2012 University of Idaho Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

This combined report of accomplishments for the College of Agricultural and Life Sciences (CALS) represents 97.5 Extension faculty FTEs in outreach education programs and 63.3 research faculty FTEs. The Extension FTEs are contributed by 70 county-based Extension Educators organized into three extension districts and 45 Extension Specialists affiliated with academic departments. Extension programs are conducted by faculty organized into 15 program teams (Topic Teams). Extension partners on those teams have generated approximately $2,834,017 in external grant support and have recorded 358,227 direct teaching contacts. Extension faculty produced 46 peer-reviewed Extension publications and 59 articles in professional and scientific journals. To summarize research faculty, they contributed to 15 program teams (Topic Teams) and outputs included 303 publications, 5 plant patents filed, and $28,876,805 of intramural funding expenditures.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	82.0	0.0	70.0	0.0
Actual	97.5	0.0	63.3	0.0

II. Merit Review Process

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

- Internal University Panel
- Combined External and Internal University Panel
- Expert Peer Review
- Other (administrative review)

2. Brief Explanation

Merit review and peer review processes are conducted annually, as a matter of University and College policies. All faculty have their performance reviewed annually by the direct supervisor, and those reviews are presented to a panel including the Dean and Directors. For tenure'seeking faculty, their accomplishments are thoroughly reviewed during their third year by members of their promotion committee and by the supervisor (Department Head). Faculty up for promotion and/or tenure receive an even more thorough review from supervisors and peer committees at three levels: the Department, the College, and the University.

III. Stakeholder Input

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

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

Brief explanation.

Faculty continue to use traditional and novel methods to involve stakeholders as advisers. Several of our counties have complete mailing lists for all households in the county. In some cases, distributing mail surveys to every address in a county has been used during the past several years. To encourage participation in focus groups, few local budgets can support cash incentives, but nearly all such activities provide food and refreshment for participants. To gather stakeholder input from our growing Spanish-speaking population, announcements are printed and broadcast in Spanish through appropriate venues. In some cases (community development, for example) targeted invitations were sent to representatives of pre-determined sectors of the community, including socio-economic categories of residents less likely to have participated in past sessions. In most cases, people are enticed to provide input as they are taking advantage of opportunities to learn something that meets their personal needs.

The major stakeholder groups providing input regarding the IAES's spectrum of research activities include:
The Dean's Advisory Board was instituted in 2002. This committee is comprised of a spectrum of stakeholder representatives representing government, industry, and education in Idaho. Academic departments of CALS also have individual advisory boards (see below).

Idaho's 17 agricultural commodity commissions and organizations provide advice specific to commodity based programs and appropriate disciplines and departments within CALS. In addition, IAES researchers provide leadership and most of the content for several major commodity schools that are presented annually in the state. The commodity schools are well attended by stakeholders from Idaho and the region. These "schools", while primarily conducted as major outreach/technology transfer events to provide the latest research results to stakeholders, also serve as major sources of stakeholder input to IAES regarding research priorities and directions. Commodity schools are annually conducted for potato, cereal, and sugarbeet industries. As an example, the UI Potato School is a three-day event that annually attracts approximately 1,400 registrants who come from Idaho, the PNW region, virtually all other states involved in potato production as well as representatives from approximately 25-30 foreign countries.

Beyond the commodity schools mentioned above, IAES faculty organize and participate in "field days" at each of the IAES's six off-campus Research and Extension centers. They also conduct a number of more focused tours or workshops such as: weed identification, ecology, management and technology at several locations, potato storage research open-house, pomology program open-house and field day, and tours of the IAES's crop genetic improvement research programs for beans, potatoes, wheat, and the oilseed crops of rapeseed and mustard. Again, these

stakeholder events function as educational/technology transfer events as well as opportunities for stakeholder interaction.

The IAES research project portfolio and an abbreviated version of the POW is annually shared and discussed with representative from the executive branch of state government including the Governor's Office, the Dept. of Agriculture, and to a lesser extent, the Dept. of Environmental Quality, Dept. of Health and Welfare, and the Dept. of Commerce as well as key committees (agriculture and appropriations) and leadership of the Idaho Legislature.

The faculty, staff, and students (both graduate and undergraduate) of CALS have a vested interest in the development of appropriate research programs of high quality that are responsive to needs of the state and region. This university stakeholder group is an important source of valuable input to the IAES and play a major role in IAES program development and delivery. In the course of performing their research, the majority of researchers in the IAES have frequent and substantive contact with stakeholders in their research programs as has been indicated above. An array of inputs regarding program directions and priorities are more informally received in this manner and are subsequently considered and often implemented.

CALS has also mandated the formation of advisory committees for each of the eight academic departments in CALS. As of 2002, all departments of CALS established advisory committees. These committees are comprised of representatives from a broad base of stakeholders sharing interest in the disciplines, programs, and strategic plans of the departments. These committees are now serving as a significant additional source of stakeholder input for the IAES and CALS. In addition, once a year in on-campus meetings the departmental advisory committees meet with the CALS and IAES leadership as well as with the Dean's Advisory Board on program priorities and directions for the college, the experiment station and the departments. One representative from each department's advisory committee serves on the Dean's Advisory Board.

University of Idaho Extension has citizen advisory groups in 42 of Idaho's 44 counties. These committees, which are composed of a very diverse and broad mix of public interests, provide input regarding extension and research program priorities from the county perspective. Extension Specialists have advisory groups as well, many of which are formally associated with producer organizations or commodity interests. A Statewide 4-H advisory Board and a Statewide Extension Advisory Board contribute annual input to guide Extension programs.

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

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Needs Assessments
- Use Surveys
- Other (Commodity-based research and Extension interactions)

Brief explanation.

During this reporting period, CALS representatives met at least once with each of Idaho's commodity commission groups. In general, these meetings were conducted to determine priorities for research and extension programs relevant to the commissions. CALS administration met two times with the Deans Advisory Board and once with faculty as a group in each of Idaho's four administrative regions. Other important venues for collecting stakeholder input included Extension Annual Conference and annual Ag Summit and legislative strolling dinner in Boise. The Dean or his designee also met with state legislative leaders in Boise regarding agriculture, science and

technology, environmental issues, and educational appropriations. These meetings included testimony before several legislative committees as well as informal meetings. CALS research and extension faculty held numerous field days and commodity schools across the state.

