative Extension teams, centers, colleagues and partners provide research-based education at both the state and community levels to address and support the vitality of communities dependent on healthy natural resource systems through informed decision making by communities, local, state and tribal governments, community organizations, businesses and agriculture. A variety of educational activities are used including presentations; professional development through workshops, conferences, teleconferences and webinars; dissemination of teaching materials through web sites, publications, CDs and DVDs; and facilitation and planning processes.

Volunteer stream monitoring: The statewide Water Action Volunteers (WAV) monitoring program enlists citizens willing to help their communities maintain the health of local streams. These volunteers collect data on water clarity, dissolved oxygen, stream flow, water temperature, salt content and other measures of stream health. The three-pronged result of the WAV monitoring program is that valuable scientific fieldwork is accomplished, volunteers gain an environmental education, and almost without exception, volunteers become energetic advocates for the environment. Water Action Volunteers spent an estimated 2,542 hours monitoring streams in Wisconsin in 2011, and their volunteer labor was valued at about $45,000.

Coverts Cooperators Land Management Program: Nonindustrial private landowners control about 65% of Wisconsin's forested land, and they control an even higher percentage of the total land base. Yet more than half of these individuals have not initiated any kind of land management program. The Wisconsin Coverts Project, begun in 1994, aims to improve this situation by demonstrating various forest habitat management practices to private landowners, and by developing a corps of landowner volunteers who will help other landowners manage their land in a sustainable manner. In 2011, 29 Coverts Cooperators, who own or are responsible for managing 5,442 acres, were trained. Over the past 18 years, the project has trained 505 landowners who manage 346,860 acres -- landowners who, in just the first year following their training, provided land management information to at least 9,500 additional landowners.

2. Brief description of the target audience

Wisconsin Cooperative Extension faculty and educators reach a variety of audiences including other Cooperative Extension staff, community leaders, businesses, agriculture, non-profit organizations, boards of directors, county, town and city boards and councils, leadership programs and organizations or associations, tribal governments, underserved communities and audiences, local planning boards and departments, youth and families, local news media and others. Program partners are also often part of the target audience including the Wisconsin Department of Natural Resources, Wisconsin Department of Agriculture Trade and Consumer Protection, USDA Natural Resource Conservation Service, Wisconsin Department of Administration, Alliance for Sustainability, Focus on Energy Program, Wisconsin Office of Energy Independence, Wisconsin Geological and Natural History Survey, Wisconsin Counties Association, Wisconsin Towns Association, Wisconsin League of Municipalities, and regional planning commissions.

2011 Natural Resources for Sustainable Community and Biological Systems stats

Of 67,306 adults reached through direct teaching methods in 2011, 92.3% were white, 3.5% were American Indian, 2.0% were Asian American, 0.8% were African American, and 1.4% were of other identity; 66.4% were male and 33.6% female. Of these, 4.3% (2,885) identified as Latino/a, who may be of any race. An estimated 1,500 students participate with their schools in the WAV stream monitoring program. Community Partners and the 1,133 volunteers trained made additional teaching contacts.

3. How was eXtension used?

Establishing a national eXtension Drinking Water and Human Health Community of Practice: National drinking water experts come from a broad set of academic disciplines and had not, until now, had a venue to work together as a community. To establish a nationwide community of practice among extension educators, natural resource professionals, professionals focused on water education and outreach, as well as anyone concerned about their drinking water, the University of Wisconsin-Madison Cooperative Extension Environmental Resources Center (ERC) recruited 18 leaders and 51 members from extension regions around the country including a tribal college, convened meetings, organized content, and provided training, editing, technical and marketing support. The 83 current members work together at the state, regional and national levels to develop, implement, and discuss approaches to water education.

In fall 2008, the ERC coordinating team initiated the Drinking Water and Human Health Community of Practice (CoP) to develop content for the eXtension national web site. The eXtension wiki required substantial time investment by the ERC team to train 25 leaders and peer reviewers, post meeting minutes, content outlines and content development, and move content to the public web site. They launched the FAQ and content peer review process in fall 2009. They outlined content for development, created, peer reviewed, and posted 168 pages of drinking water topics. Some topic areas are quite complex. For example, the section on contaminants offers detailed articles on 22 separate contaminants, yet this represents only a portion of the topics in the content outline.

eXtension changed the wiki platform to Drupal during the last year of funding. The CoP leadership team had to learn to use the Drupal format quickly to complete project activities. Training was again provided by the Wisconsin coordinating team. The team was fortunate in being able to import 200 FAQs from Alabama Cooperative Extension's drinking water and human health database. These were evaluated,

edited, and peer reviewed. ERC staff designed the public page layout and posted 120 FAQs on the eXtension Drinking Water and Human Health web site at: http://www.extension.org/drinking_water/faqs

eXtension requires CoPs to complete a certification process to assure that the group is providing access to 24/7 interaction with the Community of Interest, stewardship of the content, best practice development, and innovation. Drinking Water and Human Health CoP certification was submitted August 14, 2011, and approved. The group has created a draft online learning module on Changing Public Behavior to help extension educators identify behavior change goals for each drinking water topic and assure that topic content clearly specifies steps that people can take. This course will be posted on the eXtension Drinking Water and Human Health site in 2012.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	67306	0	1500	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	1	4	5

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants, organizations and communities will have increased or leveraged resources.
2	Participants, organizations and communities will have adopted best practices as a result of the Extension educational program.
3	Organizations, governmental entities, businesses and communities will create, retain, or expand sustainable community economic, social or human opportunities for people.

Outcome #1

1. Outcome Measures

Participants, organizations and communities will have increased or leveraged resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	45000000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In fall of 2010 a US Geological Survey (USGS) researcher, Steve Corsi, requested volunteer assistance in assessing impacts of road salt on urban streams. His study had shown that excessive salt from roads during winter months had made some urban streams toxic to fish and other aquatic life. Ongoing requests for stream monitoring across the state also came from counties who wanted to get involved in the Water Action Volunteers (WAV) stream monitoring program in order to monitor a variety of aspects of their own streams, including dissolved oxygen, water temperature, stream flow, and water clarity.

What has been done
UW-Stephens Point Cooperative Extension Specialists Kris Stepenuck and Christina Anderson worked with Corsi to develop a citizen monitoring program designed to collect high quality data across a wider area than the initial study covered, and to do this on a limited budget--all this as part of the statewide ongoing WAV stream monitoring program.

In response to Corsi's request, 21 volunteers from the Milwaukee and Madison areas were trained to collect water samples and monitor specific conductance. They monitored 33 sites every other week and also monitored on certain "triggered" high-risk days during February and March, and they continued monitoring monthly throughout the summer and fall--more than 330 times altogether--to assess whether specific conductance or chloride levels in streams were different in winter months than in months when roads were not salted.

Results
Of 33 sites monitored, seven exceeded EPA acute standards and 16 exceeded EPA chronic

chloride levels during the winter months.

Based on these results, project staff will select Madison and Milwaukee area sites at which to continue monitoring in winter 2011-12. In addition, the road salt project part of the WAV Stream Monitoring program will be expanded to other urban areas in the state, including Eau Claire and the Fox Valley.

The three-pronged result of the WAV monitoring program is that valuable scientific fieldwork is accomplished, volunteers gain an environmental education, and volunteers become, almost with exception, energetic advocates for the environment.

The environmental education gain is highlighted by a 2011 survey of volunteers revealing that each of the 71 respondents had written a letter to the editor of their local paper about water or other resource issues, had attended a public meeting to discuss water or other resource issues, had engaged in personal reading or research on water issues, and had sought experts for additional information. Thirty-one of these individuals (44%) said that they had never, or almost never, participated in water issue activities prior to becoming a stream monitor.

Multiplying the value of volunteer labor in Wisconsin in 2011 as estimated by www.independentsector.org--which is $17.79 per hour--by the estimated 2,542 hours that water action volunteers spent stream monitoring in 2011, reveals the program generated labor valued at $45,222.

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
135	Aquatic and Terrestrial Wildlife
405	Drainage and Irrigation Systems and Facilities
605	Natural Resource and Environmental Economics
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

Participants, organizations and communities will have adopted best practices as a result of the Extension educational program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nonindustrial private landowners control about 65% of Wisconsin's forested land, and an even higher percentage of the total land base. This means they control a major share of the habitat that supports a large, diverse, and important wildlife resource. Their land stewardship and use decisions determine the size, distribution, and health of wildlife populations, and the access of the public to this public resource. Yet 54% of these private landowners have not initiated any type of land management program, according to a recent U.S. Forest Service study.

What has been done
Jamie Nack, UW-Madison extension wildlife outreach specialist, and fellow wildlife specialists Scott Craven and David Drake, continue to coordinate the Wisconsin Coverts Project, which was started in 1994 and has two primary goals, 1) to demonstrate various forest habitat management practices to private landowners who wish to increase the abundance and diversity of wildlife on their property and, 2) to develop a corps of volunteers who will help other landowners manage their land in a sustainable manner. Participants in the Coverts Cooperator workshop receive a well-rounded view of management for wildlife habitat that is compatible with management for other uses, such recreation and timber production.

Results
In 2011, 29 Coverts Cooperators were trained and returned to their land to practice and promote land stewardship and wildlife conservation. They own or are responsible for managing 5,442 acres. Over the past 18 years, the Wisconsin Coverts Project has trained 505 landowners who manage 346,860 acres (including 165,000 acres of industrial forest), and these have, in just the first year following their attendance at a workshop, reached out to at least 9,500 additional landowners in the state who altogether control an additional estimated 450,000 acres. A one-year follow-up survey of the 2010 workshop attendees (49 landowners, representing 44 properties) indicates they reached out to an estimated 1,177 additional landowners who, in turn, own or are responsible for 39,310 acres. Most of the knowledge was disseminated through word-of-mouth, sharing of workshop materials, field tours, and newspaper articles. One hundred percent of survey respondents indicated that they have implemented at least one habitat management activity on their land since attending Coverts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
135	Aquatic and Terrestrial Wildlife
405	Drainage and Irrigation Systems and Facilities
605	Natural Resource and Environmental Economics
805	Community Institutions, Health, and Social Services

Outcome #3

1. Outcome Measures

Organizations, governmental entities, businesses and communities will create, retain, or expand sustainable community economic, social or human opportunities for people.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Global Food Security Food Availability: Crops and Agronomic Plants

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	20%			
133	Pollution Prevention and Mitigation	20%			
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%			
205	Plant Management Systems	10%			
216	Integrated Pest Management Systems	20%			
601	Economics of Agricultural Production and Farm Management	10%			
608	Community Resource Planning and Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	32.2	0.0	0.0	0.0
Actual Volunteer	65.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
1421129	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1421129	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
17819	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

For 2011, Wisconsin Cooperative Extension reports collaboration among colleagues and partners providing timely research-based education and assistance to improve food availability through enhancing economic and environmental sustainability of agribusinesses, managing and minimizing losses due to plant pests and diseases, and building capacity of the agriculture service and support industry. Results of in-depth evaluation of agriculture service providers is described in the evaluation studies section of this report. Evaluation results indicate that Wisconsin Cooperative Extension recommendations have improved agricultural service providers' or their clients' profitability (78%). Other benefits include expanding professional networks, reducing their own or their clients' environmental impact, and increasing or maintaining their client base.

