

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Maine Food System

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
101	Appraisal of Soil Resources	5%			
102	Soil, Plant, Water, Nutrient Relationships	10%			
205	Plant Management Systems	10%			
206	Basic Plant Biology	1%			
213	Weeds Affecting Plants	4%			
216	Integrated Pest Management Systems	10%			
301	Reproductive Performance of Animals	1%			
307	Animal Management Systems	1%			
311	Animal Diseases	1%			
315	Animal Welfare/Well-Being and Protection	2%			
501	New and Improved Food Processing Technologies	5%			
502	New and Improved Food Products	10%			
601	Economics of Agricultural Production and Farm Management	10%			
703	Nutrition Education and Behavior	10%			
704	Nutrition and Hunger in the Population	10%			
724	Healthy Lifestyle	10%			
	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	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Paid	40.9	0.0	0.0	0.0

Actual Volunteer	11.3	0.0	0.0	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1445055	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
49267	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1688873	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Planned Program: Activities and Participation

- Crop Production Activities - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Crop Production Activities - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Eat Well (Expanded Food and Nutrition Education Program) - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Eat Well (Expanded Food and Nutrition Education Program)- Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Farm Energy Activities - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Farm Energy Activities - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Food Safety - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Food Safety - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- General Activities in Support of the Maine Food System - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- General Activities in Support of the Maine Food System - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Home Horticulture Activities - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Home Horticulture Activities - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Livestock Activities - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Livestock Activities - Indirect (Applied Research, Media, Internet, Publication, Resulting from Training)
- Nutrition Education - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)
- Specialty Food Products - Direct (Club, Conference, Program, Consultation, Scholarship, or Training)

2. Brief description of the target audience

- 4-H Volunteers (Adult)
- 4-H Youth (Youth)
- Agricultural Producers (Adult)
- Agricultural Service Providers
- Agricultural Workers (Adult)
- Apple Growers (Adult)
- Blueberry Growers (Adult)
- Business Assist Organization Staff (Adult)
- Commercial Fishermen (Adult)
- Community Leaders (Adult)
- County Executive Committee Members (Adult)
- Cranberry Growers (Adult)
- Dairy Producers (Adult)
- Disabled Adults (Adults)
- Eat Well Participants (Adult)
- Eat Well Participants (Youth)
- Eat Well Volunteers (Adult)
- Elders or Seniors (Adult)
- Families (Adult)
- Families (Youth)
- Food Stamp Recipients (Adult)
- Forestland Owner (Adult)
- General Public (Adult)
- General Public (Youth)
- Home Gardeners (Adult)
- Home Gardeners (Youth)
- Maple Producers (Adult)
- Master Gardener Volunteers (Adult)
- Ornamental Horticulture Industry (Adult)
- Parent Educators (Adult)
- Parents (Adult)
- Pesticide Applicators (Adult)
- Potato Growers (Adult)
- Resource Managers and Scientists (Adult)
- Small or Home-Based Business Owners - Current (Adult)
- Small or Home-Based Business Owners - Potential (Adult)
- Sweet Corn Growers (Adults)
- Teachers (Adult)
- Vegetable Growers (Adult)
- Veterinarians (Adult)
- Volunteers (Adult)

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	217452	1064625	10304	600123

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	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Direct; Club, Conference, Program, Consultation, Scholarship, or Training

Year	Actual
2014	18664

Output #2

Output Measure

- Indirect; Applied Research, Media, Internet, Publication, Resulting from Training

Year	Actual
2014	318578

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Pounds of food donated
2	Implement techniques to reduce effects of climate variation
3	Adopt specific food safety plans and/or policies
4	Adopt healthy dietary practices (consume nutrient-rich foods, follow current Dietary Guidelines for Americans or DASH, etc.)
5	Increase consumption and preservation of healthful, locally-grown and -produced food
6	Adopt techniques to improve soil quality
7	Adopt a water saving technique
8	Utilize Cooperation Extension to identify pest problems and determine research-based management strategies
9	Increase consumption of home-grown food
10	Adopt sound business management practices
11	Monetary value of food produced, gleaned, and donated
12	Expand a business
13	Improve efficiency
14	Increase profitability
15	Number of agencies supported
16	Make more effective business decisions
17	Reduce business management risks