Counties follow specific marketing plans that are developed locally, based upon the demographics and characteristics of their communities and populations. Those plans specify efforts needed to ensure parity in program audiences. Depending on faculty areas of expertise and program efforts, stakeholders may be quite easy to identify (for example, potato growers or dairy owners) or may be more difficult to locate (for example, expectant parents or families in financial difficulty).For farmers and ranchers, Extension cooperates with the Idaho State Department of Agriculture or other appropriate agencies to verify contact lists, including lists of those individuals who are licensed to apply pesticides. For low income audiences, Extension works with schools, with the Department of Health and Welfare, and with the local faith community to identify potential clientele. Partnerships with AARP-Idaho and other advocacy organizations have been instrumental in reaching targeted audiences.

County faculty report that requests are made to advisory committees and to local government leaders and private citizens to help identify new stakeholders. Extension Specialists report that they use commodity organizations and other groups in a similar fashion. New faculty are particularly reliant on veteran faculty to help guide them to stakeholders.

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

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional individuals
- Other (various)

Brief explanation.

To generate public participation in Extension programs, outreach and advertising was designed to effectively reach all residents of the partner communities. For some programs (the Land and Livestock Team, for example) stakeholder input was gathered through focus groups made up of Beef Quality Assurance program participants. For other programs (Horticulture, for example), input was collected by conducting surveys in public spaces (including county fairs, in Walmart parking lots, etc.) to collect information from traditional and not-traditional stakeholders alike. Gathering input for several programs involved a major effort to reach underserved audiences 4-H Youth Development and Operation: Military Kids for example) through targeted visits and phone calls to organizations and individuals known to be advocates for some of our underserved groups. Most faculty report using existing program participants to generate recommendations for future programs. Some faculty reported using newsletters to request input from readers, returned via email.

During this reporting period, CALS representatives met at least once with each of Idaho's commodity commission groups. In general, these meetings were conducted to determine priorities for research and extension programs relevant to the commissions. CALS administration met two times with the Deans Advisory Board and once with faculty as a group in each of Idaho's four administrative regions. Other important venues for collecting stakeholder input included Extension

Annual Conference and annual Ag Summit and legislative strolling dinner in Boise. The Dean or his designee also met with state legislative leaders in Boise regarding agriculture, science and technology, environmental issues, and educational appropriations. These meetings included testimony before several legislative committees as well as informal meetings. CALS research and extension faculty held numerous field days and commodity schools across the state.

3. A statement of how the input will be considered

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

Brief explanation.

Several shifts in emphasis during the past several years have been the direct result of stakeholder input, including a major increase in investments for family financial education, health and fitness, and fighting obesity. These program expansions have been reported during the past several years and continue in 2012. Also in 2012, CALS is continuing efforts to respond to Federal and State agency stakeholders by shifting resources into sustainable energy, childhood obesity, and other priority programs. We are also working to respond to stakeholder input by building a program that integrates health and nutrition, small farms and horticulture to address local food systems challenges. Significant progress in 2012 includes partnerships with the Idaho State Departments of Agriculture and Education to begin collaboration on a Farm-to-School program, and other partnerships around food insecurity and local food systems

Discipline-driven programs generally use input gathered at each event to help guide the content of the next. For example, at the international Idaho Potato Conference, participants are surveyed each year to provide feedback about their continuing education needs. The results of the survey are used, in part, to direct the agenda for the next conference. We have also identified a growing demand for education about health and fitness. While administrators have not re-tasked positions in Family and Consumer Sciences to respond to our survey results, our faculty have researched and acquired high quality curricula, received training and certification, and delivered health and fitness programs to help meet the need identified by stakeholders.

Information was acquired state-wide from meeting with various stakeholders is discussed at various CALS leadership meetings. These include monthly CALS leadership meetings which are attended by dean and directors as well as leaders from academic departments, research and extension centers and district offices. In addition, priority setting is conducted in an annual dean and directors' retreat. Strategic planning and priority setting in these sessions is based largely upon stakeholder input.

Brief Explanation of what you learned from your Stakeholders

Greatly increased interest in local food systems, food insecurity, and hunger.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2738561	0	2685861	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	2738561	0	2685861	0
Actual Matching	2738561	0	2685861	0
Actual All Other	5131144	0	23505083	0
Total Actual Expended	10608266	0	28876805	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	2364960	0	1767601	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Sustainable Energy: Land and Livestock
2	Global Food Security and Hunger: Cereals
3	Commercial and Consumer Horticulture
4	Community Development
5	Global Food Security and Hunger: Dairy
6	Family Economics
7	Farm and Ranch Management
8	Food Safety
9	Climate Change: Forest Management
10	Global Food Security and Hunger: Health & Human Nutrition
11	Climate Change: Soil, Water, Waste and Air Management.
12	Global Food Security and Hunger: Potatoes
13	Global Food Security and Hunger: Small Acreages and Emerging Specialty Crops
14	Global Food Security and Hunger: Sugar Beets & Minor Crops
15	Childhood Obesity: 4-H Youth Development

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Sustainable Energy: Land and Livestock

☑ Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%		5%	
111	Conservation and Efficient Use of Water	5%		10%	
121	Management of Range Resources	10%		0%	
122	Management and Control of Forest and Range Fires	5%		5%	
133	Pollution Prevention and Mitigation	0%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	5%		5%	
205	Plant Management Systems	10%		0%	
213	Weeds Affecting Plants	5%		5%	
216	Integrated Pest Management Systems	5%		5%	
301	Reproductive Performance of Animals	5%		15%	
302	Nutrient Utilization in Animals	10%		15%	
305	Animal Physiological Processes	5%		5%	
306	Environmental Stress in Animals	5%		0%	
307	Animal Management Systems	10%		0%	
308	Improved Animal Products (Before Harvest)	5%		10%	
405	Drainage and Irrigation Systems and Facilities	0%		5%	
605	Natural Resource and Environmental Economics	5%		5%	
901	Program and Project Design, and Statistics	0%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890

Plan	9.0	0.0	4.0	0.0
Actual Paid Professional	13.3	0.0	5.4	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
528913	0	265821	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
528913	0	265821	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
461601	0	2408461	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Planned activities include beef schools, forage schools, range-in-school, grazing academy, BQA workshops, weed workshops, monitoring workshops, demonstration/applied research trials, Extension publications, popular press articles, tours, field days, faculty training sessions, web sites, CD-ROM based learning modules, office visits, and farm/ranch visits. The focus of these efforts will depend on stakeholder input, questions, and needs. When appropriate, information generated by the team will be presented in scientific journals and at professional meetings.