Sweet corn field trials reduce fertilizer rates: Wisconsin ranks second in the nation for production of sweet corn for processing, growing more than 88,000 acres annually, nearly one-fourth (24%) of total U.S. processing sweet corn acreage (USDA 2008). Wisconsin Cooperative Extension publication A2809 Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin recommends applying 70 to 150 pounds of nitrogen per acre (N/ac), depending on soil organic matter content, to grow 2 to 10 tons of sweet corn per acre. Current production practices have growers applying 200 pounds N/ac on irrigated sweet corn. Field test results support extension's lower N rate recommendations and growers are adopting them, maintaining top yields while cutting production costs and protecting sensitive groundwater resources from excess nitrogen.

Wisconsin Crop Management Conference: Wisconsin Cooperative Extension provides the 3-day educational program of the annual Wisconsin Crop Management Conference in partnership with University of Wisconsin-Madison College of Agricultural and Life Sciences and Wisconsin Crop Production Association colleagues. In 2011, 30 county extension agents, campus specialists and researchers presented educational sessions relevant to issues faced by the 1,598 participating Great Lakes region growers and their crop advisors, agronomic retail and wholesale suppliers -- along with a look at areas relevant for the upcoming growing season. Wisconsin Department of Agriculture, Trade and Consumer Protection, Department of Natural Resources, and USDA Natural Resource Conservation Service staff provide regulatory and program updates.

Extension Integrated Pest Management and other specialists reinforce this work through regional professional development trainings for Wisconsin's 620 Certified Crop Advisors who earn 40 hours of continuing education units every 2 years to remain certified.

2. Brief description of the target audience

The audience includes North Central Region colleagues, agricultural professionals and other educational partners, grains, commercial vegetable and fruit crop growers and workers, 4-H and FFA youth, grower associations, food processors and entrepreneurs, food coalitions and cooperatives, agricultural service providers, agronomic retail and wholesale suppliers, local and tribal officials, planning commissions, state and federal rural development and regulatory agencies.

Of 45,973 adults reached through direct teaching methods in 2011, 93% were white, 0.3% were African American, 0.2% were Asian American, 0.2% were American Indian, and 6.3% were of other identity; 75.4% were male and 24.6% female. Of these, 1.4% (638) identified as Latino/a, who may be of any race. In 2011, 5,247 youth enrolled in 4-H crops and agronomic plants curricula. Community partners and the 65 volunteers trained made additional teaching contacts.

The 1,598 agricultural professionals who attended the 2011 Wisconsin Crop Management Conference from Wisconsin, Minnesota, Iowa, Illinois, Indiana and Michigan produce a large multiplier effect as Wisconsin Cooperative Extension research-based recommendations ultimately reach an increasing portion of the Great Lakes Region crop production sector including farmers. Wisconsin Cooperative Extension Integrated Pest Management and other specialists reinforce this work through regional professional development trainings for Wisconsin's 620 Certified Crop Advisors who earn 40 hours of continuing education units every 2 years to remain certified.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, blogs and online newsletters, shared resources such as statewide teleconferences, eXtension and the national Extension Disaster Education Network (EDEN) to quickly address critical timely issues such as farming through difficult times. Interdisciplinary colleagues and other professionals in this network include researchers at UW-Madison, UW-Platteville, UW-River Falls, UW-Stevens Point and 11 agricultural research stations.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	45973	0	5247	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	30	48	78

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Enhance the economic and environmental sustainability of agribusinesses
2	Build the capacity of the agriculture service and support industry

Outcome #1

1. Outcome Measures

Enhance the economic and environmental sustainability of agribusinesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1100000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Wisconsin ranks second in the nation for production of sweet corn for processing, growing more than 88,000 acres annually, nearly one-fourth (24%) of total U.S. processing sweet corn acreage (USDA 2008). Wisconsin Cooperative Extension publication A2809 Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin recommends applying 70 to 150 pounds of nitrogen per acre (N/ac), depending on soil organic matter content, to grow 2 to 10 tons of sweet corn per acre. Current production practices have growers applying 200 pounds N/ac on irrigated sweet corn. With today's new hybrids and better fertilizer application management, potential exists for better crop nitrogen use efficiency that may allow growers to reach their yield goals using lower rates of nitrogen fertilization.

What has been done
A Cooperative Extension soil science specialist Carrie Laboski and county agriculture agents worked with a sweet corn processor to set up field trials in two counties looking at sweet corn response to nitrogen fertilizer rates. Trial results indicate that sweet corn yields of 10 tons per acre can be achieved with only 155 pounds N/ac (as recommended in A2809). These results add to information from small-plot research being conducted by integrated specialists to quantify the response of sweet corn hybrids to different nitrogen fertility rates and evaluate the interaction of crop density and nitrogen fertilizer rate on sweet corn productivity. Yield results were presented at producer meetings and published in the Badger Common 'Tater, the Wisconsin Crop Manager' and the Wisconsin Crop Production Association "Industry News Quarterly" in spring 2011.

Results
Enhancing economic and environmental sustainability: A reduction of only 25 pounds of applied N per acre could amount to 2.2 million pounds less N applied by Wisconsin sweet corn growers and a potential savings to area vegetable growers of $1.1 million at current N costs. This local research is a rare win-win for growers and the environment, saving growers on production costs

and protecting the area's sensitive water resource. Follow-up phone surveys of 7 growers found that as a result of this research, four growers who accounted for about half of all central Wisconsin sweet corn acres have reduced the amount of N they apply to their crop by 10 to 25 pounds per acre. Of the other three, one is already down to that rate or lower and two are considering reducing their N fertilizer application rate. Reducing N applied to sweet corn also reduces the potential for excess nitrates leaching into groundwater, in turn reducing environmental impacts of sweet corn production.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Build the capacity of the agriculture service and support industry

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1598

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Each year following agricultural research station and on-farm field trials, university researchers fine-tune their best management recommendations and publish reams of results for Wisconsin field crop, forage, fruit and vegetable producers. As these are published, some are incorporated into state and federal agency regulations required for government agricultural programs, zoning, large farm licenses, state animal feeding operation permits, and farmland preservation tax credits as of 2010. The Wisconsin Crop Management Conference (WCMC, formerly the Wisconsin Fertilizer, Aglime and Management Conference), has become the Midwest's premier agronomic inputs industry source of education for the growing field of agriculture professionals who advise or serve farmers--partners in reaching the state's food producers with the latest best management practices and regulatory compliance information.

What has been done

Wisconsin Cooperative Extension provides the 3-day educational program of the annual Wisconsin Crop Management Conference in partnership with University of Wisconsin-Madison College of Agricultural and Life Sciences and Wisconsin Crop Production Association colleagues. In 2011, 30 campus specialists and researchers presented educational sessions relevant to issues faced by growers and their crop advisors, agronomic retail and wholesale suppliers--along with a look at areas relevant for the upcoming growing season. About half of conference educational sessions are led by extension state specialists and county agents. Wisconsin Department of Agriculture, Trade and Consumer Protection, Department of Natural Resources, and USDA Natural Resource Conservation Service staff provide regulatory and program updates. Conference proceedings are provided to attendees, for public access through Steenbock Library and online at: http://www.soils.wisc.edu/extension/wcmc

Results

Building capacity among agriculture service providers: In 2011, 1,598 agricultural professionals attended the Wisconsin Crop Management Conference from Wisconsin, Minnesota, Iowa, Illinois, Indiana and Michigan. Professional attendees earned Certified Crop Advisor continuing education units in nutrient management, soil and water management, pest management, crop management, and professional development. Providing educational training to this level of professional results in a large multiplier effect as Wisconsin Cooperative Extension research-based recommendations ultimately reach an increasing portion of the Great Lakes Region crop production sector including farmers. Results of in-depth evaluation of agriculture service providers is described in the evaluation studies section of this report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Government regulations: While a federal law has sparked concern, state law has

provided for ensuring long-term sustainability of food production. For example, the Food Quality and Protection Act (FQPA) has caused concerns over pest control options, strategies and alternatives for the future. An increased need for resistance management strategies and programs are necessary as pesticides are being lost due to the onset of resistance. A change in pesticide options and the increased use of reduced-risk applications is the trend for the future. Research-based production recommendations of nutrient and pesticide management for specific varieties must be developed to maximize production on specific cultivars. Integrated research and extension programs are identifying and communicating best management practices for the Great Lakes Region, from selecting hardy, palatable, disease and pest resistant varieties through harvest and storage.

Another example involves preserving prime agricultural land becomes increasingly important as farmland continues to disappear. In 2009, the state of Wisconsin reformed the Farmland Preservation Program to reinvigorate preservation of Wisconsin's working lands through new programs that encourage exclusive agricultural preservation zoning, provide for establishment of agricultural enterprise areas, and facilitate the purchase of agriculture conservation easements. Many landowners and local government officials expressed interest in learning about the intricacies of this new legislation, especially about how it may impact their land and municipalities, and how to file petitions for Agricultural Enterprise Area designation. Interdisciplinary campus and county Agriculture and Natural Resources Extension and Community, Natural Resource and Economic Development campus and county faculty are facilitating planning to ensure long-term sustainability of food production in Wisconsin.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluation Study - Impact of Wisconsin Cooperative Extension Work with Agricultural Service Providers: Agriculture extension education has evolved considerably from providing education to agriculture that focused on a direct relationship between extension educators (county agriculture agents and state specialists) and farmer producers. Recently, third-party intermediaries -- agricultural service providers such as crop consultants, sales representatives, veterinarians, dairy nutritionists, lenders and others -- have become an important audience for extension education. In turn, these service providers use extension research-based knowledge in their work with clientele. Because little was known of this new relationship, Wisconsin Agriculture and Natural Resources Extension initiated a comprehensive evaluation study during 2010 and 2011 to examine the value and effectiveness of Cooperative Extension work with agricultural service providers.