18	Start a business
19	Stay in business
20	Implement practices that improve efficiency, reduce inputs and negative impacts on the environment, increase profitability, or reduce energy consumption
21	Demonstrate how to develop integrated farming systems
22	Establish new farm enterprises
23	Youth will consume more healthy foods
24	Youth will consume less unhealthy foods
25	Adopt and maintain integrated pest management strategies
26	Improve animal health and well-being
27	New crops and markets developed
28	Number of Meals
29	Number of participants who learn about food system through community forums
30	1) Implement practices that improve efficiency, reduce inputs and negative impacts on the environment, increase profitability, or reduce energy consumption 2) Improve efficiency 3) Increase profitability
31	1) Adopt healthy dietary practices (consume nutrient-rich foods, follow current Dietary Guidelines for Americans or DASH, etc.) 2) Increase consumption and preservation of healthful, locally-grown and -produced food

Outcome #1

1. Outcome Measures

Pounds of food donated

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	204937

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

Outcome #2

1. Outcome Measures

Implement techniques to reduce effects of climate variation

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	138

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #3

1. Outcome Measures

Adopt specific food safety plans and/or policies

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	626

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Relevance - In Maine, almost two-thirds of adults are overweight or obese, a reality that has serious implications for the health of Mainers. In addition, USDA estimates that 206,000 Mainers don't have enough to eat. The contradiction between high rates of obesity and food insecurity in Maine demonstrates that poor food choice and lack of availability of nutrient-rich food significantly affect our population.

What has been done

Response - UMaine Extension's Eat Well Program provides limited-income families with free research-based, interactive education in homes and community groups. Participants learn to stretch food dollars, new ideas and recipes for healthy meals, healthy snacks options, meal planning for busy people, cooking skills, ways to make favorite recipes healthier, how to keep food safe, and tips for healthy living.

Results

Results - Program graduates in 2014 (n=278) report these results:

- 62 percent plan meals in advance.
- 46 percent compare prices when shopping.
- 41 percent don't run out of food before the end of the month.
- 52 percent use a list for grocery shopping.
- 47 percent more often think about healthy food choices when deciding what to feed their families.
- 40 percent more often prepare foods without adding salt.
- 61 percent more often use the "Nutrition Facts" on food labels to make food choices.

Through pre- and post- 24-hour recalls, participants report an increase in consumption of whole grains, fruits, vegetables, dairy, and healthy oils.

Survey data showed that program graduates (n=143) saved money on their monthly food bills as a result of their participation. The average monthly savings per household was \$36, for a total household cost savings of \$432 per year, with improved food quality. The total food cost savings for all graduated households was \$4,960 per month or \$59,520 per year.

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

Adopt healthy dietary practices (consume nutrient-rich foods, follow current Dietary Guidelines for Americans or DASH, etc.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	3709

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Eat Well- Supporting the Health of Maine Citizens

Relevance- In Maine, almost two-thirds of adults are overweight or obese, a reality that has serious implications for the health of Mainers. In addition, USDA estimates that 206,000 Mainers don't have enough to eat. The contradiction between high rates of obesity and food insecurity in Maine demonstrates that poor food choice and lack of availability of nutrient-rich food significantly affect our population.

What has been done

Response- UMaine Extension's Eat Well Program (funded by federal EFNEP dollars) provides limited-income families with free research-based, interactive education in homes and community groups. Participants learn to stretch food dollars, new ideas and recipes for healthy meals, healthy snacks options, meal planning for busy people, cooking skills, ways to make favorite recipes healthier, how to keep food safe, and tips for healthy living.

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4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

Increase consumption and preservation of healthful, locally-grown and -produced food

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1805

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Expanding Access to Local Foods- Bringing Local Foods to Maine Schools
 Relevance- Public school students consume as much as 48 percent of their meals at school during the school year. This offers an opportunity to expand access to local foods and support Maine's local food system that includes many nutrient-dense products: blueberries, potatoes, fresh vegetables, meats, seafood, and dairy. Research shows that long-lasting habits and attitudes toward food are formed early in childhood, and cultivating a taste for fresh, local foods can improve students' health long-term.