Alfalfa and Annual Forage Production and Harvesting planned activities include:

- Alfalfa variety trials
- Annual forage variety trials
- Irrigation management trials and demonstrations
- Idaho Hay and Forage Conference
- Local forage and pasture schools and workshops
- Documenting quality of forages from different production environments
- Investigation and reporting of suitability of alternative forage species and their utilization in livestock production systems to extend the grazing season.
- Popular press and journal articles
- Forages website
- Extension publications

Efficient Production Management and Marketing of Livestock planned activities include:

- Beef Quality Assurance workshops
- Vaccine storage and handing studies and reports
- Intermountain Rangeland Livestock Symposium
- Lost Rivers Grazing Academy
- Local Winter Beef Schools
- Alternative forage production trials to extend the grazing season

- Pasture management workshops
- Baseline survey of beef cattle producers on grazing and feeding practices
- Popular press and journal articles
- Beef website
- Extension publications

Rangeland Resource Management and Utilization planned activities include:

- Intermountain Rangeland Livestock Symposium
- Collaboration with the University of Idaho Rangeland Center
- Wolf-cattle interaction research and workshops
- Regional fire cycle/cheatgrass workshop,
- Collaboration with the Idaho Rangeland Resource Commissions public perception surveys
- Development of a public policy curriculum
- Local rangeland demonstrations, workshops and tours
- Popular press and journal articles
- Range-In-Service
- Extension Publications

2. Brief description of the target audience

The target audience most likely to participate in and benefit from these programs are:

- land owners, range livestock producers, local government and resource management agency personnel.
- Livestock and forage producers are likely to be positively impacted by new and improved production practices that will improve their profitability and ecological sustainability.
- Alfalfa and grass seed producers are likely to be positively impacted as many improved practices may involve the planting of new varieties with high productivity and pest resistance.
- Supplies of a variety of production input are likely to be positively impacted since improved practices may include the use of new materials, machinery or other production inputs.
- Small acreage land owners will have a greater understanding of the biology of their land and livestock resources, and will be less likely to be impacted by weed invasion or be taken advantage of by unscrupulous input suppliers.
- Beef cattle producers

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	10603	113709	1927	125300

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

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	5	24	29

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Producer schools. (number of schools: multiple sessions of instruction on multiple subjects)

Year	Actual
2012	11

Output #2

Output Measure

- Workshops (including BQA).

Year	Actual
2012	68

Output #3

Output Measure

- Demonstrations and applied research projects.

Year	Actual
2012	27

Output #4

Output Measure

- Popular press articles.

Year	Actual
2012	59

Output #5

Output Measure

- Newsletters; number of issues.

Year	Actual
2012	46

Output #6

Output Measure

- Field days

Year	Actual
2012	12

Output #7

Output Measure

- Presentations at producer meetings

Year	Actual
2012	113

Output #8

Output Measure

- Budgets developed to improve clientele decision making

Year	Actual
2012	12

Output #9

Output Measure

- Curricula developed

Year	Actual
2012	5

Output #10

Output Measure

- Survey conducted

Year	Actual
2012	4

Output #11

Output Measure

- Tours conducted

Year	Actual
2012	17

Output #12

Output Measure

- Websites developed or significantly modified

Year	Actual
2012	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Learners will adopt new, accepted, or recommended production practices. I: Number of participants indicating in post-program surveys that they have or intend to adopt recommended practices.
2	O: Learners aquire knowledge and understanding of new, approved, or recommended practices. I: Number of participants citing change in knowledge on evaluation instruments(pre- post-test results) [number of evaluations administered and examined.
3	O: Learners are aware of new, accepted, or recommended production practices and emerging technologies and issues (BQA, NAIS, etc.) I: Number of participants at educational events.
4	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.
5	Enhancing Milk Fat with Monounsaturated and Polyunsaturated Fatty Acids for Improved Nutritional and Market Value

Outcome #1

1. Outcome Measures

O: Learners will adopt new, accepted, or recommended production practices. I: Number of participants indicating in post-program surveys that they have or intend to adopt recommended practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	130

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Vaccine Handling and storage research is a large component of Beef Quality Assurance. Ranchers need to be aware of how they are managing their vaccines. Making sure vaccines are remaing viable and are stored at the reccomended temperature range is imperative in properly administering vaccines and reducing the spread of dieases in cattle herds and other livestock herds.

What has been done
Vaccine handling and storage research was done throught out Idaho involving ranchers and retailers that handle vaccines. The results of this research has been presented at beef producer schools around the state with the goal to change the way producers store and manage vaccines and other medicines.

Results
In 2012 a follow up survey was sent to producers to determine if they had changed any techniques and acquired more knowledge in handling vaccine. Results show that the producers are adjusting their refridgerator temperatures, using thermometers to monitor their fridges, and keeping their vaccines stored in a cooler at the chute side.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water

121	Management of Range Resources
122	Management and Control of Forest and Range Fires
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

O: Learners aquire knowledge and understanding of new, approved, or recommended practices. I: Number of participants citing change in knowledge on evaluation instruments(pre- post-test results) [number of evaluations administered and examined.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1031

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Previous Beef Quality Audits identified many quality challenges in the beef industry. A major industry goal was to educate beef producers to select management practices that increase value and quality of beef.