Response: A 12-member team of county extension educators, campus and state evaluation specialists worked with the University of Wisconsin-River Falls Survey Research Center to conduct a literature review, 18 key informant interviews, a survey of county agriculture agents (March-April 2010; 72 respondents; 85% response rate), a survey of state specialists (June 2010; 59 respondents; 64% response) and a survey of 1,809 agricultural service providers (August 2010; 935 respondents; 52% response rate). Agricultural service provider survey respondents worked mainly in the agronomy and dairy-livestock sectors, with fewer in finance-tax or management consulting. These respondents were from across the state, 84% were male and 16% female, and 75% have used extension for more than 10 years. The evaluation study report is due out in 2012.

Results: Agricultural service providers (AgSPs) provided 427 written comments about how they used Wisconsin Cooperative Extension information to have an impact in agriculture. Notably, 95% of AgSPs strongly agree or agree that UW-Extension "improves management in agriculture" and 95% also strongly agree or agree that UW-Extension "improves the scientific understanding of agriculture"; 82% rated UW-Extension information as very good or good for being "research-based"; 81% rated UW-Extension information as very good or good for being "trustworthy."

Other survey highlights include: "UW-Extension resources help me improve my services to my customers" (strongly agree or agree = 85%); "UW-Extension recommendations improve my clients' profitability" (78%); 77% indicate that they work with UW-Extension to "validate information"; 71% indicate that they work with UW-Extension to "respond to producers' needs."

Key Items of Evaluation

Evaluation Study - Impact of Wisconsin Cooperative Extension Work with Agricultural Service Providers: Nearly all (95%) of the 935 agricultural service provider survey respondents use Wisconsin Cooperative Extension information to have an impact in agriculture. Two-thirds of these respondents have worked with Cooperative Extension for 15 or more years. Extension is the primary source of professional development for one-third (34%). Nearly all use at least one extension delivery method "frequently" or "all the time." Extension meetings/workshop/conferences and newsletters or other publications are used the most frequently. The greatest proportion (77%) works with extension educators to validate their own information by comparing it with extension information. Agricultural service providers generally feel that extension information is research-based, trustworthy, consumer-friendly, and accessible.

The agricultural service providers included in this sample give Wisconsin Cooperative Extension high marks in terms of the impact the institution has had on the agricultural sector. Nearly all (95%) agree that extension efforts have improved management in agriculture and contributed to the scientific understanding of agriculture. Seventy percent of survey respondents reported that Cooperative Extension provides them with at least 10% of their annual new agricultural information. The majority of respondents report that this has improved their service to their customers (85%). Three-quarters of the sample feels that this increased their effectiveness by 10% or more. Agricultural service providers reported that Wisconsin Cooperative Extension recommendations have improved their own or their clients' profitability (78%). Other benefits include expanding professional networks, reducing their own or their clients' environmental impact, and increasing or maintaining their client base. The evaluation study report is due out in 2012.

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Global Food Security Food Availability: Dairy and Livestock

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%			
307	Animal Management Systems	15%			
308	Improved Animal Products (Before Harvest)	10%			
311	Animal Diseases	5%			
315	Animal Welfare/Well-Being and Protection	5%			
601	Economics of Agricultural Production and Farm Management	20%			
602	Business Management, Finance, and Taxation	15%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	32.3	0.0	0.0	0.0
Actual Volunteer	1825.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
1356472	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1356472	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
22250	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Wisconsin Cooperative Extension statewide interdisciplinary teams provide research-based education and assistance to sustain and grow the state's vital agricultural economy and the $26.5 billion dairy industry. To increase profitability, productivity and quality of life among farmers and rural communities, colleagues and partners provide timely education and technical assistance for minimizing losses due to animal diseases through on-farm management teams, enhancing the economic and environmental sustainability of agribusinesses through farm succession planning, and building the capacity of the agriculture service and support industry by training the next generation of farmers and agricultural service providers.

Management teams: On-farm teams include milk quality, herd health, farm succession and business planning, modernization, and the new Grow Wisconsin Dairy Farm Management Team partnership among the Wisconsin Cooperative Extension Center for Dairy Profitability and county offices, the Wisconsin Department of Agriculture, Trade and Consumer Protection and Wisconsin Technical Colleges. Teams include veterinarians, nutrition and crop consultants, milking equipment field representatives, agricultural lenders, farm owners and managers, and a county extension facilitator. In 2011, county agents facilitated Grow Wisconsin Dairy Farm Management Teams on 37 farms with 7,568 cows. Team suggestions led to changes such as increased milk production, decreased somatic cell count (SCC) and increased premiums, barn renovation, improved calf management and health. For example, 6 Manitowoc County farmers reduced SCC by around 110,000, resulting in significant milk quality premiums, improved milk production, lower veterinary costs and less antibiotic use.

Farm succession planning: While half of Wisconsin farmers are nearing retirement, most do not discuss farm succession plans with anyone. In 2011, 9 Cooperative Extension county agriculture agents and 2 campus specialists developed and delivered 5 comprehensive regional Transferring the Farm in a High-Stakes Era workshops, providing research-based tips and tools for more than 200 farmers. Wisconsin Cooperative Extension Heart of the Farm and Annie's Project trainings reached another 265 hard-to-reach women farm owners with farm succession planning. Providing education to assist with the succession of farm businesses and retaining on-farm jobs is extremely important in rural Wisconsin.

National 4-H Dairy Conference: Wisconsin Cooperative Extension 4-H Youth Development outreach staff coordinated the 2011 National 4-H Dairy Conference exploring careers in agriculture and related fields in collaboration with a national committee of dairy specialists, industry leaders, recent alumni youth, and 4-H dairy project volunteers. All 120 youth delegates explored dairy-related careers while attending seminars on the UW College of Agricultural and Life Sciences campus, sparking an interest in attending

this or another college to pursue a specialized educational degree. More than half (54%) indicated they would pursue a career in agriculture.

2. Brief description of the target audience

The audience includes extension colleagues, veterinarians, agricultural professionals and other educational partners, youth and adult dairy and livestock producers and workers, forage growers and grazing networks, cheesemakers, meat and dairy food processors and entrepreneurs, agricultural service providers, farm lenders, local and tribal officials, and state and federal regulatory agencies. Campus-based integrated faculty and county extension agents are engaged in international and multi-state collaborations to increase sustainability of the food supply by developing new and updated research-based recommendations for farm owners and managers nationwide.

Of 194,900 adults reached through direct teaching methods in 2011, 96.6% were white, 0.6% were Asian American, 0.2% were African American, 0.1% were American Indian, and 2.4% were of other identity; 66.4% were male and 33.6% female. Of these, 2.4% (4,707) identified as Latino/a, who may be of any race. In 2011, 4,852 Wisconsin youth enrolled in 4-H dairy cattle curricula. Another 7,309 enrolled in 4-H beef, sheep and swine projects, many of them with the goal of producing a quality meat animal. Community partners and the 1,825 volunteers trained made additional teaching contacts.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, blogs and online newsletters, shared resources such as statewide teleconferences, eXtension and the national Extension Disaster Education Network (EDEN) to quickly address critical timely issues such as farming through difficult times. Interdisciplinary colleagues and other professionals in this network include researchers at UW-Madison, UW-Platteville, UW-River Falls, UW-Stevens Point, 11 agricultural research stations, and the USDA Dairy Forage Research Center.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	194900	0	12161	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	17	27	44

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Manage and minimize the loss due to animal diseases
2	Enhance the economic and environmental sustainability of agribusinesses
3	Build the capacity of the agriculture service and support industry

Outcome #1

1. Outcome Measures

Manage and minimize the loss due to animal diseases

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Each dairy farm has unique animals, management practices, and facilities that require specific management practices. As producers struggle to make management changes, how can they best cut production costs and reduce losses to stay in business? For example, both clinical and subclinical mastitis result in financial losses. Increased treatment costs and greater cull rates, reduced milk production, reproductive performance and longevity, and lower cheese yields are well-documented losses due to mastitis (Ruegg, 2003). In Wisconsin, milk production loss due to subclinical mastitis costs about $4 per cow per day (Rodrigues et al, 2005). Thus a typical 100-cow herd (33% with subclinical mastitis) loses about $4,000 per month.

What has been done
The Grow Wisconsin Dairy Farm Management Team program is a partnership among the Wisconsin Cooperative Extension Center for Dairy Profitability and county offices, the Wisconsin Department of Agriculture, Trade and Consumer Protection and Wisconsin Technical Colleges. This program provides funding and expertise to encourage farm owners to try the management advisory team concept. Management advisory teams are composed of veterinarians, nutrition and crop consultants, milking equipment field representatives, agricultural lenders, the farm owners and managers, and a county extension agent who serves as the team facilitator. Their objective is to help farm owners and managers discover ways to improve the productivity and financial sustainability of their farms. The Dairy Management web site provides dozens of user-friendly decision aids and technical support to help producers, their veterinarians and advisors in critical areas of dairy farm management. These decision support tools are available from county extension offices and receive up to 100 views per day at: http://dairymgt.uwex.edu

Results
Grow Wisconsin Dairy Farm Management Teams improve viability: In 2011, Cooperative Extension county agriculture agents facilitated Grow Wisconsin Dairy Farm Management Teams

on 37 farms representing 7,568 cows. Statewide, 105 farm members and 221 agribusiness professionals--102 paid and 119 unpaid--served on these teams. Their suggestions led to changes such as increased milk production, decreased somatic cell count (SCC) and increased premiums, decreased feed, labor and bedding costs, improved forage quality, barn renovation, specialized fresh cow facilities, improved calf management and health. In Manitowoc County, for example, 47% developed a milk quality team to reduce SCC and improve milk quality (all 6 farmers met their milk quality goals). They reduced SCC by around 110,000, resulting in significant milk quality premiums, improved milk production, lower veterinary costs and less antibiotic use. One Kewaunee County farm improved mastitis prevention so rather than being docked $1,500 per month they now receive $3,000 more per month for improved milk quality.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

Outcome #2

1. Outcome Measures

Enhance the economic and environmental sustainability of agribusinesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	465

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The 2007 Census of Agriculture reported that half of Wisconsin farmers identified as principal operators were 55 years old or older. Recent research in Wisconsin, Iowa, Pennsylvania, New

Jersey, North Carolina and California shows that few farmers have identified a successor or developed farm business succession plans, nor have most discussed their retirement or succession plans with anyone. Further, farmers can no longer just draft a simple will to transfer ownership to their children. Successfully transferring the farm business to the next generation takes place over a number of years, requiring trust, a sound financial footing, good planning and communication. Families face legal and financial challenges, personality and generational differences, and an increasingly volatile agriculture economy.