What has been done

Response- UMaine Extension established connections between the Portland Public School (PPS) food service and local farmers to encourage local food procurement by PPS. We created and implemented a research methodology to identify the students' taste preferences and ultimately increase their consumption of local foods. This included conducting taste tests at PPS cafeterias of 5,110 students in grades 5 to 12.

Results

Results- Taste test results indicate that the consumer base will support a menu featuring local procurement practices that could allow an increase in the percentage of PPS's \$1.13 million budget that is spent on local foods. The PPS taste tests showed:

- 62 percent of students are willing to try featured Maine foods.
- 88 percent of students indicate that they would eat the featured Maine food again or more often.

Portland's mayor wants to increase locally sourced foods in city schools from 30 percent to 50 percent by 2016. An increase of 20 percent in local foods spending would mean that \$226,000 more annually could go toward supporting the local food system. PPS's efforts are helped by a nearly \$100,000 USDA Farm to School grant that supports the purchase of local foods, and encourages schoolyard gardens and the inclusion of nutrition and physical activity in the curriculum to encourage students to make healthy choices everyday.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
703	Nutrition Education and Behavior

704 Nutrition and Hunger in the Population

Outcome #6

1. Outcome Measures

Adopt techniques to improve soil quality

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1013

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
213	Weeds Affecting Plants

Outcome #7

1. Outcome Measures

Adopt a water saving technique

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	117

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
213	Weeds Affecting Plants

Outcome #8

1. Outcome Measures

Utilize Cooperation Extension to identify pest problems and determine research-based management strategies

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2014

8801

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Preventing Greenhouse Pest Diseases

Relevance- Greenhouse pest management is of concern to both growers and their customers. Many growers seek to establish biological control protocols in their production, but the learning curve is steep, and hands-on experience is critical for success.

What has been done

Response- UMaine Extension collaborated with colleagues from the Maine Department of Agriculture, Conservation, and Forestry to produce the Best Greenhouse Practices Workshop in March. The program was presented at the greenhouse of a grower who uses biocontrols very effectively. The program, which featured extensive hands-on activities related to greenhouse biocontrol systems, was attended by 34 people, including 26 commercial growers, as well as horticulture students and university and MDACF personnel.

Results

Results- Of the 12 respondents to the post-workshop survey, participants highly ranked the greenhouse tour (4.08 avg/5.0 possible), hands-on activities (4.0 avg/5.0), chance to earn pesticide credits (4.15 avg/5.0), and opportunity for networking (4.23 avg/5.0). Of the 12 respondents, 100 percent indicated that as a result of this workshop, they: (i) instituted better pest monitoring; (ii) implemented aphid banker plants; (iii) used potato cubes as a scouting method for fungus gnats; (iv) improved their pest scouting methods; and (v) cleaned their greenhouses better as a pest preventive measure. Of the 12 respondents, 75 percent implemented better recordkeeping and a higher level of scouting and planted habitat plants for beneficial Orius bugs. The total reported impact of this workshop on the businesses of the 11 people who responded was \$2,925. If just 10 percent (55, including these 11) of the approximately 550 commercial greenhouses in the state adopted these measures, it could save at least \$14,625.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #9

1. Outcome Measures

Increase consumption of home-grown food

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1077

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #10

1. Outcome Measures

Adopt sound business management practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	140

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #11

1. Outcome Measures

Monetary value of food produced, gleamed, and donated

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	64232

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

Outcome #12

1. Outcome Measures

Expand a business

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	107

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Maine Compost School

Relevance- Maine's compost industry has grown from three or four operations in the 90's to over 50 commercial operations in 2015. The many reasons why composting is so essential are more deeply understood these days, in part because of the many issues that are going on around the globe with our environment, and also as a result of people's increased awareness of recycling and reusing. In the early stages of the industry development, there were limited educational opportunities to learn about commercial scale composting. As a result the Maine Compost School was developed. The Maine Compost School provides a mechanism for individuals to learn about compost technology and the business of composting.