What has been done
In response, University of Idaho Extension submitted a proposal to IBC to fund the Idaho Beef Summit (Summit) to offer end-product quality programming to Idaho beef producers. The Summit

was held January 5-7, 2012 in Twin Falls. The Summit featured speakers, tours, and workshops on topics ranging from improving carcass traits, meat science 101 for ranchers, retail and foodservice tips, beef quality assurance, cull cow marketing, and much more.

Results
In a post survey, 98% of respondents stated they would consider end-product quality when making management decisions on the ranch and 97% of respondents have a good understanding of what improves carcass quality in beef cattle after attending the Summit. 93% of respondents said they learned something new at the Summit, 94% of respondents said they would return to a future session of the Summit, and 98% said they would recommend the Summit to fellow beef producers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
121	Management of Range Resources
122	Management and Control of Forest and Range Fires
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

O: Learners are aware of new, accepted, or recommended production practices and emerging technologies and issues (BQA, NAIS, etc.) I: Number of participants at educational events.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2644

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The beef industry is changing every day. Beef producers are faced with a variety of issues that directly and indirectly impact the productivity and profitability of their operations. Consumers of beef products demand a safe, wholesome, quality product. Beef producers need the knowledge and tools to produce safe, high quality beef.

What has been done
The Beef Quality Assurance program was delivered in multiple locations across the state, for producers and employees to learn about steps they can take to have the highest quality beef possible.

Results
Of those producers who attended BQA workshops in 1012, approximately 179 demonstrated sufficient knowledge and awareness of best practices to become BQA certified.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
121	Management of Range Resources
122	Management and Control of Forest and Range Fires
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

Outcome #5

1. Outcome Measures

Enhancing Milk Fat with Monounsaturated and Polyunsaturated Fatty Acids for Improved Nutritional and Market Value

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Currently, the Federal Drug Administration (FDA) restricts feeding camelina meal to lactating cows based on glucosinolates present in the meal and potential transfer of their metabolites, isothiocyanates and/or nitriles, into milk.

What has been done
Studies were conducted to determine the effects of feeding camelina meal to Holstein cows on milk production, composition, content of glucosinolates and metabolites as well as thyroid hormone concentrations of serum.

Results
Camelina meal supported milk production similar to canola meal without transfer of glucosinolates or their metabolites into milk as confirmed by a lack of effect on thyroid hormones and chemical analysis. Camelina meal also enhanced the unsaturated portion of the milk fatty acid profile which could potentially offer a healthier alternative for consumers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
305	Animal Physiological Processes

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Other (none of great impact)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

A post-program evaluation was conducted following the 2012 Winter Feeding Strategies workshops that were held in four locations in the state of Idaho. In program evaluations, approximately 65-70% of respondents indicated they learned a new technique that could be implemented on their operation to improve their operation's winter feeding situation.

Approximately one-hundred, sixty five individuals participated in the 2012 Winter feeding strategies workshops that were held in four locations in Idaho. As noted previously, attendees found the workshops to be valuable and indicated some of the information and technologies presented could be incorporated into their operations. Some of the comments from attendees following the workshops included: "Great information. Will make a difference in my operation." and "Seems like I am doing a few things right, but still have a ways to go. This will help me fine tune the winter feeding of my cows." Additionally, approximately 20% of the workshop attendees requested copies of various software programs (demonstrated during the workshops) to help them balance beef cow rations and analyze the cost of feedstuffs.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Global Food Security and Hunger: Cereals

☑ 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
102	Soil, Plant, Water, Nutrient Relationships	20%		10%	
201	Plant Genome, Genetics, and Genetic Mechanisms	5%		15%	
202	Plant Genetic Resources	20%		15%	
205	Plant Management Systems	30%		20%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%		5%	
212	Pathogens and Nematodes Affecting Plants	5%		5%	
213	Weeds Affecting Plants	5%		10%	
216	Integrated Pest Management Systems	10%		10%	
501	New and Improved Food Processing Technologies	0%		5%	
502	New and Improved Food Products	0%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	5.5	0.0	10.0	0.0
Actual Paid Professional	4.0	0.0	8.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
73345	0	407586	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
73345	0	407586	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
287063	0	4021343	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Breeding, testing, evaluating wheat and barley varieties throughout Idaho that will evaluate agronomic performance, end-use quality, adaptability to an area or type of production, suitability for specialty markets, and production of seed for moving the varieties into commercial production
• Conducting cereal schools to interact with growers and provide technology transfer for new varieties, pest management practices and problems, management decisions, and integration of cereals in cropping systems
• Conduct field tours and field days to transfer technology as in cereal schools
• Meet with advisory committees, commodity commissions, processors, ag-support industries for feedback and to inform them of work in cereal production in Idaho
• Conduct off campus credit and continuing ed classes, stakeholder seminars, and applicator training/testing for education and technology transfer about cereals
• Write and publish newsletters, Extension publications, progress reports, scientific publications, and general media articles
• Conduct research into cereal production problems as identified in the plan of work
• Interact with other professionals at meetings to transfer knowledge, form alliances, and implement projects
• Document and report progress and accomplishments

2. Brief description of the target audience

Cereal growers in Idaho - will be provided with technology to enhance cereal production and profitability and provide feedback and suggestions of needs and areas of concern for profitable cereal production. They will also provide resources for the project through direct use of facilities, and through checkoff contributions to commodity commissions.

Agribusiness and support workers - will provide resources for technology development and delivery, be targets for information delivery, provide feedback and suggestions for directions of the program.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

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

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

Patent Applications Submitted

Year:	2012
Actual:	1

Patents listed
201200014, Bruneau, Wheat Common

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	8	26	34

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Idaho Cereal Schools.

Year	Actual
2012	9

Output #2

Output Measure

- Release and adoption of new cereal varieties.

Year	Actual
2012	1

Output #3

Output Measure

- Peer-reviewed Extension publication (CIS, Bulletins, PNW).

Year	Actual
2012	6

Output #4

Output Measure

- Develop pest control technology - project/experiments.

Year	Actual
2012	11

Output #5

Output Measure

- Research on management systems - projects/experiments.

