

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

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%			
205	Plant Management Systems	15%			
206	Basic Plant Biology	5%			
213	Weeds Affecting Plants	5%			
216	Integrated Pest Management Systems	25%			
311	Animal Diseases	5%			
315	Animal Welfare/Well-Being and Protection	5%			
601	Economics of Agricultural Production and Farm Management	15%			
602	Business Management, Finance, and Taxation	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890

Actual	24.4	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
830792	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
3189186	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2335326	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Crop Production Activities (Direct; Club, Conference, Program, Consultation, Scholarship, or Training)
- Crop Production Activities (Indirect; Applied Research, Media, Internet, Publication, Resulting from Training)
 - General activities related to Global Food Security and Hunger (Direct; Club, Conference, Program, Consultation, Scholarship, or Training)
 - General activities related to Global Food Security and Hunger (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 (Indirect; Applied Research, Media, Internet, Publication, Resulting from Training)
 - Livestock Activities (Direct; Club, Conference, Program, Consultation, Scholarship, or Training)
 - Pest Management Activities (Direct; Club, Conference, Program, Consultation, Scholarship, or Training)
 - Pest Management Activities (Indirect; Applied Research, Media, Internet, Publication, Resulting from Training)
 - Pest Management Activities: Grower Site Visits for research, trainings and/or pest monitoring.

2. Brief description of the target audience

- 4-H Volunteers (Adult)
- 4-H Youth (Youth)
- Agricultural Producers (Adult)
- Agricultural Workers (Adult)
- Apple Growers (Adult)
- Blueberry Growers (Adult)
- Community Leaders (Adult)
- Cranberry Growers (Adult)
- Dairy Producers (Adult)
- Disabled Adults (Adults)

- Extension - staff (Adult)
- Extension Staff (Adult)
- Families (Adult)
- General Public (Adult)
- General Public (Youth)
- Greenhouse Operators (Adult)
- Home Gardeners (Adult)
- Master Gardener Volunteers (Adult)
- Pesticide Applicator Training Participants (Adult)
- Potato Growers (Adult)
- Poultry Producers (Adult)
- Teachers (Adult)
- Vegetable Growers (Adult)
- Veterinarians (Adult)
- Volunteers (Adult)

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA}	{NO DATA}	{NO DATA}	{NO DATA}
Actual	43171	525775	2237	162

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

Patent Applications Submitted

Year: 2010
 Plan:
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	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	Target	Actual
2010	{No Data Entered}	18072

Output #2

Output Measure

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

Year	Target	Actual
2010	{No Data Entered}	6467

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Pounds of food donated
2	Participate in livestock disease monitoring programs
3	Participate in livestock quality assurance program
4	Improve animal well-being
5	Demonstrate application of life skills
6	Demonstrate application of subject matter knowledge
7	Increase career aspirations & goal setting
8	Demonstrate application of leadership skills
9	Demonstrate civic engagement
10	Monetary value of food produced, gleaned, and donated
11	Adopt sustainable living practices
12	Adopt appropriate strategies based on research-based information
13	Form/join citizen networks for citizen action and education
14	Engage positively in their community
15	Train, support and mentor others in leadership roles
16	People donating food
17	Organizations/collaborators receiving donated food

18	Demonstrate practices that improve efficiency, reduce inputs, or increase profitability
19	Apply knowledge of risks to food safety
20	Demonstrate practices including managing nutrient sources, recycling/delivery methods that are compatible with crop/soil/production systems
21	Increase consumption of locally produced foods
22	Adopt integrated pest management strategies
23	Develop integrated farming systems

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	Quantitative Target	Actual
2010	{No Data Entered}	191977

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Harvest for Hunger: Hunger is a community issue and as such requires action from the entire community to affect change.

What has been done

UMaine Extension's Harvest for the Hungry Program involves home gardeners, Master Gardeners, and other volunteers who grow and glean fresh fruits and vegetables and donate them to needy individuals and families in Maine.

Results

During the 2010 garden season, UMaine Extension collected 191,977 pounds of fresh fruit and

vegetables to give to food banks, soup kitchens, service organizations, and directly to families as part of our healthy lifestyles educational programs. At an average market value of \$1.69 per pound, the contribution was valued at more than \$325,400. The program's objectives are to mitigate hunger, improve nutrition and health, and help the recipients develop lifelong positive nutritional habits.

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

Participate in livestock disease monitoring programs

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	182

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection

Outcome #3

1. Outcome Measures

Participate in livestock quality assurance program

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #4

1. Outcome Measures

Improve animal well-being

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	227

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #5

1. Outcome Measures

Demonstrate application of life skills

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	220

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
216	Integrated Pest Management Systems
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 #6

1. Outcome Measures

Demonstrate application of subject matter knowledge

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	171

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
206	Basic Plant Biology
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
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 #7

1. Outcome Measures

Increase career aspirations & goal setting

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	302

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

602 Business Management, Finance, and Taxation

Outcome #8

1. Outcome Measures

Demonstrate application of leadership skills

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

Outcome #9

1. Outcome Measures

Demonstrate civic engagement

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	824

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #10

1. Outcome Measures

Monetary value of food produced, gleaned, and donated

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	325400

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

Outcome #11

1. Outcome Measures

Adopt sustainable living practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	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
- 206 Basic Plant Biology
- 213 Weeds Affecting Plants
- 216 Integrated Pest Management Systems

Outcome #12

1. Outcome Measures

Adopt appropriate strategies based on research-based information

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	2387

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Minimizing Pesticide Use on Wild Maine Blueberries: Maine’s 60,000 acres of wild blueberries are worth over \$250 million annually to growers, and more to the Maine economy. The blueberry maggot destroys commercial blueberry crops by attacking the fruit and leaving the berry non-viable. Tighter controls enacted by the EPA, and strict residue restrictions in many countries made growers concerned about insecticide residues on the fruit and the potential for limiting the salability of their crop.

