V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Food Safety

☑ 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
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: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	3.5	0.0	0.0	0.0
Actual Volunteer	153.0	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**
172430	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
172430	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

With nearly 500 licensed meat processing facilities creating around $12.3 billion of economic impact and more than 20,000 jobs, the Wisconsin meat industry consistently ranks in the top 5 for economic output among state manufacturing industries. Wisconsin also has a vibrant "buy local" economy. The need to strengthen and evaluate food safety from farm to table is critical. For 2012, University of Wisconsin-Extension Cooperative Extension reports efforts of interdisciplinary campus and county faculty and staff, colleagues and partners providing timely research-based education and assistance to improve the safety of the food supply by training and supporting the next generation of meat processors and small processors of acidified foods, as well as developing and implementing behavioral interventions to improve consumer food safety practices. Impacts include:

Master Meat Crafters: Within a small margin of error, meat processors must thoroughly understand what pathogens must be controlled and how most effectively to control them. Initiated and directed by extension meat specialist Jeff Sindelar in partnership with the Department of Agriculture, Trade and Consumer Protection, the Master Meat Crafter Training Program addresses food safety education and practical application throughout the program's 2 years. In 2012, 17 graduates earned status as a Master Meat Crafter and 25 are on track to do so in 2014. Graduates apply and share skills needed to improve the safety, consistency, quality and profitability of specialty meats - pleasing customers while expanding sales. Their communities gain good jobs and other economic benefits.

Improving consumer food safety practices: During 2012, UW-Extension Cooperative Extension Supplemental Nutrition Assistance Program Nutrition Education (SNAP-Ed) was offered in 68 of Wisconsin's 72 counties with 852 community partners. SNAP-Ed made 24,303 food safety educational contacts - 7,404 with adults and 17,099 with children:

- After lessons on hand washing, 76% of parents said their children were more willing to wash their hands.
- After a lesson on handling food safely, 28% of adults said they would wash their hands more often.

Preserving food safely: Training and supporting small food processors increases the availability of safe, wholesome local food, and 100 trained Master Food Preserver volunteers help meet the growing need for food safety education:

- Since 2009, 573 small business owners have completed the Wisconsin Acidified Canned Foods School. Top foods processed were salsas, tomato sauce, pickles and relishes. Extension training helped develop new products, supporting local economies as well.
- More than 30 Winnebago County residents attended the Food Preservation webinar series. The extension educator worked with Oshkosh Community Media Services (OCMS) to air an 8-part series from University of Georgia Extension on cable. OCMS reaches 43,470 potential viewers.
- More than 100 Barron County residents attended food preservation classes. A local Master Food Preservers club also meets monthly to promote food safety with media releases.

2. Brief description of the target audience

Cooperative Extension reached an estimated 10,102 adults and 23,186 youth through direct teaching methods. The audience includes interdisciplinary colleagues and partners, trained Master Food Preserver volunteers, individuals, family decision-makers, 4-H youth and trained volunteer leaders, school-age children and preschoolers, low-income women with infants and young children, fresh market vegetable and fruit growers, sellers and entrepreneurs, crop, dairy and livestock producers, producer associations, artisan cheesemakers, meat processors and Master Meat Crafters, small processors of acidified foods, farmers' markets, local and tribal governments, state and federal regulatory agencies, and others preserving food safely and keeping local food supplies safe and wholesome.

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.

Reaching under-served audiences: During 2012, UW-Extension Cooperative Extension Supplemental Nutrition Assistance Program Nutrition Education (SNAP-Ed) was offered in 68 of Wisconsin's 72 counties with 852 community partners. SNAP-Ed continues to achieve significant outreach to growing minority populations with relevant educational programming including oral and written resources in Hmong and Spanish. In 2012, SNAP-Ed made 24,303 food safety educational contacts - 7,404 with adults and 17,099 with children.

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 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 during 2012. Interdisciplinary colleagues and other professionals in this network include University of Wisconsin researchers on the Madison, Platteville, River Falls and Stevens Point campuses, working with 3 tribes, and at 11 agricultural research stations.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	10102	0	23186	0

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

Patent Applications Submitted

Year:	2012
Actual:	1

Patents listed

Rankin, Scott: Patent Issued (P08339US02), March 2011. Intramammary Teat Sealant Formulation and method of using same to reduce or eliminate visual defects in aged cheeses.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	2	18	20

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.
2	Develop and implement behavioral interventions that improve consumer food safety practices.

Outcome #1

1. Outcome Measures

Improve the safety of the food supply.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The meat industry is a major contributor to Wisconsin's economy. With nearly 500 licensed meat processing facilities creating around $12.3 billion of economic impact and more than 20,000 jobs, the Wisconsin meat industry consistently ranks in the top 5 for economic output among state manufacturing industries. The Wisconsin meat industry is both diverse and dynamic, resulting in a wide array of needs and requests. From small family businesses to very large multi-plant facilities, all are tasked with the daily challenge of producing safe, high-quality nutritious foods. Within a small margin of error, meat processors must thoroughly understand what pathogens must be controlled and how most effectively to control them. And to ensure that the industry remains sustainable and viable, an extension researcher identified the need for successful inter-generational transfer of expertise.