What has been done

Response- The Maine Compost School is a collaborative program among UMaine Extension, the Maine Department of Environmental Protection and the Maine Department of Agriculture, Conservation and Forestry, and is the longest continuously running compost program in the United States. Located at the University of Maine Forest and Experimental Station at Highmoor Farm, it includes a full-scale commercial compost site constructed as a center of excellence for education and research. The facility provides opportunities for hands-on learning and field experiences along with traditional classroom activities. The semi-annual five-day school attracts a wide range of participants from for-profit businesses and non-profits such as schools, government agencies.

Results

Results- Since 1997 the school has served 792 U.S. and international participants. In 2014 participants from 2009-2014 were surveyed. Respondents (n=68) reported increased knowledge

(100 percent), improved product quality (47 percent), and improved operational efficiency (39 percent). 124 respondents increased sales an average of \$8,500 per year. Participants started 55 new compost businesses. 134 participants increased employment, hiring a total of 8 full-time and 7 part-time workers with a total estimated annual payroll of \$305,002. Business respondents (n=30) produced a total of 82,000 cubic yards of compost with an estimated retail value of \$2.5 million. The average business employed 23 full-time and 14 part-time workers with a total estimated annual payroll of \$796,500. The school has had a positive economic impact on participants, businesses and communities, and has been an effective economic development program helping entrepreneurs successfully create and grow viable businesses in Maine and beyond.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #13

1. Outcome Measures

Improve efficiency

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	149

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgrAbility...Supporting Farmers of All Abilities To Remain Active on the Farm
 Relevance- The average U.S. farmer is 57 years old, and farming is the seventh most dangerous job. An estimated 5,700 farmers, farm family members or workers in Maine have a chronic health condition or disability-arthritis is most common. The Maine AgrAbility Project provides no-cost aid to those facing physical or cognitive challenges in an industry that typically requires an "able body." The team also educates service providers about AgrAbility, links farmers to resources, and promotes farm safety.

What has been done

Response- UMaine Extension partners with Goodwill Industries of Northern New England, Alpha One, and collaborating state agencies to support Maine farmers in maintaining independent living, an enhanced quality of life, and farm financial sustainability. Since 2010, Maine AgrAbility has conducted over 70 customized and confidential on-farm assessments to suggest ways to adapt tools or work sites to allow farmers with disabilities to continue working.

Results

Results- Our AgrAbility specialists offer recommendations to clients, such as changing to a field-model wheelchair, adopting assistive technologies, implementing universal design for ease of use, and urging safe work methods. More than half of participants surveyed up to four years after receiving our services reported some increase in quality of life from their participation and were able to remain productive in their agriculture business. Some reported increased business opportunities, operations productivity, and revenue as a result of participating.

It takes an average of about 18 hours to complete one assessment. At \$65/hour and \$0.44/mile for an average travel distance of 300 miles, the average assessment costs about \$1,300. The team assesses about 17 farms per year, so the total annual value of the free assessment service alone is about \$22,100. The renewed grant allows Maine AgrAbility to provide assessments, advice, and aid to forestry and fisheries workers, as well as farmers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
301	Reproductive Performance of Animals
601	Economics of Agricultural Production and Farm Management

Outcome #14

1. Outcome Measures

Increase profitability

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	56

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Maine Grass Farmers Network- Increasing Profitability and Environmental Soundness of Dairy Farms

Relevance- Growing and effectively using pasture resources for livestock production can improve profitability and also reduce erosion, protect water resources, sequester carbon, and maintain open space. More than 274,000 acres of hay and/or pasture are grown in Maine. Organic dairy farmers must pasture their animals during grazing season. The demand for grass-fed livestock products continues to increase, but these operations need to improve profitability and environmental sustainability.

What has been done

Response- The Maine Grass Farmers Network, with UMaine Extension, produces a newsletter and videos; maintains a website; and holds an annual conference. Forage production and pasture management talks, walks, and webinars are delivered around the state and region for various clients, including beginning farmers, USDA, commodity groups, and commercial agriculture support industries. Perennial rye grass cultivar trials evaluate grazing and harvest management response, among other traits.

Results

Results- The network's 2014 grazing conference saw the highest attendance yet (110 graziers). Membership is now over 250 producers.