What has been done

In 2011, 9 Cooperative Extension county agriculture agents and 2 campus specialists developed and delivered 5 comprehensive regional Transferring the Farm in a High-Stakes Era workshops, providing research-based tips and tools for more than 200 Wisconsin farmers. Topics included financial considerations for retirement, farm business arrangements, Dealing with the 5 Ds: Death, Divorce, Disability, Disaster and Disagreement, tax considerations for farm transfers, beginning farmer business planning, and the importance of communication in farm transfers. Local agents continue to work with families to address specific needs in their farm transfer process. Wisconsin Cooperative Extension Heart of the Farm and Annie's Project trainings reached another 265 hard-to-reach women farm owners with farm succession planning educational programs.

Results

Sustaining jobs in rural Wisconsin: Farm transfer workshop evaluations indicate participants learned about farm business arrangements and tax consequences of farm transfers. Participants noted increased awareness of the importance of communications for successful succession plans. They indicated they would be taking action on wills, financial analysis of their farming operations, and communicating with their families. Providing education to assist with the succession of farm businesses and retaining on-farm jobs is extremely important in rural Wisconsin. Agriculture's economic impact, measured by on-farm and food processing jobs, is significant in these counties, most especially for Clark and Green counties. In Clark, Green, Jefferson, Sheboygan and Rusk counties, on-farm and food processing businesses generate 7,697, 5,911, 8,732, 4,266 and 1,157 jobs. Agriculture in these counties generates business sales of $1.54 billion, $1.38 billion, $2.14 billion, $3.15 billion and $111 million. In Clark County, agriculture employment accounts for 45.5% of all jobs, and 27.8% of all Green County jobs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

Outcome #3

1. Outcome Measures

Build the capacity of the agriculture service and support industry

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	120

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Today's agriculture is highly specialized in production and in numerous other fields. In preparation for careers in agriculture, it is essential that youth become aware of the many options available to them and understand options for gaining experience and obtaining the education needed to attain their chosen career.

What has been done
Wisconsin Cooperative Extension 4-H Youth Development outreach staff coordinated the 2011 National 4-H Dairy Conference exploring careers in agriculture and related fields in collaboration with a national committee of dairy specialists, industry leaders, recent alumni youth, and 4-H dairy project volunteers. In October 2011, 165 youth and adult leaders attended the 4-day National 4-H Dairy Conference. The 120 youth delegates from Wisconsin, other states and Canadian provinces explored the science of dairy foods, biotechnology, genetics, and other sciences related to dairy which they could teach to others when they returned home.

Results
Setting career goals: All 165 youth and adult leaders were challenged to adapt to unexpected change and to set specific short and long-term goals for themselves, to help them achieve success in their personal lives, college and careers. Feedback indicates that participants increased their understanding of the variety and types of careers available in the dairy industry; understanding of science related to dairy; understanding of issues related to living in a global market; and ability to communicate. Networking with dairy youth from other regions and with industry leaders added opportunities for exchanging ideas. All 120 youth delegates explored dairy-related careers while attending seminars on the UW College of Agricultural and Life Sciences campus, sparking an interest in attending this or another college to pursue a specialized educational degree. More than half of these youth (54%) indicated they would pursue a career in agriculture.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Global Food Security and Hunger: Food Accessibility

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	5%			
601	Economics of Agricultural Production and Farm Management	10%			
602	Business Management, Finance, and Taxation	5%			
604	Marketing and Distribution Practices	15%			
607	Consumer Economics	5%			
608	Community Resource Planning and Development	30%			
703	Nutrition Education and Behavior	15%			
704	Nutrition and Hunger in the Population	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	12.8	0.0	0.0	0.0
Actual Volunteer	7083.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
459882	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
459882	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

For 2011, Wisconsin Cooperative Extension reports efforts of colleagues and partners providing timely research-based education and assistance to improve food accessibility by strengthening local food markets and systems through training and support for farmers' market managers and increasing the food supply for vulnerable populations through a partnership increasing school breakfast access.

The success of small-scale agriculture requires an effective stream of micro-enterprises from the farm gate to small-scale processors, marketers, restaurants and local food system networks. In 2011, 217 farmers' markets were critical outlets for many agricultural producers in Wisconsin. Although the number of farmers' markets continues to grow, not all markets are successful. To create economic opportunities for farmers, markets must provide a consistent customer base and reliable income. Many managers are volunteers, lacking the skills or knowledge base to build a strong and sustainable market.

Training and supporting farmers' market managers: Farmers' market managers play a vital role in the success and sustainability of small and medium-sized farms in Wisconsin. Providing successful markets for these growers to sell their products keeps them viable. Since 2006, Wisconsin Cooperative Extension county educators have been assessing the needs of farmers' market managers, providing training, resources and support to improve managers' marketing and promotion skills needed to realize their markets' full potential. In 2011, the Waukesha County commercial horticulture educator Kristin Krokowski helped establish the Wisconsin Farmers Market Association and develop a web site to support managers and promote their markets, working with the Wisconsin Department of Agriculture, Trade and Consumer Protection so customers can locate each of 207 markets using a clickable map: http://www.wifarmersmarkets.org

Increasing breakfast access for hungry children: Research shows that children who eat breakfast demonstrate both increased ability to learn, and improved behavior in the classroom. To ensure that more Wisconsin children receive proven benefits of eating a healthy breakfast, Cooperative Extension partners with the Department of Public Instruction to help schools with breakfast programs increase their student participation, support other schools in starting breakfast programs, and share research-based resources. Wisconsin's school breakfast challenge efforts also help schools find new ways to increase breakfast participation through non-traditional service such as grab and go or breakfast in the classroom. The Food Research and Action Center School Breakfast Scorecard rates states' performance in school breakfast programs, and Wisconsin achieved double-digit growth in the number of children receiving free or reduced-priced breakfasts (up by 10.6%) -- providing a healthy start to the day for 42.6% of low-income students, and putting Wisconsin in the top five performing states for greatest percent change in

participating low-income students.

2. Brief description of the target audience

The audience includes farmers' market managers, vendors and customers, small-scale producers, producer associations, food processors and entrepreneurs, gardeners and Master Gardener volunteers, food coalitions and cooperatives, hunger coalitions and task forces, food pantries and other community service providers, local and tribal governments, school boards, school food service directors, teachers and parents of school-age children, low-income women with infants and young children, local and state agency personnel, and others.

Of 87,918 adults reached through direct teaching methods in 2011, 89.1% were white, 4.2% were African American, 2% were Asian American, 1.8% were American Indian, and 2.8% were of other identity; 50.2% were male and 49.8% female. Of these, 6.1% (5,351) identified as Latino/a, who may be of any race. In 2011, community partners and the 7,083 volunteers trained made additional teaching contacts.

School Breakfast Programs improve nutrition for more low-income school-age children: Continued collaboration among Wisconsin Cooperative Extension, Department of Public Instruction, the School Nutrition Association of Wisconsin, Wisconsin Milk Marketing Board, and the Hunger Task Force, with support from Nutrition Enhancement Breakfast Grants, have greatly increased the number of low-income students who have access to school breakfast and the number of schools participating in the program as described in this report. While any student can participate regardless of income, 2 of every 5 school-age children in Wisconsin (41%) live in families whose incomes are below the household income level to qualify for free or reduced-price lunch and breakfast programs -- where these are available in their schools. As of the 2010-2011 school year, about 70% of schools that participate in the national School Lunch Program now also participate in the School Breakfast Program, providing a healthy start to the day for 42.6% of Wisconsin's low-income students. This puts Wisconsin in the top five performing states for greatest percent change in the number of low-income students participating.

UW-Extension Cooperative Extension colleagues are connected by email ListServ, blogs and online newsletters, shared resources such as statewide teleconferences, eXtension and the national Extension Disaster Education Network (EDEN) to quickly address critical timely issues such as farming through difficult times. Interdisciplinary colleagues and other professionals in this network include researchers at UW-Madison, UW-Platteville, UW-River Falls, UW-Stevens Point and 11 agricultural research stations.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues. Extension specialists have proposed the following community of practice to improve food accessibility through strengthening local food markets and systems and increasing the food supply for vulnerable populations:

eXtension Community and Regional Food Systems Community of Practice: Wisconsin Cooperative Extension specialists are working with Pennsylvania and Ohio extension to create an eXtension Community, Local and Regional Food Systems Community of Practice. They have assembled a national leadership team and submitted a proposal to eXtension.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	87918	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	3	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Strengthen local food markets and systems
2	Increase access to food for vulnerable populations

Outcome #1

1. Outcome Measures

Strengthen local food markets and systems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	207

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
More than 200 farmers' market managers make farmers' markets in Wisconsin possible. They organize, manage, resolve conflicts, track finances and commit their time, often as volunteers. As accomplished as many managers are in running a farmers' market, vendors need someone who can bring more people to the market and keep them coming back. Since 2006, Wisconsin Cooperative Extension commercial horticulture and agriculture educators have been assessing the needs of farmers' market managers, providing training, resources and support to improve managers' marketing and promotion skills needed to realize their markets' full potential.

What has been done
In 2011, the Waukesha County commercial horticulture educator Kristin Krokowski brought managers together, secured grant funding, facilitated meetings and further assessed needs to establish the Wisconsin Farmers Market Association. A 9-member board and committees meet monthly by phone to address needs they identified--to promote local food consumption by supporting and educating market managers, vendors, consumers and communities. This county extension educator also helped develop a web site to support these managers and promote their markets, working with the Wisconsin Department of Agriculture, Trade and Consumer Protection so customers can locate each of 207 markets using a clickable map. The public access part of the web site provides product seasonality, food selection, preparation, and nutritional value. The internal section mentors members through blogs sharing best practices, marketing strategies and materials, and a library of market and health regulations, laws and guidelines: http://www.wifarmersmarkets.org

Results
Strengthening local food markets and systems: With many farmers dependent on farmers' markets for their livelihood, giving managers easy-to-use tools allows them to be more effective and efficient, increasing their customer base without increasing their workload. Market managers

surveyed accomplished 61% of the goals that they identified, made progress toward accomplishing 30% and intend to address the remaining 9% in the future. Wisconsin Cooperative Extension helped them learn how to work collaboratively with other market managers and pursue their goals in a way that made the process less intimidating and time consuming.