What has been done
Initiated and directed by extension meat specialist Jeff Sindelar in partnership with the Wisconsin Department of Agriculture, Trade and Consumer Protection, the one-of-a-kind, 2-year Master Meat Crafter Training Program at the University of Wisconsin-Madison Meat Science Laboratory certified its first 17 graduates in 2012, and enrolled 25 candidates for graduation in 2014. Training addresses food safety education and practical application throughout the program's 2 years. While food safety is significantly integrated into five of the program's short courses, the sixth titled Food Safety and Meat Microbiology School is fully food safety-focused - covering all facets of food safety taught by industry experts, coupled with hands-on microbiology laboratories. Graduates learned food safety from micro lab to meat plant, taking home a thorough and comprehensive understanding of pathogenic bacteria with the skills and tools to further develop and improve their own food safety programs:
http://www.uwex.edu/ces/animalscience/meats/index.cfm

Results

New Master Meat Crafters strengthen the industry: In 2012, 17 graduates earned status as a Master Meat Crafter and 25 are on track to do so in 2014. Of the first class to graduate, half are the next generation in a family business - 6 trained to take over the family business, and 3 started a business. Each is tasked with producing every pound of product safely every day. Thus, the food safety elements of the Master Meat Crafter Training Program are critical to providing graduates the knowledge, skills and proper tools to process 100% safe food all the time. One third-generation owner and 2012 certified Master Meat Crafter graduate entered products for the first time in a national-level meat product competition, winning awards in four categories including a first place. New Master Meat Crafter graduates apply and share skills needed to improve the safety, consistency, quality and profitability of specialty meats made in Wisconsin - pleasing customers while expanding sales. Their communities gain jobs and other economic benefits. Long-term industry viability is ensured as plants grow, add on, and pass along the business for future generations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Develop and implement behavioral interventions that improve consumer food safety practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The World Health Organization and U.S. Centers for Disease Control and Prevention state that foodborne illness is a serious public health problem. The need to strengthen and evaluate food safety from farm to table is critical. Most foodborne illness is due to improper storage, handling and home preparation. Food safety education gives people the knowledge to practice safe food handling behaviors. Wisconsin also has a vibrant "buy local" economy. Farmers wishing to add

value to their crops sell canned pickles, salsas and other products. Processed incorrectly, acidified canned foods may cause illness. The government now requires training before issuing a license. For small food processors, finding training that fits their needs is often a challenge. Evidence-based educational programs conducted by UW-Extension Cooperative Extension address these needs.

What has been done
Extension Family Living educators work with community partners to help create environments with healthy, affordable and safe food. Throughout Wisconsin, Cooperative Extension provides food safety education directly to youth and adult consumers with a special emphasis on reaching limited-resource families. Committed to providing small food processors with food safety training and support, food science extension specialist Barbara Ingham partnered with the Department of Agriculture, Trade and Consumer Protection on a training program for small processors of acidified canned foods. In 2012, she trained 240 new businesses and provided ongoing one-on-one assistance to 194 businesses in Wisconsin, 27 other states and Canada. She also trained 86 employees under the FDA's Better Process Control School to supervise critical functions in the Upper Midwest's vibrant canning industries.

Results
Improving consumer food safety practices: UW-Extension Cooperative Extension SNAP-Ed made 24,303 food safety educational contacts with adults and children:
- 809 adults took part in a lesson on handling food safely. Afterward, 28% said they would wash their hands more often.
- After lessons on hand washing, 1,666 surveys were sent home to parents of participating children: 76% of 516 parents said their children were more willing to wash their hands.

Preserving food safely: Training and supporting small food processors increases the availability of safe, wholesome local food, and 100 trained Master Food Preserver volunteers help meet the growing need for food safety education:
- Since 2009, 573 small business owners have completed the Wisconsin Acidified Canned Foods School. Top foods processed were salsas, tomato sauce, pickles and relishes. Extension training helped develop new products, supporting local economies as well.
- More than 30 Winnebago County residents attended the Food Preservation webinar series. The extension educator worked with Oshkosh Community Media Services (OCMS) to air an 8-part series from University of Georgia Extension on cable. OCMS reaches 43,470 potential viewers.
- More than 100 Barron County residents attended food preservation classes. A local Master Food Preservers club also meets monthly to promote food safety with media releases.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
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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.)
- Other (Database development)

Brief Explanation

Natural disasters: Intense heat and severe drought rivaling that of 1988 lingered through most of Wisconsin and the Midwest through 2012, compounded by widespread late frost and even some flooding. University of Wisconsin-Extension Cooperative Extension campus and county faculty and staff responded quickly to immediate issues of the drought. Planning for, coordinating and leading a longer-term response effort that focuses on the human/family, production and financial aspects of this challenge is one of Cooperative Extension's primary purposes - to respond proactively now so that as drought impacts unfold, programs and resources are in place to continue responding appropriately. UW-Extension Cooperative Extension has devoted resources to work collaboratively with partner agencies to address challenges involving production, financial, and humans responding to stressful situations. An extension point person has been designated to work with state specialists, county agriculture and family living educators and partners to coordinate the longer-term response needed. See the report added for 2012 Wisconsin Cooperative Extension Response to the Drought.

Database development: UW-Extension Cooperative Extension is in the midst of replacing the legacy planning and reporting database, which was closed in 2012. For this report: The 2012 direct contacts for adults reported are the 4-year average of past performance of relevant statewide teams in 2008-2011. The 212 program participation is in alignment with previous years. The 2012 direct contacts for youth reported include 4-H enrollments in relevant projects reported on the ES-237 form form 2011-2012. SNAP-Ed 2012 food safety teaching contacts for children and youth are added to 4-H youth food safety enrollments for the 2012 Food Safety federal report.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}