Year	Actual
2012	14

Output #6

Output Measure

- Refereed publications (Journal & Book Chapters).

Year	Actual
2012	26

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Producers gain knowledge about improved cereals management at cereal schools, field days, seminars, and re-certification events. I: Number of participants attending cereal schools, field days, etc.
2	O: Producers are aware of cereal resource publications. I: Number of cereal extension publications distributed.
3	O: Producers adopt new cereal varieties. I: Increase in number of acres of new varieties (released within 5 years; greater than previously grown).
4	O: Adoption of new crop production methods. I: Number of growers who report adoption through surveys at educational events and meetings.
5	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.
6	Ecology of Plant-Virus-Insect Interactions

Outcome #1

1. Outcome Measures

O: Producers gain knowledge about improved cereals management at cereal schools, field days, seminars, and re-certification events. I: Number of participants attending cereal schools, field days, etc.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2675

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The industry is concerned about management of new and resurgent insect pests. Interest is high about field scouting methods, economic injury levels, cultural and biological control, and judicious insecticide use.

What has been done
15 hours of IPM workshops were delivered at 20 local, state and regional workshops. Subject matter focus included pesticide safety, exotic insect pests, wireworm management, and aphid management in rotational crops. Multistate venues included the Tri-State Grain Growers Convention and the PNW Farm Forum; local venues included Dryland Producers Workshops (3 sites), Southeast Idaho Cereal Schools (5 sites), and N. Idaho Pesticide Applicator Training.

Results
Over 1215 commercial grain growers and ag professionals who advise grain growers about pest management learned about IPM practices for cereal insect pests by attending workshops at conferences, field days and recertification events during 2012. Overall gain-in-knowledge (measured by 6-question pre-test:post-test was 54%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants

212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
502	New and Improved Food Products

Outcome #2

1. Outcome Measures

O: Producers are aware of cereal resource publications. I: Number of cereal extension publications distributed.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
502	New and Improved Food Products

Outcome #3

1. Outcome Measures

O: Producers adopt new cereal varieties. I: Increase in number of acres of new varieties (released within 5 years; greater than previously grown).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources

Outcome #4

1. Outcome Measures

O: Adoption of new crop production methods. I: Number of growers who report adoption through surveys at educational events and meetings.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	427

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The University of Idaho Extension IPM Program periodically conducts statewide grower IPM adoption surveys to assess program impacts and to identify future extension and research. Survey focus is three-fold: (1) measure current use of IPM practices for insects, plant diseases, weeds and other pests; (2) identify grower perceptions of key pest problems; (3) quantitatively document changes in grower use of IPM practices since the prior survey.

What has been done
Faculty conducted surveys during 2012 to compare current use of IPM practices against the baseline data collected a decade ago. Commercial wheat and barley producers attending the UI Dryland Producers Winter Workshops (3 sites) and the UI Southeast Idaho Cereal Schools (5 sites)responded to on-site surveys.

Results
All 283 commercial barley and wheat producers surveyed are practicing certain elements of integrated pest management. Multiple pest control practices, rather than reliance on pesticides, is the norm among these growers. Surveys indicate that approximately 75% of Idaho wheat and barley producers follow an IPM program that combines cultural controls with regular pest scouting and thresholds on at least half their acreage.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	4

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
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
501	New and Improved Food Processing Technologies
502	New and Improved Food Products

Outcome #6

1. Outcome Measures

Ecology of Plant-Virus-Insect Interactions

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Virus diseases seriously affect wheat, potato and pea crops in the Pacific Northwest. The most serious of these are vectored by aphids and management focuses on aphid control. Better understanding of aphid behavior and patterns of infection could improve effectiveness of these control methods. This research aims to understand better the effects of virus infection on the behavior of the aphids that are the required vectors for these viruses. The research focuses on Barley yellow dwarf virus (BYDV),Potato leaf roll virus in potato and Bean leaf roll virus and Pea enation mosaic virus in pea. We know that virus infection influences aphid development and behavior. The research will better describe and understand the basis of these responses and use the information to model their effects on virus spread. In pea, we will conduct parallel research assessing spatial and temporal patterns of infection of pea by Pea enation mosaic virus and Bean leaf roll virus as a basis for forecasting risks of virus infection that producers can use to make treatment decisions.

What has been done
The basis of volatile production from Potato leaf roll virus (PLVR) infected potato and Nicotiana benthamiana, and potato and Barley yellow dwarf virus (BYDV) infection in wheat was studied. Behavior of viruliferous and nonviruliferous bird-cherry oat aphids to BYDV-infected wheat was compared adn this work was continued by using aphids that acquired virus through artificial media. Shifts in aphid responses and volatile production associated with the age of the plant at first infection was confirmed.

Results
Growers that have access to the website report improved understanding of aphid virus risk patterns. A survey of growers indicated respondents who reported having great understanding of legume viruses, their aphid vector, and crop damage caused increased from 19% to 29% during the period of this research. The students working on the system have become proficient in GIS

software, economic threshold development and modeling pertaining to aphid landscape scale dynamics. Legume producers are monitoring the information to help them make decisions concerning treatment of pea aphids to control viruses. 55% of respondents in a grower survey planned to use them regularly and 34% would use them sometimes. According to this information 55% of the acreage of peas and lentils (110,500 acres) will be sprayed in the future according to economic thresholds - which is double what respondents indicated they did in the past (27%).

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy

Brief Explanation

grain prices continue to cause changes in land use: more acres planted to cereals.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Idaho Cereal Schools conducted across the State in 2012 were all evaluated using a terminal survey to gather information about knowledge gained and about those topics that were most important for growers to adopt into their own enterprises.

Among the most useful topics where growers also gained the greatest knowledge increases were: Crop insurance, Wireworm and insect issues, Wheat end use quality ,Integrated Pest management, Variety Update, Resistance to Fusarium Head Blight, and Current Economics and Management Decisions.