New Direction in Marketing for Farmers' Markets was reviewed and evaluated by market managers and 770 copies were purchased throughout the state. Managers surveyed said the guide helped improve their marketing and promotion skills (96%), was easy to use and apply the strategies to their farmers' market (92%): http://learningstore.uwex.edu/New-Directions-in-Marketing-for-Farmers-Markets-P1369.aspx

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

Outcome #2

1. Outcome Measures

Increase access to food for vulnerable populations

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition research shows that children who eat breakfast demonstrate both increased ability to learn, and improved behavior in the classroom. Eating breakfast improves their mood, decreases their risk of being overweight, and enhances the quality of their diet. Yet many Wisconsin children still miss breakfast daily, due to lack of time, limited household income or because they do not have access to breakfast at school. School breakfast programs are one way to ensure a nutritionally healthy start to their day. Regardless of household income, any school-age child can participate in a School Breakfast Program--where one is available. In 2004, Wisconsin ranked last

in the nation, with only 58% of the schools offering lunch also offering breakfast. Since then, Wisconsin Cooperative Extension Family Living Programs and the Department of Public Instruction (DPI) have partnered to improve breakfast access for more low-income children in more schools.

What has been done
To ensure that more Wisconsin children receive the proven benefits of eating a healthy breakfast, Cooperative Extension and DPI help schools with breakfast programs increase their student participation, support other schools in starting breakfast programs through Nutrition Enhancement Breakfast grants and grant-writing trainings, and share research-based resources. Wisconsin's school breakfast challenge efforts also provide support to schools to find new ways to increase breakfast participation through non-traditional service such as grab and go or breakfast in the classroom. The Breakfast Scoop newsletter provides resources for school food service directors 3 times a year through the Wisconsin School Breakfast ListServ (more than 400 members), the DPI School Nutrition web site, and at: http://fyi.uwex.edu/wischoolbreakfast

Results
Providing more school breakfasts for more hungry children: Collaboration among Wisconsin Cooperative Extension, DPI, the School Nutrition Association of Wisconsin, Wisconsin Milk Marketing Board, Hunger Task Force, schools and other organizations contributes to the growth of School Breakfast Programs. As of the 2010-2011 school year, Wisconsin ranked in the top three performing states in terms of showing greatest positive change in the number of schools that offer breakfast. About 70% of schools that participate in the national School Lunch Program now also participate in the School Breakfast Program, up from 65.8% the year before.

The Food Research and Action Center (FRAC) School Breakfast Scorecard rates states' performance in school breakfast programs, and this year Wisconsin achieved double-digit growth in the number of children receiving free or reduced-priced breakfasts (up by 10.6%)--providing a healthy start to the day for 42.6% of Wisconsin's low-income students. This puts Wisconsin in the top five performing states for greatest percent change in the number of low-income students participating.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Food Safety

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	50%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	50%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	6.5	0.0	0.0	0.0
Actual Volunteer	100.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
279649	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
279649	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

For 2011, Wisconsin Cooperative Extension reports efforts of colleagues and partners providing timely research-based education and assistance to improve the safety of the food supply through training and supporting small acidified food processors and small meat processors. While face-to-face programs are a hallmark of Cooperative Extension, educators reach Wisconsin residents round-the-clock through web-based materials and print publications. Online resources keep consumers up-to date on food preservation, safety and storage. An easy-to-use web site dedicated to providing the latest information on food preservation and other food safety topics can be found at: http://www.foodsafety.wisc.edu

Training and supporting small food processors: Helping small food processors is an excellent way to increase the availability of safe, wholesome products made in Wisconsin. Committed to providing small food processors ongoing training and support in the critical area of food safety, Wisconsin Cooperative Extension partnered with the Department of Agriculture, Trade and Consumer Protection to develop a training program for these small processors. Since 2009, 333 small business owners and entrepreneurs have completed Wisconsin Acidified Canned Foods Program trainings as they prepare to develop and market their products. Cooperative Extension training and support has also allowed these businesses to develop new products and has provided economic growth for local economies. Along with needed trainings, a web site now helps small food processors navigate the course of "recipe to reality," providing convenient information on licensing and product testing, sample process forms, and contact information for process approval: http://www.foodsafety.wisc.edu/ssp_acidified_canned_food.html

Master Meat Crafter: Working within a small margin of error, meat processors must thoroughly understand what pathogens must be controlled and how most effectively to control them. Food safety ranks as a top priority for all meat and poultry processors tasked with the daily challenge of producing safe, high-quality nutritious foods. Initiated and organized by UW-Madison extension meat specialist Jeff Sindelar in partnership with the Wisconsin Department of Agriculture, Trade and Consumer Protection, a unique new meat processing certification program began at the University of Wisconsin-Madison Meat Science Laboratory in 2010. The Master Meat Crafter Training Program addresses food safety education and practical application throughout the program's 2.5 years. Having been exposed to food safety principles ranging from new antimicrobials and their application to how thermal processing design improves process lethality, the first 18 participants gained a deep and thorough understanding of food safety from micro lab to meat plant. As a result, they take home a thorough and comprehensive understanding of pathogenic bacteria as well as tools to improve their own food safety programs: http://www.uwex.edu/ces/animalscience/meats/index.cfm

2. Brief description of the target audience

The statewide Wisconsin FIRST (Food Industry Research, Service and Training) Team, Family Living Programs colleagues and trained Master Food Preserver volunteers provide research-based education and assistance to individuals, families, 4-H youth, school-age children and preschoolers, fresh market vegetable and fruit growers and sellers, small food processors and entrepreneurs, crop, dairy and livestock producers, artisan cheesemakers, small meat processors and others preserving food safely and keeping the food supply safe and wholesome.

Wisconsin Cooperative Extension campus and county faculty and trained volunteer advisers address animal care and carcass quality issues through species-specific programs. Twenty county extension educators and state specialists are Beef Quality Assurance trainers, two Swine Team members are certified Transport Quality Assurance trainers and all four are Pork Quality Assurance Plus Advisers who also help train certified 4-H youth and volunteer leaders in Meat Animal Quality Assurance required for participation in county and state fair swine, beef and sheep projects and auctions. Around 4,500 4-H youth

are certified in Meat Animal Quality Assurance each year.

Of 2,003 adults reached by the Wisconsin FIRST Food Industry Research, Service and Training Team through direct teaching methods in 2011, 92.2% were white, 2.9% were Asian American, 2.4% were African American, 0% were American Indian, and 2.4% were of other identity; 57.6% were female and 42.4% male. Of these, 2.8% (56) identified as Latino/a, who may be of any race. Community partners and trained volunteers made additional teaching contacts. To help meet the growing need for food safety education, 100 trained Master Food Preserver volunteers pledged to commit an average of 20 volunteer hours per year for 3 years -- a total of 6,000 hours -- in service to their communities as part of the Volunteer Master Food Preserver program.

In 2011, 8,687 adults who participated in nutrition education food safety lessons learned more about preparing, cooking and storing food safely. Almost 20,000 educational contacts were made with school-age youth in lessons focused on food safety topics. Almost 3,000 preschool children learned more about safe food handling and hand washing. Demographics for the total low-income youth and adults reached by direct teaching methods in 2011, 81% were white, 7% were African American, 5% were Asian American, 2% were American Indian, and 5% were of other identity; 52% were female and 48% were male. Of these, 13% identified as Latino/a, who may be of any race. Community partners and trained volunteers made additional teaching contacts.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	10690	0	27500	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	13	13

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Improve the safety of the food supply: Acidified Canned Foods Program
2	Improve the safety of the food supply: Master Meat Crafter Training Program

Outcome #1

1. Outcome Measures

Improve the safety of the food supply: Acidified Canned Foods Program

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	333

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Wisconsin has a vibrant "buy local" economy and small food processors are benefiting from the economic momentum. In some cases, farmers wishing to add value to their crops are delving into the sale of canned pickles, salsas and other family-favorite products. As a group, canned foods such as pickles, salsas and tomato-based products are referred to as acidified foods. Processed incorrectly, acidified canned foods are potentially hazardous--they present the risk of botulism poisoning. As a result, the federal government requires processors of acidified canned foods to receive training before they are issued a processing license. For small food processors, finding training that fits their needs often poses a challenge.

What has been done
Helping small food processors is an excellent way to increase the availability of safe, wholesome products made in Wisconsin. Committed to providing small food processors ongoing training and support in the critical area of food safety, Wisconsin Cooperative Extension partnered with the Department of Agriculture, Trade and Consumer Protection to develop a training program for these small processors. In 2011, 133 new businesses were trained under the Acidified Canned Foods Program and extension provided support and ongoing one-on-one assistance to 86 businesses--assisting with development and approval of scheduled processes, filing documents with FDA, and providing ongoing technical support. Extension also trained 64 employees under the FDA's Better Process Control School to supervise critical functions in the Upper Midwest's vibrant canning industries.

Results
Training and supporting small food processors: Since 2009, 333 small business owners and entrepreneurs have completed Wisconsin Acidified Canned Foods Program trainings as they prepare to develop and market their products. Their top acidified canned foods processed for sale are salsas and tomato sauces, fruit or vegetable pickles or relishes. Wisconsin Cooperative

Extension training and support has also allowed these businesses to develop new products and has provided economic growth for local economies. Survey responses were used to redesign the Wisconsin Acidified Canned Foods Program to better support these businesses. Along with needed trainings, a web site now helps small food processors navigate the course of "recipe to reality," providing convenient information on licensing and product testing, sample process forms, and contact information for process approval:
http://www.foodsafety.wisc.edu/ssp_acidified_canned_food.html

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Improve the safety of the food supply: Master Meat Crafter Training Program

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Wisconsin has a strong and vibrant meat industry that is important for meeting consumer needs. Food safety ranks as a top priority for all meat and poultry establishments, with productivity and profit often ranking lower. Without a clear understanding of pathogenic bacteria and a progressive approach to preventing bacterial presence or growth, meat processors may face a negative food safety situation such as a foodborne illness outbreak. Working within a small margin of error, meat processors must thoroughly understand what pathogens must be controlled and how most effectively to control them. From small, family businesses to very large multi-plant facilities, all are tasked with the daily challenge of producing safe, high-quality nutritious foods.