Improving forage and pasture management to ensure quality nutrients in terms of crude protein (CP) and digestibility improves animal performance and farm profitability. As plants mature, the concentration of CP declines in harvested material and digestibility drops. Increasing forage quality from 14 percent to 17 percent CP through more timely harvest can substantially improve farm profit. For example, if organic protein is valued at \$1.10 per pound, the change of 3 percentage points in CP would yield about 60 additional pounds of protein per ton of feed. Assuming a yield of 4 tons per acre, that represents about \$240 in protein from forage per acre, or \$24,000 on a farm that harvests 100 acres of grass and legumes for hay, pasture, or silage. Building efficiencies such as this into grass-based feeding systems can make a huge difference in profitability and animal performance.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
501	New and Improved Food Processing Technologies
601	Economics of Agricultural Production and Farm Management

Outcome #15

1. Outcome Measures

Number of agencies supported

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Make more effective business decisions

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	177

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #17

1. Outcome Measures

Reduce business management risks

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #18

1. Outcome Measures

Start a business

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	133

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #19

1. Outcome Measures

Stay in business

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #20

1. Outcome Measures

Implement practices that improve efficiency, reduce inputs and negative impacts on the environment, increase profitability, or reduce energy consumption

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	928

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Barley Disease Control-Increasing Barley Yields and Profits

Relevance - Barley is grown in Maine for livestock feed and, to a lesser extent, for malt production. It was planted on about 22,000 acres in Maine in 2013, and the acreage is increasing. The value of Maine's barley crop in 2013 was \$3.7 million.

The cool climate and generally uniform rainfall favor spring barley production. However, the climate also means that fungal diseases such as Fusarium head blight and net blotch can limit grain yield and malting quality in Maine-grown barley.

What has been done

Response - UMaine Extension ran barley trials aimed at improving grain yields and improving malting quality through disease control. In cooperation with local grain elevators, contractors, and growers, researchers sought to identify when, and if, fungicide was necessary to protect the crop, given interactions between weather and plant development stage.

Results

Results - A disease control program for barley growers was developed and put in place on 13,000 acres of feed barley and 3,000 acres of seed and malting barley. More than 75 barley growers adopted the disease control program in 2014. Barley growers in Maine following this disease control program received over \$200,000 in increased revenue from greater barley yields and grain quality in 2014 compared to 2013. Growers, grain contractors, and elevators are planning to continue the disease control program, and in some cases, to make the practices mandatory.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #21

1. Outcome Measures

Demonstrate how to develop integrated farming systems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	42

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wild Blueberries-Allowing Maine to Remain Competitive in the Global Market
Relevance - About 100 million pounds of wild blueberries are produced on over 60,000 acres in Maine by 575 growers. The industry contributes over \$250 million to Maine's economy. Understanding production costs and returns is critical in determining the appropriate level of insect pest management and pollination inputs needed to remain competitive as production increases worldwide. Invasive pests and increasing prices for honeybee colonies threaten the economic viability of small growers.

What has been done

Response - In 2009 we began research to provide growers with information on how pollination strategies for different management systems determine pest pressures on blueberry crops. Growers must optimize increasingly expensive inputs to achieve sustainable yields. Research-based field management and yield information helps current blueberry growers define the risk and returns on investment and assists new growers in understanding the inputs needed for optimal production.

Results

Results - Growers who sample to determine pollinator density in their fields can decide if they should change their investment in rented honeybees, or if they should enhance native bee populations by planting pollinator pastures. Previously, growers invested in pollination without any factual basis.

Wild blueberry production in Maine has increased from 20 to 104 million pounds over the past 25 years. Part of this increase came from better pest management and financial information on which to base pollination decision-making. Total attributable net pollination income is \$2.2 million for rented honeybees and \$1.5 million for native bees. The attributable net income/ha for wild blueberry is \$257 for rented honeybees and \$171 for native bees. Therefore, the decision-making tools that we have provided growers so that they can determine how much to rely on honeybees versus native bees are very important. The economic impact of native bees is significant and can replace that of honeybees.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
213	Weeds Affecting Plants
601	Economics of Agricultural Production and Farm Management

Outcome #22

1. Outcome Measures

Establish new farm enterprises

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	118

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #23

1. Outcome Measures

Youth will consume more healthy foods

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	2726

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Eat Well- Supporting Children's Learning and Health

Relevance- In Maine, more than a quarter of school-aged youth are overweight or obese.