What has been done

UMaine Extension and the UMaine Department of Plant and Soil Science have partnered with Maine growers to conduct on-farm trials to test the efficacy of new less toxic insecticides, and developed monitoring protocols that help growers know when treatments are necessary, and when they are not.

Results

Our trials have confirmed this new class of pesticides is effective against the blueberry maggot, and growers in Maine are using the monitoring protocols developed as a component of this project. As a result, insecticide is being used less frequently and only when necessary, helping to minimize residue and maintain the value of wild Maine blueberries to local, out-of-state, and international markets.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #13

1. Outcome Measures

Form/join citizen networks for citizen action and education

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	69

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #14

1. Outcome Measures

Engage positively in their community

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	287

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #15

1. Outcome Measures

Train, support and mentor others in leadership roles

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #16

1. Outcome Measures

People donating food

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	147

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #17

1. Outcome Measures

Organizations/collaborators receiving donated food

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	176

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems

601 Economics of Agricultural Production and Farm Management

Outcome #18

1. Outcome Measures

Demonstrate practices that improve efficiency, reduce inputs, or increase profitability

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	64

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Maine Compost School: It is predicted that most landfills in the U.S. will be full within the next decade. Each year Americans dispose of millions of tons garbage that, when mixed together in landfills does not bio-degrade and causes a variety of problems. Composting provides a way not only of reducing the amount of waste that needs to be disposed of, but also of converting it into a valuable product that is useful for farming, gardening, and landscaping.

What has been done

The Maine Compost School helps people understand how to recycle organic material, reduce their contributions to landfills, and produce rich, valuable, soil enhancing compost, a marketable commodity. Participants come from throughout world and are professional compost operators, farmers, municipal workers, homeowners, teachers, and students who gain certification in week long or 2-day programs. The School is a partnership between UMaine Extension, the Maine Department of Agriculture Food and Rural Resources, Maine Department of Environmental Protection, and the Maine State Planning Office.

Results

In the last two years, six new compost businesses were started in Maine as a direct result of the Maine Compost School, creating 17 new jobs and a variety of seasonal employment opportunities. One existing compost producer increased sales 200 percent after the first year of attending the class, with gross annual income for their compost operation now over \$50,000. The Portland Maine school district has reduced waste removal cost by approximately \$15,000 after implementing more recycling efforts in the school cafeterias since attending a school compost workshop in 2009. Since 2006 160 people received certification of technical ability from the Maine Compost School.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management

Outcome #19

1. Outcome Measures

Apply knowledge of risks to food safety

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	14117

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
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #20

1. Outcome Measures

Demonstrate practices including managing nutrient sources, recycling/delivery methods that are compatible with crop/soil/production systems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	96

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Locally-grown Organic Bread Wheat: Maine millers and bakers cannot find enough locally grown organic wheat that meets quality standards for bread production demand. Supplying this expanding market represents a significant economic opportunity for our region's farmers, who lack to produce high quality grains for bread end-use markets using organic methods.

What has been done

UMaine Extension and the Maine Agricultural and Forest Experiment Station are leading a multi-state project to increase farmers' ability to produce high quality organic bread wheat with a group of 10 researchers from Maine and Vermont through a 4-year \$1.3 million grant from the USDA Organic Agriculture Research and Extension Initiative. In partnership with local farmers, millers, and bakers, we are conducting research on varieties, fertility, weed management, and rotations; and developing tools for farmers to ensure success.

Results

Deputy Secretary of Agriculture, Kathleen Merrigan, recognized our grant at a media event in Maine in October 2009. She praised the project's involvement of stakeholders, integration of research and Extension, and efforts to revitalize a local food system. The USDA blog post about the event stated, "If there is a better example of USDA's "Know Your Farmer, Know Your Food" initiative in action, we'd like to see it."

The project was initiated with a trip to Quebec for Maine and Vermont farmers, millers, bakers, and researchers to build connections with their more experienced Quebecois colleagues. A Vermont producer used information he gleaned from the trip to construct a mill design appropriate for his small scale operation. The bread wheat variety trials have so far identified 6-8 new varieties that show promise for our region. As a result, several farmers planted one new winter variety based on the yield and quality data that was made available to them in late August. A fertility study evaluating nitrogen topdress treatments to increase grain protein has inspired one

farmer to test these strategies on his own farm through a SARE partnership grant.

4. Associated Knowledge Areas

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

Outcome #21

1. Outcome Measures

Increase consumption of locally produced foods

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	44

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Humble Beginnings for Community Farmer's Market: Southern Aroostook County in northern Maine has historically lacked a Farmers' Market that would provide local small, diverse vegetable and livestock farms a direct market to consumers and give residents access to local farm-fresh foods.

What has been done

In 2009, UMaine Extension approached community leaders in Houlton and led a committee that would create the Houlton, Maine Farmers' Market.

Results

Through humble beginnings of having only four vendors at the end of the 2009 growing season, 2010 saw a venue change, increased advertising, and increased participation for both buyers and sellers. At the end of the 2010 season, the newly named Houlton Community Market boasted 24 vendors providing locally produced food and crafts that generated approximately \$100,000 in

direct sales to local producers, and more to downtown businesses who benefit from proximity to consumers who are patronizing the market.

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
602	Business Management, Finance, and Taxation

Outcome #22

1. Outcome Measures

Adopt integrated pest management strategies

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	5134

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

Outcome #23

1. Outcome Measures

Develop integrated farming systems

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	172

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
216	Integrated Pest Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Case Study
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

Key Items of Evaluation