What has been done
Initiated and organized by UW-Madison extension meat specialist Jeff Sindelar in partnership with

the Wisconsin Department of Agriculture, Trade and Consumer Protection, a unique new meat processing certification program began at the University of Wisconsin-Madison Meat Science Laboratory in 2010. The Master Meat Crafter Training Program addresses food safety education and practical application throughout the program's 2.5 years. While food safety is part of five of the program's short courses, the sixth titled Food Safety and Meat Microbiology School focuses on all facets of food safety from industry experts, some of whom have been involved with outbreaks through their companies. Coupled with hands-on microbiology laboratories, participants gain a deep and thorough understanding of food safety from micro lab to meat plant. As a result, they take home a thorough and comprehensive understanding of pathogenic bacteria as well as tools to improve their own food safety programs:
http://www.uwex.edu/ces/animalscience/meats/index.cfm

Results

Master Meat Crafter: As a result of completing the intensive meat processing certification program they began in 2010, graduating participants will be awarded status as a Master Meat Crafter. Of the first 18 participants, half are the next generation in a family business--6 are taking the training to take over the family business, and 3 are in the early phases of starting a business. Having been exposed to food safety principles ranging from new antimicrobials and their application to how thermal processing design improves process lethality, participants have improved their understanding, making them a proactive rather than reactive business owner. Each is tasked with producing each and every pound of product safely so no one becomes ill. Thus, the food safety elements of the Master Meat Crafter Training Program are critical to providing participants the knowledge and proper tools to process 100% safe food all the time. Program success can be measured by how many people never become ill due to a food safety slip.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Childhood Obesity

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	75%			
704	Nutrition and Hunger in the Population	10%			
724	Healthy Lifestyle	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	0.9	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
34425	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
34425	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

For 2011, Wisconsin Cooperative Extension reports efforts of Family Living Programs campus and

county faculty and staff, colleagues and partners providing timely research-based education and assistance for preventing childhood obesity through developing and implementing behavioral interventions that improve nutrition and increase physical activity, as well as building capacity among community partners to address issues related to nutrition and childhood obesity. Diverse participants make informed, science-based decisions regarding nutrition, childhood obesity, health and physical activity.

Raising Healthy Eaters: The Healthy Eating Index indicates that 76% of children ages 2 to 5 have poor diets that put them at risk of obesity (USDA, DHHS). Effective research-based interventions are needed to prevent obesity among preschoolers. In 2006, Wisconsin Cooperative Extension Family Living Programs developed the Raising Healthy Eaters (RHE) curriculum to teach parents how to help young children develop healthy eating behaviors. Trained educators and child care providers reported that RHE works well, but original evaluation did not capture impact. In 2011, Walworth County family living educator Jenny Wehmeier worked with UW-Madison nutrition education extension specialist Gayle Coleman to revise RHE evaluation using curriculum goal-setting components to capture impact. For example, Wehmeier found: Raising Healthy Eaters participants reported that after the lesson, they now serve regular family meals, give their children smaller portions, let them decide how much to eat rather than forcing them to eat, and keep the TV off during meals. They now buy more fruits and vegetables for meals and snacks, and no longer buy unhealthy foods so those are not in the house. They are cooking their own food more often, using recipes, and engaging their children in helping cook.

Mobilizing rural communities to prevent childhood obesity: Nearly $150 billion per year is spent to treat obesity-related medical conditions. The White House Task Force on Childhood Obesity Report to the President, Solving the Problem of Childhood Obesity within a Generation, presents an action plan for the prevention of childhood obesity: (1) empower parents and caregivers; (2) provide healthy food in schools; (3) improve access to healthy, affordable foods; and (4) increase physical activity. The goal is to reduce childhood obesity to just 5% by 2030. A unique 7-state project is investigating rural communities' abilities to provide environments that sustain healthy eating and promote physical activity among 4-year-old low-income children. University scientists, researchers and extension specialists from multiple disciplines are developing community readiness, needs assessment and online distance learning tools to document best practices for extension staff working to prevent childhood obesity. Through a competitive proposal process, Crawford and Iron counties were chosen as project sites based on their commitment and established community partnerships for preventing childhood obesity.

2. Brief description of the target audience

Wisconsin Cooperative Extension Family Living Programs campus and county faculty and staff, colleagues and partners provide timely research-based education and assistance for preventing childhood obesity to diverse children and youth, caregivers, parents and family members, public and private collaborating and community agencies and others in a variety of educational settings. Primary emphasis is placed on reaching under-represented audiences including low-income; Latino/a, African American, American Indian and Hmong families and youth.

In 2011, 303,307 Childhood Obesity Nutrition/Dietary Quality educational contacts were recorded with parents with children and with youth. Demographics for the total low-income youth and adults reached by direct teaching methods in 2011, 76% were white, 10% were African American, 4% were Asian American, 3% were American Indian and 7% were of other identity; 54% were female and 46% were male. Of these, 16% identified as Latino/a, who may be of any race.

Wisconsin Cooperative Extension nutrition education programs such as the Expanded Food and Nutrition Education Program (EFNEP) and Supplemental Nutrition Assistance Program (SNAP-Ed) provide keys to better health by showing people how to eat better and incorporate healthy activity into their lives.

Extension educators reach diverse audiences through a variety of methods from home visits to classes and activities at community centers, translating and interpreting as needed. Working with local partners -- schools, civic groups, public health and community centers, government agencies, non-profits and more -- Cooperative Extension helps diverse individuals and families improve their lives through healthy diet and physical activity.

EFNEP reaches two primary audiences: low-income youth and low-income families with young children in six urban counties (Milwaukee, Rock, Dane, Racine, Kenosha, and Waukesha) plus educational programming for Hmong learners in Portage, Outagamie and Winnebago counties. In Wisconsin, 45% of those reached by EFNEP reported incomes below the federal poverty level. More than two-thirds were racially, culturally and ethnically diverse. Poor health disproportionately affects low-income and minority populations. EFNEP saves states and families money: for every dollar invested in EFNEP, health care costs were reduced by $10.64 in Virginia; $8.82 in a group of Midwestern states; $8.03 in Iowa. EFNEP is effective in increasing the dietary intake levels of six key nutrients that are often limited in the diets of low-income individuals (protein, iron, calcium, and Vitamins A, C, B6) and increasing servings of all food groups to better achieve the new dietary guideline recommendations.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	303307	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Develop and implement behavioral interventions that improve nutrition and increase physical activity--Raising Healthy Eaters trainings
2	Increase the capacity of community partners to address issues related to nutrition and childhood obesity--Mobilizing rural communities to prevent childhood obesity

Outcome #1

1. Outcome Measures

Develop and implement behavioral interventions that improve nutrition and increase physical activity--Raising Healthy Eaters trainings

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	66

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Results of the Healthy Eating Index indicate that 76% of children ages 2 to 5 have poor diets that can put them at risk of obesity (USDA, DHHS). In 2010, 29% of 2 to 3 year olds participating in the Wisconsin Supplemental Nutrition Program for Women, Infants and Children (WIC) were overweight or obese. Effective research-based interventions that are practical to implement and sustain are needed to prevent obesity among preschoolers. Education that helps children develop healthy eating behaviors will improve children's health and ability to learn and reduce childhood obesity. These improvements will lead to decreased health care costs for families and the Wisconsin BadgerCare program, and contribute to a productive workforce in the future.

What has been done
In 2006, Wisconsin Cooperative Extension Family Living Programs developed the Raising Healthy Eaters (RHE) curriculum to teach parents how to help young children develop healthy eating behaviors. Trained educators and child care providers who used the curriculum reported that it works well. However, original evaluation developed for RHE did not do a good job of capturing impact. In 2011, more Wisconsin nutrition and family living educators expressed interest in curricula for parents including Raising Healthy Eaters. Walworth County family living educator Jenny Wehmeier worked with UW-Madison nutrition education extension specialist Gayle Coleman to revise RHE evaluation based on success that Wehmeier had using curriculum goal-setting components to capture impact. They also co-taught a 6-hour training on the Raising Healthy Eaters curriculum in three Wisconsin sites in August 2011. The 66 learners from 30 counties who attended the training were encouraged to work with their county colleagues to implement at least one RHE lesson series and send their evaluation results to Coleman for analysis.

Results

Raising Healthy Eaters: Sixty-one of the 66 educators trained completed an evaluation. Evaluation results indicate that educators thought the training was worth their time (rated 5 on a scale of 1 to 6). The three most useful aspects of the training with number of learners indicating usefulness in parentheses were: overview of lessons (47); discussion of challenges and ideas to overcome them (44); discussion of learner-centered strategies (41). Learners enjoyed engaging in lesson activities and trying new foods. They suggested ways to improve the training: include learners that are more like the learners we work with/more discussion of realistic situations for our learners (low-income families); have more time to determine feasibility locally (budget/partner interest/time); include more physical activity. One example follows, another under the next outcome.

Walworth County: Raising Healthy Eaters participants reported that after the lessons, they now serve regular family meals, give their children smaller portions, let them decide how much to eat rather than forcing them to eat, and keep the TV off during meals. They now buy more fruits and vegetables for meals and snacks, and no longer buy unhealthy foods so those are not in the house. They are cooking their own food more often, using recipes, and engaging their children in helping cook.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Increase the capacity of community partners to address issues related to nutrition and childhood obesity--Mobilizing rural communities to prevent childhood obesity

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nearly $150 billion per year is now being spent to treat obesity-related medical conditions. The White House Task Force on Childhood Obesity Report to the President, Solving the Problem of Childhood Obesity within a Generation, presents an action plan for the prevention of childhood obesity: (1) empower parents and caregivers; (2) provide healthy food in schools; (3) improve access to healthy, affordable foods; and (4) increase physical activity. The goal of the action plan, developed by an interagency task force, is to reduce childhood obesity to a rate of just 5 percent by 2030: http://www.letsmove.gov/tfco_fullreport_may2010.pdf

What has been done

A unique multi-state project is investigating rural communities' abilities to provide environments that sustain healthy eating and promote physical activity among 4-year-old low-income children. A collaborative North Central Region--Indiana, Kansas, Michigan, North Dakota, Ohio, South Dakota and Wisconsin--multi-disciplinary team of nutrition scientists, social network researchers, community and youth development specialists initiated an innovative, integrated research and extension project to: (1) collect data using a community development model of extension intervention to prevent childhood obesity; (2) promote the use of effective communication tools in communities; (3) use a quasi-experimental design to examine outcomes; and (4) use online distance learning tools to document best practices for extension staff working to prevent childhood obesity.