When asked how the information would be incorporated into management practices, learners responded that they would:

Pay more attention to seeding rate and variety, consider the importance of fungicide for disease prevention, consider how to incorporate seed treatment, use new knowledge in the selection of chemicals, adopt stripe rust resistance best practices, follow variety trials more closely, modify insect management, purchase crop insurance, conduct A & G, wireworm scouting, be conscientious of nematode populations, and focus on end use quality.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Commercial and Consumer Horticulture

☑ 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
102	Soil, Plant, Water, Nutrient Relationships	15%		0%	
111	Conservation and Efficient Use of Water	10%		25%	
202	Plant Genetic Resources	8%		25%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	5%		0%	
204	Plant Product Quality and Utility (Preharvest)	10%		25%	
205	Plant Management Systems	25%		25%	
216	Integrated Pest Management Systems	25%		0%	
805	Community Institutions, Health, and Social Services	2%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	9.2	0.0	1.5	0.0
Actual Paid Professional	9.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.3	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**
291705	0	41274	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
291705	0	41274	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
423186	0	627062	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Beginning Master Gardener classes were delivered serving 17 counties and Advanced Master Gardener classes and projects were delivered in six counties. Shorter, more accessible gardening class series' were also delivered by educators in seven counties. Outreach for commercial producers included collaborations with the Idaho Nursery and Landscape Association at the HortExpo, the Idaho Green Collar College, the Certified Nursery Professional course, and through collaborations with local nursery retailers, including on-site training.

Supervised Master Gardeners and Advanced Master Gardeners delivered more than 100 presentations for local gardening groups and interested publics, served hundreds of residents who sought assistance in our plant clinics, and contributed to dozens of community projects including school gardens and community gardens, and water conservation and FireWise demonstrations.

Media outreach is conducted through regular contributions to seven local newspapers, local TV and radio interviews, and through targeted newsletters and trade publications.

2. Brief description of the target audience

Master Gardener Education: The target audience includes members of the public with a high level of interest in horticulture and time and interest in educating others. Beginning Master Gardeners participate in 30 to 70 hours of basic training in topics related to landscaping and gardening, such as soils, plant development, fertility, irrigation, plant problem diagnosis, pest control, etc., followed by 30-70 hours of volunteer service to the community. After completion of the training course and initial volunteer hours, Master Gardeners may re-certify annually or choose to become Advanced Master Gardeners. In this role, they will continue training under UI horticulturists in advanced topics using a hands-on approach. More importantly, with respect to team objectives, Advanced Master Gardeners become volunteer instructors and are expected answer horticultural questions from the general public, assist in organizing workshops, conferences, and other education opportunities, develop public demonstration projects, and assist communities with plant-based improvement projects.

Consumer Horticulture Education: The potential audience for this project is very large, consisting of virtually all Idaho citizens with an interest in home horticulture on all levels. For the most part, this target audience provides the learners for this program. They will take opportunities to learn sustainable horticultural principles from numerous sources, including web sites, publications, popular press articles, presentations, workshops, conferences, demonstrations, short courses, and other teaching forums. Organized groups from this target audience, including community public works departments, garden clubs, civic groups, public libraries, church groups, and other interested organizations will assist by

sponsoring educational gatherings.

Green Industry Education: The target audience consists of owners, managers, and employees of green industry companies. The audience will take a fairly active role in recommending curriculum, organizing teaching opportunities, and actively working to become competent horticulturists.

3. How was eXtension used?

Faculty, staff and volunteers use, and clientele are directed to a variety of eXtension resources.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	13598	1329428	1305	8359

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	14	15

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Advanced Master Gardener Training Workshop/Tours.

Year	Actual
2012	123

Output #2

Output Measure

- Beginning Master Gardener Courses.

Year	Actual
2012	17

Output #3

Output Measure

- Consumer Horticulture Education Media Publications/Programs.

Year	Actual
2012	106

Output #4

Output Measure

- Consumer Horticulture Education Personal Contacts/Visits.

Year	Actual
2012	21285

Output #5

Output Measure

- Consumer Horticulture Web Site.
  Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Consumer Horticulture Workshops/Seminars/Demonstrations.
  Not reporting on this Output for this Annual Report

Output #7

Output Measure

- Green Industy Education Workshops/Seminars/Clinics.

Year	Actual
2012	62

Output #8

Output Measure

- Master Gardener Volunteer Activities (in Hours).

Year	Actual
2012	12466

Output #9

Output Measure

- Green Industry Web Site Maintenance and Improvement

Year	Actual
2012	241

Output #10

Output Measure

- Consumer Horticulture Media Outreach: Number of popular press and Extension media products developed for consumers. Include magazine articles, newspaper columns, newsletters or newsletter articles, radio or television spots.

Year	Actual
2012	245

Output #11

Output Measure

- Face-to-face contacts with stakeholders reported by trained Master Gardeners: This metric reflects contacts made by trained MGs (in clinics, presentations, etc.).

Year	Actual
2012	10315

Output #12

Output Measure

- Faculty Contributions to Consumer-based Workshops, Seminars, and Demonstrations. Number of faculty activities coordinating or teaching consumer education events; (excluding MG classes taught (reported above).

Year	Actual
2012	241

Output #13

Output Measure

- Presentations to Beginning Master Gardeners: Measure of direct faculty contribution to beginning MG (other than course creation/organization). Number of presentations for beginning MG classes (includes face-to-face, distance, and presentation of recorded materials).

Year	Actual
2012	168

Output #14

Output Measure

- Retention of Master Gardener Volunteers: Total number of active Master Gardeners and Advanced Master Gardeners who meet all qualifications to remain certified after the first year of certification.

Year	Actual
2012	251

Output #15

Output Measure

- Volunteer Contributions to Workshops, Seminars, and Demonstrations: Number of volunteers who organized or presented at educational events.

Year	Actual
2012	137

Output #16

Output Measure

- Volunteer-Produced Publications and Media: Number of products developed by supervised MG volunteers (exclude those with faculty authors): bulletins, fact sheets, web content, PowerPoint, media productions for radio or television.

Year	Actual
2012	236

Output #17

Output Measure

- Web Sites with Consumer Content: Number of sites containing consumer horticulture education, built or actively improved during the year. Includes Idaho Landscapes and Gardens, county-based, and any other faculty-developed web sites).

