

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Global Food Security Food Availability: Dairy and Livestock

Reporting on this Program

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%			
301	Reproductive Performance of Animals	10%			
307	Animal Management Systems	20%			
308	Improved Animal Products (Before Harvest)	5%			
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	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	33.0	0.0	0.0	0.0
Actual Paid	36.0	0.0	0.0	0.0
Actual Volunteer	2959.0	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
1827216	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1827216	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 dairy farming and processing contribute 78,900 jobs, \$3.9 billion to labor income, \$7.2 billion to total income, and \$43.4 billion to industrial sales (Deller, 2014). Each cow generates \$34,000 that circulates through local communities. University of Wisconsin research and extension campus, county, tribal and regional colleagues, veterinarians, nutritionists and other agricultural professionals, trained farmers, farm lenders and other advisers, agricultural input suppliers and service providers, volunteers and other educational partners provide timely research-based education and assistance to improve food availability. The 2014 Farm Bill ushered sweeping dairy policy changes -- farmers must sign up to be protected, and costs of insurance vary depending on the amount of milk and the margin each farm wants to protect. Decisions made during late 2014 would affect program payments for the next year, creating an urgent need for education.

Sustaining dairy production: As dairy farm numbers drop, a shortage of milk for cheese requires importing milk from other states. The remaining 8,277 farms milking fewer than 100 cows may need to modernize to stay competitive. Extension campus specialists, county dairy and livestock educators helped meet 319 producers' unique needs in 43 counties in 2014. Farmers made investments in milking, housing, feeding, and manure handling and storage systems design and management, and engaged in farmstead planning for the next generation. They adopted practical solutions that improve working conditions, cow comfort and health, production and profitability, and create a sustainable dairy production system.

Improving margin risk management and sustainability: University of Wisconsin received funding to develop decision tools and provide education on 2014 Farm Bill Title 1 programs -- Margin Protection Program for Dairy (MPP-Dairy) described here, as well as Agriculture Risk Coverage and Price Loss Coverage described under Crops and Agronomic Plants outcome 4. Collaborating with 6 other Land Grant institutions, this became the national Program on Dairy Markets and Policy (DMaP). Integrated campus specialists and more than 30 county extension educators directly trained more than 6,210 participants through 33 meetings and 5 webinars co-hosted by Farm Service Agency (FSA) statewide.

2. Brief description of the target audience

Expanding access to marginalized and vulnerable populations: More than 25% of Manitowoc County dairy farms employ Hispanic workers who milk more than 70% of the cows. This makes it critical for extension to continue to provide educational opportunities for all employees including those who do not speak English to ensure Wisconsin's \$43.4 billion dairy industry continues to thrive. English is still not used by most Hispanic employees, requiring use of a translator and easy-to-read bilingual newsletters for dairy

modernization farm visits. Of those who have learned English as they work with farm owners, other employees, farm service providers and extension educators, they have also increased their understanding of the dairy business and have become mid-level managers.

Adoption of milking parlor systems on smaller family dairy farms has been a challenge due to the large cost of building a parlor and freestall setup. Manitowoc County dairy farms use extension-facilitated on-farm teams such as the Grow Wisconsin Dairy Team (GWDT launched in 2009) and the Dairy 30x20 program (launched in 2012). The 27 dairy farm owners surveyed received around \$75,000 from the GWDT and Dairy 30x20 grant programs, which leveraged an estimated \$1 to \$1.5 million more funds from the dairy farm owners and lenders to improve their dairy cattle housing, milking center, milking equipment, and electrical, ventilation and feeding systems.

Building relationships: Individual county extension educators, farm lenders and other advisers, veterinarians and nutritionists are gaining knowledge in the complex issues regarding decisions being made at the farm level to invest in the dairy production system for future generations. Integrated campus specialists assisting with 319 farm visits in 43 counties and drawing up farmstead plans bolster dairy modernization programming efforts. Relationships developed with farmers who have modernized in the past by visiting other farms and learning from other farmers has been key to making the bi-annual dairy modernization tours a success. Farmers like extension open house dairy modernization tours because they learn from other farmers and can choose which farms to visit. These tours have also created an archive of different modernization improvements for both farmers looking for ideas as well as UW Short Course students.

3. How was eXtension used?

University of Wisconsin-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 and region. 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 such as responding to extreme weather. Colleagues and other professionals in this network include University of Wisconsin researchers on the Madison, Platteville, River Falls and Stevens Point campuses, at 11 agricultural research stations and the USDA Dairy Forage Research Center.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	163887	0	22699	0

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

Year: 2014
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	6	4	10

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 disease.
2	Enhance the economic and environmental sustainability of agribusinesses.
3	Build the capacity of the agriculture service and support industry.
4	Innovations and increased efficiencies in production.

Outcome #1

1. Outcome Measures

Manage and minimize the loss due to animal disease.

Not Reporting on this Outcome Measure

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
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As Wisconsin dairy farm numbers drop, a shortage of milk for cheese production requires processing plants to import milk from other states. Of the 10,500 dairy farms at the end of 2014, three-fourths (75%) milk less than 100 cows. Given the difficulty in generating a living wage from such small herds, these 8,277 farms are the most likely to either expand their herd or leave the business. More dairy farms will need to modernize in the next 5 years to stay competitive. Modernizing does not always mean building a new barn or expanding, but can also be small-scale projects such as improving ventilation, remodeling calf and older heifer facilities, or installing automatic take-offs on milking units. Farmers are looking for ways to improve dry cow care, feeding and feed storage. Others need assistance in planning for the future as milk prices and input costs remain volatile.