Additionally, more than 16 percent (206,000) of the state's people are food insecure, of whom about one-quarter are children. Food insecurity is harmful to children's physical and cognitive development. Inadequate nutrition can affect children's learning and ability to stay free from

illness.

What has been done

Response- UMaine Extension's Eat Well Program (funded by federal EFNEP dollars) provides limited-income youth with research-based, interactive education on a variety of topics. Program participants learn new skills and practice behaviors that help them improve their eating habits, prepare food safely, and become more physically active.

Results

Results- Participants included 5,026 Maine youth in grades K-12 (ages 5-18) reached through a variety of community, school, and after-school programs. As a result of participating in Eat Well nutrition classes:

- 80 percent (2,098 of 2,633) of youth improved their abilities to choose foods according to USDA MyPlate recommendations.
 - 45 percent (1,191 of 2,622) of youth use safe food handling practices more often.
 - 32 percent (841 of 2,626) of youth improved their physical activity practices.
 - ?26 percent (12 of 46) of youth improved their ability to prepare simple, nutritious, affordable food.
 - ?10 percent (6 of 60) of youth acquired skills to increase their food security.
- Habits of healthy eating and regular physical activity are laid in childhood, so developing a solid foundation in these areas will help improve the health of Maine's population long term.

4. Associated Knowledge Areas

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

Outcome #24

1. Outcome Measures

Youth will consume less unhealthy foods

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	55

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #25

1. Outcome Measures

Adopt and maintain integrated pest management strategies

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	20670

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

213 Weeds Affecting Plants

Outcome #26

1. Outcome Measures

Improve animal health and well-being

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	319

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management

Outcome #27

1. Outcome Measures

New crops and markets developed

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	136

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #28

1. Outcome Measures

Number of Meals

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	11818

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

Outcome #29

1. Outcome Measures

Number of participants who learn about food system through community forums

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	243

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Maine Colleges Addressing Food Insecurity

Relevance- Maine ranks number one in New England in food insecurity among its residents, even though a host of public and private groups provide emergency food to those in need. The rate of food insecurity among Maine school-age students is 24 percent. But there is no organized effort among Maine's college campuses to address hunger in their communities or statewide. The potential for harnessing this human and intellectual resource is limitless.

What has been done

Response- UMaine Extension collaborated with the Maine Campus Compact to develop the first Maine Hunger Dialogue. Nearly 100 students and faculty from 17 Maine campuses gathered in Orono to learn about hunger and to generate action plans for ending hunger in their regions. UMaine Extension faculty secured over \$33,000 in corporate sponsorships for the event. Community groups attended to support student action planning and assist students in packing

10,000 emergency food packets for Maine food pantries.

Results

Results- To date, eight proposals have been funded. One project will raise funds for a local food bank and host a competition among eight high schools to see which school can collect and donate the most food to local pantries. Another project will analyze the extent of hunger on a community college campus and the feasibility of hosting a food bank for nontraditional students. Another proposal will establish an edible park in Bangor, where residents would work with college students to grow food with and for those in need.

Through this initiative, UMaine Extension has developed new partnerships with Maine Campus Compact, UMaine System campuses, eight corporations, and the Good Shepherd Food Bank. The foundation is now in place for student action among campuses in Maine to address hunger in more coordinated ways and to share best practices. UMaine Extension will convene a 2015 mid-year rally for the campus teams with funding from SYSCO as the major sponsor of this initiative.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #30

1. Outcome Measures

1) Implement practices that improve efficiency, reduce inputs and negative impacts on the environment, increase profitability, or reduce energy consumption 2) Improve efficiency 3) Increase profitability

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)

Helping Farmers Optimize Forage Production and Quality

Relevance - New England corn silage production is estimated at 162,000 acres, with an estimated value of \$178 million for 2012. This crop accounts for a substantial portion of the cropping expenses of Northeast dairy farms. Recent environmental rules and USDA incentive programs encourage the adoption of cover crops after silage harvest. New England's short growing season and a long-standing emphasis on longer-season hybrid selection for maximum yield has hampered adoption of cover crop strategies.