Year	Actual
2012	7

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Beginning Master Gardeners will obtain adequate knowledge of horticultural principles to help or instruct other people. I: Marked increase in knowledge as measured by percentage increase in before and after test assessments.
2	O: Consumers have access to appropriate information about horticulture when they need it. I: Number of web site hits.
3	O: Adoption of effective and sustainable gardening practices by trained Master Gardeners. I: Survey-derived self-ranking of the extent of adoption of appropriate principles and practices; self-ranking is on 1-9 scale where 9=fully adopted.
4	O: Improved green-industry access to pest control and product information. I: Number of hits on technical resource center web site.
5	O: Master gardener programs will operate at a high level of performance and conform to minimum statewide policies with respect to amount and type of volunteerism, certification requirements, courses taught, and operation of advanced Master Gardener programs. I: Master Gardener coordinators will be surveyed to determine the operational status of each county-based program. Based on published statewide policies, each county program will be graded as compliant or not. The indicator will the percentage of compliant Master Gardener programs.
6	O: Publication of up-to-date consumer-oriented extension publications designed to improve public knowledge of sustainable horticultural practices. I: Increased number of available publications.
7	Commercialization of Native and Adapted Plant Species for Use in Sustainable Southern Idaho Landscapes

Outcome #1

1. Outcome Measures

O: Beginning Master Gardeners will obtain adequate knowledge of horticultural principles to help or instruct other people. I: Marked increase in knowledge as measured by percentage increase in before and after test assessments.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

O: Consumers have access to appropriate information about horticulture when they need it. I: Number of web site hits.

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

O: Adoption of effective and sustainable gardening practices by trained Master Gardeners. I: Survey-derived self-ranking of the extent of adoption of appropriate principles and practices; self-ranking is on 1-9 scale where 9=fully adopted.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

O: Improved green-industry access to pest control and product information. I: Number of hits on technical resource center web site.

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

O: Master gardener programs will operate at a high level of performance and conform to minimum statewide policies with respect to amount and type of volunteerism, certification requirements, courses taught, and operation of advanced Master Gardener programs. I: Master Gardener coordinators will be surveyed to determine the operational status of each county-based program. Based on published statewide policies, each county program will be graded as compliant or not. The indicator will the percentage of compliant Master Gardener programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

Outcome #6

1. Outcome Measures

O: Publication of up-to-date consumer-oriented extension publications designed to improve public knowledge of sustainable horticultural practices. I: Increased number of available publications.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems
216	Integrated Pest Management Systems

Outcome #7

1. Outcome Measures

Commercialization of Native and Adapted Plant Species for Use in Sustainable Southern Idaho Landscapes

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Idaho public areas and home landscapes are intensively managed and consume disproportionate amounts of irrigation water and generate fertilizer and pesticide contaminants that enter the environment. Sustainable landscape planning and management have the potential to optimize aesthetic appeal while conserving water, minimizing pest damage and limiting negative environmental impacts. A key element in designing and planting sustainable landscapes is the use of appropriate plant materials. In southern Idaho, with its high-altitude arid environment, adapted plant species are typified by low water use and adaptation to shallow, well-drained soils with low levels of natural fertility (Mee et al, 2003). Unfortunately, very few nurseries supply plants with these characteristics. Acceptance of native plants in the landscape can be improved through the development of attractive cultivars that adapt easily to yard and garden conditions, education of the public in use of native plant materials, and distribution of propagation information that will assist nurseryman and wholesalers with production of new plants. The core of this project is to develop attractive, useful native plant cultivars for use in the Idaho and Intermountain landscape industries. A progressive system of species collection, establishment, evaluation, and increase will be used to develop cultivars of native plants. Identifiable outcomes will be an infusion of new cultivars of native wildflowers, shrubs, and trees into the Intermountain landscape nursery industry. This project will have both economic and environmental impacts. It will infuse new native plant products into the nursery industry, with associated financial gains by cooperating members of industry. It will also create a palette of native landscaping plants that will reduce the use of natural resources by all who choose to use them.

What has been done

This research creates commercially viable native plant products suitable for use in water conserving commercial and home landscapes and gardens.

Results

Domestication and improvement of native plants is an essential first step in creating commercial value. This research project is designed to increase the availability of native plants with superior horticultural traits that are adapted to the difficult climate and poor soils typical the Intermountain West. The ultimate impact of this work will be reduced use of environmentally harmful gardening practices and conservation of Idaho's valuable, but limited, water resources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
202	Plant Genetic Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Other (public demand for local food systems)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The demand for University of Idaho Extension home and community vegetable gardening information and education in the Treasure Valley region of Idaho has risen steadily since 2008. Clientele are still experiencing aftershocks from the recession; the Idaho Foodbank reports the overall poverty rate in Idaho is at 15.8%, and that one in six Idahoans are food insecure. Others wish to learn or update their knowledge so that the proven physical, nutritional and economic benefits of home food production can be enjoyed. An emerging audience also includes advocates, educators and community leaders looking to initiate or support school, community or public gardens with Extension's help.

The Idaho Victory Garden program was created in 2008 to increase home and community food production in Canyon County. Extension faculty are joined by Master Gardener volunteers, community gardeners and small acreage farmers to present six weeks of evening instruction and hands-on activities in February and March. The program trains individuals and families to successfully plan, plant, harvest, prepare and preserve affordable and healthy food.

Clientele are evaluated immediately following the course and again at the end of the growing season. The information they provide is used to improve program quality and content, and assess outcomes.

Our program has been offered four times to over 190 diverse individuals. Graduates are growing more of their own food: an estimated $80,750 worth of fruits and vegetables. They are implementing water conserving drip irrigation systems, composting,

and using fewer pesticides. Many are even keeping backyard poultry, where permitted. But increasingly, the ways in which participants are using their new-found knowledge and community connections that are creating dynamic impact with real public value.