What has been done

University of Wisconsin-Extension campus specialists, county dairy and livestock educators helped producers expanding and modernizing their dairy facilities by visiting 319 farms in 43 counties in 2014. They delivered reports and educational information to farms making decisions. To identify and meet each farm's unique needs, they document and follow up on 3 types of

transitions occurring as farms decide their future:

1. Generational transition: The senior partner will retire, and the new generation is coming back to the farm to take over management and decision-making.
2. Business transition: The family decides how to transfer assets to the new farming generation, and the new generation builds equity into the dairy business.
3. System-wide farmstead facility change: The farm makes changes in housing, milking, feeding, and manure handling systems design and management.

Results

With extension assistance, farmers made decisions on investments in milking, housing, feeding, and manure handling and storage systems design and management. They adopted both conventional and alternative technologies, including low-cost parlors, rotational grazing, cattle-handling facilities, animal housing and ventilation, feed storage, manure storage, organic and bio-fuel production, and engaged in farmstead planning for the next generation.

Leading state dairy production, Green County farmers who recently modernized their operations reported expanding their herds by an average 63 cows with nearly 10% increase in milk per cow. Each cow adds another \$34,000 that circulates through local communities. This expansion of both cow numbers and increased production per cow resulted in 55,292,337 more pounds of milk, keeping 18 processing plants and 12 cheese plants operating at capacity. These 30 Green County plants provide 3,000 jobs and along with 60 specialty cheeses, \$1.29 billion in dairy product sales.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #3

1. Outcome Measures

Build the capacity of the agriculture service and support industry.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Innovations and increased efficiencies in production.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Dairy farming is Wisconsin's leading agricultural enterprise, valued at \$43.4 billion (Deller, 2014). When President Obama signed the Agricultural Act of 2014 into law last February, this Farm Bill ushered the most sweeping dairy policy changes in 50 years. The new voluntary Margin Protection Program for Dairy (MPP-Dairy) provides risk management coverage that will pay participating producers when the difference (the margin) between the national price for milk and the average cost of feed falls below the insured level each producer selects. Farmers must sign up to be covered, costs of insurance vary depending on the amount of milk and the margin each farm wants to protect, and enrolled producers can adjust coverage annually. Decisions made during late 2014 would affect program payments for the next year, creating an urgent need for education among dairy farmers and their advisers, service providers and other industry representatives.

What has been done

The Farm Bill made funding available to Land Grant institutions for development of web-based decision tools. The University of Wisconsin received about \$300,000 to develop the MPP-Dairy tool and provide education on Title 1 programs. This funding was used as a collaborative effort with 6 other Land Grant institutions, known as the Program on Dairy Markets and Policy (DMaP), to define the tool concept, develop a web site with the decision tool, printed materials, slide sets, streaming videos and other educational materials. These individuals also prepared and conducted 5 national train-the-trainer meetings across the country, and delivered additional training webinars. The USDA Farm Service Agency (FSA) is also hosting the decision tool on their web site and collectively, the tool was receiving around 1,000 unique visits per day from September to December at: <http://dairymarkets.org/mpp>

Results

Using farm radio and news video podcasts and local networks including other key professionals working with dairy producers helped integrated campus specialists and more than 30 county extension educators directly train more than 6,210 participants through 33 meetings and 5 webinars co-hosted by FSA statewide. Based on what they learned, farmers made informed decisions regarding whether to enroll in the program, and at what level of participation to enroll. FSA enrollment statistics show that of the 10,860 Wisconsin dairy farms licensed in 2013, 54% enrolled in MPP-Dairy (5,864), and 55% of those (3,225) elected buy-up coverage (Novakovic et al, DMAP BP 15-01: dairymarkets.org). Signing up for MPP-Dairy allows producers to protect (insure) the margin they need to cover expenses. On moderate-sized operations, returns to participating farmers could top \$100,000 per year in adverse price and margin years, sustaining Wisconsin's \$43.4 billion dairy industry.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

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.)
- Other (Database Development)

Brief Explanation

Database development: University of Wisconsin-Extension is in the process of replacing the legacy planning and reporting database, which was closed in 2012. For this report, the 2014 direct contacts for adults reported are the 4-year average of past performance of relevant statewide teams in 2008-2011. Program participation is in alignment with previous years.

The 2014 trained volunteers participating and direct contacts for youth reported are from the 2013-14 ES-237 form.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Margin Protection Program for Dairy (MPP-Dairy): University of Wisconsin Extension agricultural economists worked with 6 other Land Grant universities, collectively known as

the Program on Dairy Markets and Policy (DMaP) to support 2014 Farm Bill education nationally. Farm Service Agency enrollment statistics show that of the 10,860 Wisconsin dairy farms licensed in 2013, 54% enrolled in MPP-Dairy (5,864), and 55% of those (3,225) elected buy-up coverage (Novakovic et al, DMaP BP 15-01: dairymarkets.org). Signing up for MPP-Dairy allows producers protect (insure) the margin they need to cover expenses. On moderate-sized operations, returns to participating farmers could top \$100,000 per year in adverse price and margin years, sustaining Wisconsin's \$43.4 billion dairy industry.

Key Items of Evaluation