Results ? Farmers planting silage corn using no-till reduced fuel use on average by 5.7 gal/ac and time in the field by 2.75 hr/ac, for total savings of about \$50/ac. At \$30/ac, the cost of planting cover crops effectively replaced nitrogen fertilizer, both in cost and N availability. Shorter-season silage corn with no-till planting freed up time for farmers to incorporate cover crops into their rotation. The improvement in forage quality without sacrificing yield increased milk production and farm profitability.

Of 103 farmers who completed a post-project survey, 33 adopted no-till corn and cover cropping on almost 3,000 ac, primarily because of economic benefits. Shorter-season corn had similar yields but higher quality than longer-season varieties, according to variety trials in ME and MA. On one ME farm, researchers estimated that switching from a 94-day to an 85-day variety would increase income by \$670/ac (milk value of \$20/cwt), because milk production/ac increased by 3,350 lbs.

What has been done

Response - To help dairy farmers optimize overall forage production and quality, UMaine researchers organized field trials and demonstrations in three New England states. They sought to determine the benefits of cover crops, no-till, and shorter-season corn silage varieties. All three state teams conducted widespread outreach efforts throughout the region and internationally through traditional, online, and in-person methods.

Results

Results - Farmers planting silage corn using no-till reduced fuel use on average by 5.7 gal/ac and time in the field by 2.75 hr/ac, for total savings of about \$50/ac. At \$30/ac, the cost of planting cover crops effectively replaced nitrogen fertilizer, both in cost and N availability. Shorter-season silage corn with no-till planting freed up time for farmers to incorporate cover crops into their rotation. The improvement in forage quality without sacrificing yield increased milk production and farm profitability.

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4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

213	Weeds Affecting Plants
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #31

1. Outcome Measures

1) Adopt healthy dietary practices (consume nutrient-rich foods, follow current Dietary Guidelines for Americans or DASH, etc.) 2) Increase consumption and preservation of healthful, locally-grown and -produced food

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)

Dining with Diabetes

Relevance Washington County has high rates of diabetes-related hospitalizations, lower extremity amputations, and the highest diabetes-related death rate in the state. Few Washington County residents participate in diabetes self-management education programs. Barriers to participation include cost, lack of insurance, complexity of education programs available through the health care system, and the time, cost, and inconvenience of traveling to the closest programs, which are all outside of the county.

What has been done

Response - A free program of four 2-hour sessions was presented in four communities. Each session included a presentation, cooking demonstrations, and facilitated discussion. The first session presented a general overview. In each of sessions 2-4, how to select foods and prepare meals that favorably affect one of the "ABCs" of diabetes were addressed: A1C, Blood pressure, and Cholesterol. Fifty-five adults with type 2 diabetes, pre-diabetes, and family members participated.

Results

Results - Participants indicated that the information presented was easy to understand, the food tasted very good, and the printed materials were helpful. Six-month follow-up evaluation showed:

- 94 percent reported using the Plate Method to plan meals
- 78 percent reported using recipes
- 83 percent reported lost weight
- 56 percent reported lower A1C (blood sugar)
- 61 percent reported lower blood pressure
- 50 percent reported lower LDL cholesterol
- 94 percent reported lower weight, A1C, blood pressure, or LDL cholesterol
- 89 percent reported lower values for at least 2 measures
- 44 percent reported lower values for at least 3 measures
- 22 percent reported lower values for all 4 measures

Based on published research, the program will likely result in decreased disability, death, and health care costs. For example, approximately \$96,000 is saved in Medicare costs for each year hemodialysis is postponed due to improved diabetes control. Reported participant influence on children and grandchildren may positively impact their elevated lifetime risk for diabetes.

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
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Resulting from input received through structured and unstructured interviews, UMaine Extension ran barley trials aimed at improving grain yields and improving malting quality through disease control. In cooperation with local grain elevators, contractors, and growers, researchers sought to identify when, and if, fungicide was necessary to protect the crop, given interactions between weather and plant development stage.

Key Items of Evaluation

A disease control program for barley growers was developed and put in place on 13,000 acres of feed barley and 3,000 acres of seed and malting barley. More than 75 barley growers adopted the disease control program in 2014. Barley growers in Maine following this disease control program received over \$200,000 in increased revenue from greater barley yields and grain quality in 2014 compared to 2013.