Results

Mobilizing rural communities to prevent childhood obesity: Wisconsin Cooperative Extension formed an advisory committee now working with colleagues in the 6 other states compiling an inventory of materials for a best practices web site, and developing a multi-state assessment tool packet for communities to assess readiness and needs before and after the program. Through a competitive proposal process, Crawford and Iron counties were chosen as project sites beginning March 15, 2012, based on their commitment and established community partnerships for preventing childhood obesity. For example, Crawford County had identified the need: According to the USDA Food Economic Research Service, 12% of Crawford County's low-income preschoolers are overweight and only 38.9% of high school students are physically active. In 2011, 212 adults participated in healthy living programs such as the 8-week Crawford County on the Move, Raising Healthy Eaters to encourage healthy eating habits, Active Play for Child Care Centers, and Family Health Fiestas. All participants in Raising Healthy Eaters reported they learned how to better handle choosey eaters and could provide healthier choices for family meals and snacks. All child care providers indicated they used at least two ideas gained in the Active Play training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Public policy: Nearly $150 billion per year is now being spent to treat obesity-related medical conditions. The White House Task Force on Childhood Obesity Report to the President, Solving the Problem of Childhood Obesity within a Generation, presents an action plan for the prevention of childhood obesity: (1) empower parents and caregivers; (2) provide healthy food in schools; (3) improve access to healthy, affordable foods; and (4) increase physical activity. The goal of the action plan, developed by an interagency task force, is to reduce childhood obesity to a rate of just 5 percent by 2030: http://www.letsmove.gov/tfco_fullreport_may2010.pdf

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No response

Key Items of Evaluation

No response

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Climate Change

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%			
133	Pollution Prevention and Mitigation	20%			
205	Plant Management Systems	10%			
601	Economics of Agricultural Production and Farm Management	10%			
605	Natural Resource and Environmental Economics	20%			
608	Community Resource Planning and Development	30%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	15.7	0.0	0.0	0.0
Actual Volunteer	281.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
630221	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
681530	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

For 2011, Wisconsin Cooperative Extension reports collaboration among the interdisciplinary Energy Conservation and Renewable Energy Team, Estuary and Coastal Wetlands Protection Team, Nutrient Management Team, Sustainability Team, colleagues and partners providing timely research-based education and assistance to adapt to and mitigate climate change impacts through developing, implementing and evaluating outreach programs to reduce carbon, nitrogen, energy and water footprints in their communities. Supporting this work is the interagency Wisconsin Initiative on Climate Change Impacts: http://www.wicci.wisc.edu

Nutrient Management Farmer Education (NMFE): Improving nutrient management practices improves farm profitability and reduces harmful effects of nitrogen and phosphorus on water quality. This can likewise reduce a harmful byproduct of increased flooding, by leaving less nitrogen in the soil for saturated cropland to convert to the greenhouse gas nitrous oxide. Three NMFE components -- on-farm research, training and grant funding -- intertwine to reach both farmers who seek out research-based education as well as those who lack the means to do so and can benefit the most by adopting best management practices. An interdisciplinary working group incorporates the latest on-farm research recommendations from UW-Madison, Platteville, River Falls, Stevens Point, Discovery Farms, Pioneer Farm and county agriculture agents in updating the NMFE curriculum and training interagency instructors. Price-adjusted maximum economic return on nitrogen fertilizer and Wisconsin Phosphorus Index field values are calculated using the SNAP-Plus nutrient management planning and soil loss assessment software program and new iPhone apps developed and maintained by the UW-Madison Soil Science Department. As of 2011, at least 844,500 acres of cropland and grazing land are covered under a nutrient management plan that meets all local, state and federal regulations. The farmer value is $5.9 million for plans and $2.1 million for tax credits.

Climate Impacts Workshops: Communities and agencies find themselves needing to adapt to immediate climate impacts and plan for future climate scenarios, yet lack local climate science and planning information. Wisconsin Cooperative Extension partnered with the National Oceanic and Atmospheric Administration, Ohio Department of Natural Resources, and Great Lakes Sea Grant Network to secure Great Lakes Restoration Initiative funding for conducting Climate Impacts Workshops modeled after workshops developed by the National Estuarine Research Reserve System. Workshop content was customized and shaped through input from local planning teams and the Wisconsin Initiative on Climate Change Impacts. In 2011, two 1-day workshops provided the latest climate science, examples of Great Lakes community vulnerabilities, climate planning processes and strategies, planning tools and resources for 126 planners and other professionals working on land use, public health, stormwater, emergency preparedness, utilities, and natural resource management issues. This same curriculum was presented at six more workshops reaching another 671 professionals and community leaders with specific climate information tailored to their disciplines and communities.

2. Brief description of the target audience

Wisconsin Cooperative Extension provides timely research-based education and assistance for a variety of audiences including growers and grower associations, coalitions and cooperatives, community leaders, business owners, local elected officials, town, city, county and tribal governments, plan commissions, local planning departments, school districts, economic development practitioners, and diverse individuals, youth and families. Of 26,919 adults reached through direct teaching methods in 2011, 92.6% were white, 2.4% were American Indian, 1.3% were Asian American, 1.1% were African American, and 2.7% were of other identity; 71.7% were male and 28.3% female. Of these, 3.4% (904) identified as

Latino/a, who may be of any race. Community partners and the 281 volunteers trained made additional teaching contacts.

Lake Superior National Estuarine Research Reserve: The National Estuarine Research Reserve (NERR) System is a nationwide network of protected coastal estuaries designated and supported through the National Oceanic and Atmospheric Administration. Wisconsin Cooperative Extension successfully facilitated the nomination of the St. Louis River freshwater estuary in 2009. With its designation in October 2010, the 16,697-acre Lake Superior National Estuarine Research Reserve joined Old Woman Creek (Ohio) as the second Great Lakes freshwater estuary in the NERR System.

Wisconsin Initiative on Climate Change Impacts (WICCI): This statewide collaboration brings scientists and stakeholders together to find adaptation strategies to reduce potential negative impacts of climate change in Wisconsin. WICCI issued its first comprehensive report in February 2011, Wisconsin's Changing Climate: Impacts and Adaptation. Wisconsin Cooperative Extension statewide climate specialist David S. Liebl leads the WICCI outreach effort, chairing the WICCI Outreach Committee and serving on the WICCI Science Council. WICCI's outreach program focuses on building capacity among Wisconsin decision makers to integrate climate projections into resource management decisions: http://www.wicci.wisc.edu

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	26919	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	4	4

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Develop, implement and evaluate outreach programs that reduce carbon, nitrogen, energy and water footprints in their communities--Nutrient Management Farmer Education
2	Develop, implement and evaluate outreach programs that reduce carbon, nitrogen, energy and water footprints in their communities--Climate Impacts Workshops

Outcome #1

1. Outcome Measures

Develop, implement and evaluate outreach programs that reduce carbon, nitrogen, energy and water footprints in their communities--Nutrient Management Farmer Education

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	844500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Wisconsin farmers face increasing regulatory pressures due to agricultural nutrient contributions to Wisconsin lakes and streams, resulting in non-point source pollution including a dead zone the size of New Jersey in the Gulf of Mexico. Government agricultural programs, zoning, large farm licenses, state animal feeding operation permits and new farmland preservation tax credits all require farms to have nutrient management plans. Regulations aside, improving nutrient management practices can also improve farm profitability and water quality. This can likewise reduce a harmful byproduct of increased flooding, by leaving less nitrogen in the soil for saturated cropland to convert to the greenhouse gas nitrous oxide.

What has been done
The Nutrient Management Team researches and updates guidelines and software to help farmers credit nitrogen from legumes and manure to save fertilizer cost and prevent loss of nutrients from fertilizers and manure to groundwater, lakes, streams and the atmosphere. Revised in 2010, the Nutrient Management Farmer Education (NMFE) curriculum combines classroom instruction, individual consultation, and on-farm field trials to engage farmers in designing nutrient management plans they can understand and follow. For a key 2010 revision to the SNAP-Plus software, NMFE curriculum and NRCS 590 Nutrient Management Standard, soil fertility extension specialist Carrie Laboski teamed with county agriculture agents for testing her corn yield response to nitrogen fertilizer protocol on diverse farms. Laboski analyzed research results and updated the nitrogen rate guidelines such that they more accurately reflect corn nitrogen needs across the wide variety of Wisconsin soils. In 2011, this was translated into the Corn N Rate Calculator app downloaded 1,003 times from September to December. This does not require Internet connection once loaded onto an iPhone or iPad--providing information in the field when needed--and will be developed for Android in 2012.

Results

Reducing the nitrogen footprint: Since 2000, an estimated 75% of the total 1,126,000 acres farmed in 51 counties by the 3,700 producers trained by Wisconsin Cooperative Extension Nutrient Management Farmer Education are now covered by a qualified nutrient management plan. As of 2011, at least 844,500 acres of cropland and grazing land are covered under a nutrient management plan that meets all local, state and federal regulations. Nutrient management (NM) plan cost is about $7 per acre for farmer time and effort. Thus, with 844,500 acres under NM plans as of 2011 due to NMFE, the farmer benefit values at least $5.9 million. As an added benefit, farmland preservation tax credits starting in 2010 range from $5 to $10 per acre and require compliance with state soil and water conservation standards, including filing NM plans. Conservatively assuming only half of the acres under NM plans as of 2011 due to NMFE claim this tax credit at the minimum $5 per acre, the farmer benefit values at least another $2.1 million.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Develop, implement and evaluate outreach programs that reduce carbon, nitrogen, energy and water footprints in their communities--Climate Impacts Workshops

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	797

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Climate change is a complex and often debated societal issue. Despite the complexity and associated challenges, communities and agencies find themselves having to adapt to immediate climate impacts and needing to plan for future climate scenarios. As these planning processes move forward, it is important to provide professionals and community leaders with locally relevant,

science-based climate information. Information and guidance are also needed for choosing among the potential methods for incorporating evolving climate information into planning processes.

What has been done

Wisconsin Cooperative Extension partnered with the National Oceanic and Atmospheric Administration (NOAA), Ohio Department of Natural Resources, and Great Lakes Sea Grant Network to secure Great Lakes Restoration Initiative (GLRI) funding for conducting Climate Impacts Workshops in the Great Lakes Region. The workshops were modeled after workshops developed by the National Estuarine Research Reserve System. Workshop content was customized and shaped through input from local planning teams and the Wisconsin Initiative on Climate Change Impacts (WICCI). In 2011, two 1-day workshops provided the latest climate science, examples of Great Lakes community vulnerabilities, climate planning processes and strategies, planning tools and resources for 126 planners and other professionals working on land use, public health, stormwater, emergency preparedness, utilities, and natural resource management issues. This same curriculum was presented at six more workshops reaching another 671 professionals and community leaders with specific climate information tailored to their disciplines and communities. For example, a workshop for Rock and Jefferson County planners focused on the changing risk of riparian flooding to developed areas along the Rock River.

Results

Climate Impacts Workshops: Workshop participants represented a diverse audience from local, state, and federal agencies and organizations. Participants were asked to complete both pre- and post-workshop evaluations. Based on the results, most attendees came with some understanding of general climate science and impacts, but few came with a substantial understanding of local climate science and impacts or climate adaptation planning. All areas of understanding increased after the workshops. For example, the majority of Green Bay participants (54%) rated their pre-workshop understanding of local climate science as very low or low. After the workshop, the majority (61%) rated their post-workshop understanding of local climate science as high or very high. The combined evaluation data showed that 73% of respondents learned something new that applied to their future work or decisions, and 93% indicated the workshops increased their knowledge of climate change adaptation either some (42%), a lot (34%), or a great deal (17%).

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
601	Economics of Agricultural Production and Farm Management
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Sustainable Energy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%			
133	Pollution Prevention and Mitigation	10%			
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%			
403	Waste Disposal, Recycling, and Reuse	10%			
601	Economics of Agricultural Production and Farm Management	10%			
602	Business Management, Finance, and Taxation	10%			
605	Natural Resource and Environmental Economics	20%			
608	Community Resource Planning and Development	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	3.7	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
165118	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
165118	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The new Wisconsin Cooperative Extension BioEnergy and the BioEconomy Team is a cross-program area effort. More than 20 active team members are conducting integrated research and extension programs, building capacity for sustainable energy among extension colleagues and communities. UW-Madison Environmental Resources Center sustainability studies scientist Sharon Lezberg is collaborating with 50 North Central Region colleagues to develop the BioEnergy and Renewable Energy Community Assessment Toolkit and Energy Independence, BioEnergy Generation and Environmental Sustainability curricula. Curriculum development teams are working on three courses: BioEnergy and Sustainability, On-Farm Energy Conservation and Efficiency, and Anaerobic Digestion.

Building regional capacity for sustainable energy: Southwest Wisconsin has an opportunity to develop renewable energy both for use within the 9-county region as well as to supply nearby urban areas. Wisconsin Cooperative Extension community development agent Ela Kakde engaged graduate students and key stakeholders with ties to communities, government and industry, campus and county colleagues and UW-Madison Urban and Regional Planning (URPL) as project partners to create a 3-year Renewable Energy Opportunity Plan for Southwest Wisconsin. Kakde secured nearly $45,000 in startup funds. For the URPL graduate workshop, she coordinated educational partners and resources for 18 students to inventory renewable energy sources of solar, wind and biomass, assess energy demand, infrastructure, potential for growth and jobs creation. The students' report of the first phase developing a regional sustainable energy economic development plan is valued at about $80,000 of consultant time. Project partners have committed funding toward the next phase. Results also led to partnerships that include support in securing a $132,305 USDA NIFA Hatch Grant for the project titled Bioenergy feedstock supply in Southwest Wisconsin: A network approach to research and extension.

Anaerobic digestion research and training: Since large-scale implementation is relatively recent, training is needed for safe production and use of biogas. While multi-million dollar systems only run economically on the waste from 500 or more cows, hundreds of thousands of very small farms worldwide use small-scale biodigesters costing only a few hundred dollars in climates as harsh as Wisconsin's. UW-Madison Cooperative Extension biowaste specialist Rebecca Larson works with USDA, campus, county and Michigan State University colleagues, industry partners and farmers assessing on-farm economic and environmental benefits of small-scale anaerobic digesters, building a mobile dry biodigester to compare with wet biodigestion, and comparing 9 on-farm solid-liquid separation systems coupled with digesters. In 2011, they presented the nation's first Small-Scale Anaerobic Digester Conference for more than 60 dairy producers and agency staff on technology processes and value-added products. Their 3-day Anaerobic Digester Operator Training for 40 large-scale dairy producers, operators and agency staff incorporated an

on-farm digester tour to demonstrate safety protocols and system components.

2. Brief description of the target audience

The new interdisciplinary BioEnergy and the BioEconomy Team is addressing statewide emerging bioenergy education needs. Farmers and foresters are interested in supplying feedstocks to the bioenergy industry as a potential alternative market and source of revenue. Communities are interested in developing renewable energy industries for energy independence, job creation, and economic development. At the onset of the bioenergy industry, policy makers, as well as entrepreneurial businesses, encouraged the rapid development of new energy sources using biomass as a renewable feedstock.

In 2011, the Wisconsin Cooperative Extension Municipal Leadership Renewable Energy Professional Development Program also leveraged established relationships with private sector participants in the renewable energy arena, including paper manufacturers, forest product firms, professional engineering companies, legal and financial service firms, technology vendors, agricultural producers, utilities and others. Of 4,372 adults reached through direct teaching methods by the BioEnergy and the BioEconomy Team in 2011, 94% were white, 3.6% were American Indian, 1.2% were Asian American, 0.5% were African American, and 0.6% were of other identity; 80.7% were male and 19.3% female. Of these, 3% (129) identified as Latino/a, who may be of any race. Community partners and trained volunteers made additional teaching contacts.

Given Wisconsin's wealth of resources in forests and agricultural production, there is great interest among state businesses and communities in producing alternative fuels and feedstocks from biomass. The audience includes municipalities, regional planning commissions, regulated and unregulated utilities, liquid biofuels, anaerobic digester and biomass conversion technology firms, biomass producers and aggregators, food processors, food services, school districts, loggers, procurement foresters, wood products professionals, haulers, farmers, business owners, woodland owners, recycling volunteers, public and private agencies, government and tribal officials.

3. How was eXtension used?

Wisconsin Cooperative Extension campus and county faculty and staff participate in various communities of practice, engaging with colleagues around the country to improve the educational content of research-based programs and assistance delivered to residents across the state. Extension colleagues are connected by email ListServ, blogs and online newsletters, and shared resources such as teleconferences and webinars, eXtension Communities of Practice, and the national Extension Disaster Education Network (EDEN) to quickly address critical and emerging issues.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4372	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Build regional capacity for developing biomass use for biofuels
2	Build capacity to create, refine and implement scalable conversion technologies

Outcome #1

1. Outcome Measures

Build regional capacity for developing biomass use for biofuels

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	132305

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As a region rich in renewable resources, rural Southwest Wisconsin has an opportunity to develop renewable energy both for use within the 9-county region as well as to supply nearby urban areas. Regional organizations are collaborating to develop partnerships among industry, higher education and school districts. While there have been attempts at small-scale initiatives, little has been done to identify regional resources and create a unified vision and roadmap. To develop community infrastructure that meets local demand and grows markets for sustainable energy enterprises, research is needed to show demand and economic development potential that encourages renewable energy startup companies to locate or grow in this area, generating new energy jobs in Southwest Wisconsin.

What has been done
Wisconsin Cooperative Extension community development agent Ela Kakde engaged graduate students and key stakeholders with ties to communities, government and industry such as the Wisconsin Bioenergy Initiative, campus and county colleagues, Biomass Consulting, Wisconsin Department of Agriculture, Trade and Consumer Protection, New North, Virent Energy, Energy Law Wisconsin, Southwest Wisconsin Regional Planning Commission, Southwest Badger Resource Conservation and Development, and UW-Madison Urban and Regional Planning (URPL) as project partners to create a 3-year Renewable Energy Opportunity Plan for Southwest Wisconsin. Kakde secured nearly $45,000 in startup funds. For the fall 2011 URPL graduate workshop, she facilitated class meetings, coordinated educational partners and resources for 18 students to inventory renewable energy sources of solar, wind and biomass in the nine counties, assess energy demand, infrastructure, potential for growth and jobs creation, inventory other energy plans to compare, assess public perception and engagement through surveys and focus groups, and develop a report.

Results

Building regional capacity for sustainable energy: With guidance from Cooperative Extension, URPL students produced a report of the first phase developing a regional sustainable energy economic development plan valued at about $80,000 of consultant time. Students presented their findings to project partners including local officials in the nine counties, who expressed enthusiastic support. While additional research still needs to be done, project partners have committed funding toward the next phase creating plans for pilot communities identified in year one and finally, implementing sustainable energy economic development plans within those communities. Subsequent results have also led to partnerships that include support in securing a $132,305 USDA NIFA Hatch Grant for the project titled Bioenergy feedstock supply in Southwest Wisconsin: A network approach to research and extension.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development

Outcome #2

1. Outcome Measures

Build capacity to create, refine and implement scalable conversion technologies

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Anaerobic digestion is a proven waste-to-energy technology. Wisconsin is the leading state for on-farm anaerobic digestion with more than 35 operational systems. The last decade created demand for knowledge of system components, processes and mechanisms, and operation skills. Since large-scale implementation is relatively recent, training is needed for safe production and use of biogas. While these multi-million dollar systems only run economically on the waste from 500 or more cows, hundreds of thousands of very small farms worldwide using very small-scale biodigesters costing only a few hundred dollars in climates as harsh as Wisconsin's. The bulk of Wisconsin dairy farms with fewer than 200 cows lack information on small-scale biodigesters.

What has been done
UW-Madison Cooperative Extension biowaste specialist Rebecca Larson works with USDA, campus, county and Michigan State University colleagues, industry partners and farmers assessing on-farm economic and environmental benefits of small-scale anaerobic digesters, building a mobile dry biodigester to compare with wet biodigestion, and comparing 9 on-farm solid-liquid separation systems coupled with digesters. In 2011, they presented the nation's first Small-Scale Anaerobic Digester Conference for more than 60 dairy producers and agency staff on technology processes and value-added products. Since the conference, Larson and colleagues are addressing areas that require attention for small-scale adoption. Their 3-day Anaerobic Digester Operator Training for 40 large-scale dairy producers, operators and agency staff incorporated an on-farm digester tour to demonstrate safety protocols and system components. Larson is conducting life cycle assessment to share with digester operators and add to the Anaerobic Digester Operator Training Program curriculum.

Results
Anaerobic digestion research and training: Results are critical to developing more profitable nutrient management strategies with reduced environmental impact and increased safety.

Small-scale biodigestion: Increased efficiencies can decrease system size, increase biogas production and the value of asset streams to produce an economically viable option reducing costs and increasing revenues for smaller operations.

Increasing dry anaerobic digestion: Dry AD systems are able to handle solid waste streams without pretreatment, reduce solid waste volume requiring disposal up to 40%, and decrease reactor size in comparison to wet digestion systems.

Solid-liquid separation: Liquids can be land applied as fertilizer, improving nutrient management. Solids are used on-farm as bedding or sold as a value-added product. With detailed herd management, milk quality and pathogen data, best practices recommendations can improve herd health in dairies using recovered manure solids as bedding.

Small-Scale Digester Conference: As a result of the conference, the only small-scale operator in Wisconsin has begun to make changes to his operation, and a second producer is installing a small-scale digester.

Anaerobic Digester Operator Training: Many large-scale operators now have a greater understanding of their systems, can implement strategies outlined in the training, and are connected with their peers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}