Idaho Victory Garden graduates are making a difference:

- Nancy Robinson ('09), Roberta and Sam Ireland ('11), and BillieJean Nunnally ('12) began community gardens in Nampa, producing thousands of pounds of food for low income residents and emergency food pantries. Urban community gardeners are also more likely to consume fruits and vegetables, and enjoy increased social cohesion, social support and social connections.
- Craig Olsen ('11, '12) applied for a Garden Grant through the Idaho Department of Education to start the remarkable Pat Anderson School garden at the Southwest Idaho Juvenile Detention Center in Caldwell.
- Ruby Valdez ('12), Community Gardens Coordinator for the Idaho Foodbank organized classes on community gardening to increase capacity for fresh food production.
- Megan McCarthy ('12) and Elizabeth Dickey ('12) restored the kitchen garden at the Idaho Botanical Garden in Boise, demonstrating economical and environmentally friendly practices like drip irrigation and recycled materials construction. The garden is viewed by thousands of visitors annually.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Community Development

☑ 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
124	Urban Forestry	2%		0%	
131	Alternative Uses of Land	5%		5%	
134	Outdoor Recreation	5%		5%	
601	Economics of Agricultural Production and Farm Management	5%		20%	
602	Business Management, Finance, and Taxation	3%		0%	
603	Market Economics	3%		5%	
604	Marketing and Distribution Practices	3%		5%	
605	Natural Resource and Environmental Economics	5%		10%	
608	Community Resource Planning and Development	15%		20%	
609	Economic Theory and Methods	0%		5%	
610	Domestic Policy Analysis	5%		5%	
802	Human Development and Family Well-Being	20%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%		20%	
805	Community Institutions, Health, and Social Services	9%		0%	
806	Youth Development	5%		0%	
903	Communication, Education, and Information Delivery	5%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890

Plan	5.8	0.0	3.0	0.0
Actual Paid Professional	7.6	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.7	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**
199282	0	132228	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
199282	0	132228	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
374941	0	582377	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• The Community Development Team has implemented the Community Coaching for Grass Roots Action program to meet the needs of rural communities that desire a focus on action (rather than protracted educational delivery). Similar involvement is reported for several local economic development councils and similar citizen-led initiatives, several of which formed through catalyzing efforts by Community Development Team members.

To help communities understand inter-related activities, Ripple Effects Mapping has been initiated in several Horizons communities. Customer Service workshops, Business and Community Entrepreneurship, and Smart Growth workshops have been delivered, as have been a number of workshops that focus on local, sustainable food systems and enterprise development, including support for Big Wood River Raspberries, local farmers markets, the Blue Sage Farm and Green Goat Farm, work on forages and marketing, and exploration of a Sustainable Food Systems Farm. Extension conducted an economic impact study and a rapid market assessment.

A youth entrepreneurship program was initiated as a pilot for the state and faculty continued delivering USDA Rural Business Enterprise Grant funded workshops on small business development, primarily focusing on art marketing. Work began (with Washington State University Extension) to plan a joint small business development training that is a collaborative effort with other small business service providers.

In cooperation with community leaders, faculty helped to organize and manage several community projects, including a Xeriscaping Golf Course project, Community Gardens, People's Gardens, County Fair projects and a Fire-Wise Landscaping project. Other efforts include a county comprehensive groundwater plan, emergency preparedness plans, and a civil defense working group.

Families are included in the community development portfolio through the Just-in-Time Parenting program (website and newsletter), estate planning workshops, and the Idaho's Journey diversity tour.

2. Brief description of the target audience

Target audiences include:

- Small business owners in Idaho
- Government organizations/agencies in Idaho
- Community non-profit organizations
- Entrepreneurs - current and future
- Elected officials & decision makers (state & local)
- State & local employees
- New leaders and individuals currently serving in leadership roles
- Rural communities
- UI staff and volunteers
- Educators
- Youth
- Families

Target audiences will participate in educational training opportunities. In many instances target audiences will also be involved in designing of programs, serving on steering committees, teaching of curriculum, recruiting of program participants, and in evaluation & redesign of programs.

3. How was eXtension used?

unknown

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7230	27347	875	352

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	40	41

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Steering Committees/Teams formed.

Year	Actual
2012	8

Output #2

Output Measure

- Materials/Curriculum developed.

Year	Actual
2012	2

Output #3

Output Measure

- Presentations/Workshops delivered

Year	Actual
2012	71

Output #4

Output Measure

- Series/Short Courses/workshops - organized &/or taught

Year	Actual
2012	22

Output #5

Output Measure

- Conference posters/presentations

Year	Actual
2012	10

Output #6

Output Measure

- Boards & Communities - Facilitated/Mentored/Coached.

Year	Actual
2012	27

Output #7

Output Measure

- Communities served.

Year	Actual
2012	59

Output #8

Output Measure

- Counties served.

Year	Actual
2012	44

Output #9

Output Measure

- web-based educational materials developed

Year	Actual
2012	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Effective local leadership: Elected officials, decision makers, government agencies, and civic organizations will become knowledgeable about data relevant to their communities. I: Number of participants who increase knowledge about local data and how to find it. (Retrospective Post)
2	O: Entrepreneurs: Current & future Idaho Entrepreneurs learn business practices and develop skills needed for starting a business. I: Number of participants learning skills
3	O: Customer: Small business owners and government organizations adopt customer oriented operating practices. I: Percentage of participants indicated adoption of practices. (customer service follow-up checklist)
4	O: Leadership: Incumbent and emerging leaders learn skills for leadership positions. I: Number of participants with increased skills (pre-post test)
5	O: Leadership: New leaders will assume leadership roles. I: Number of new leaders serving in communities. (1 yr. follow up checklist/count)
6	O: Family Life: Users of web-based family life materials find useful information that addresses their needs. I: Number of participants accessing the materials who rate the information as useful
7	O: Human capital development. I: Youth gain understanding of post-high school educational opportunities.(Retrospective pretest)
8	O: Regional business development: Economic and business development organizations collaborate at a regional level to offer comprehensive business training and support to local communities. I: Number of regions, counties or clusters of communities establishing a regional business development effort. (Retrospective Post)
9	O: Social Capital Development: Community Partnerships will be developed through community networks and mentoring. I: Number of participants in network and mentoring relationships.
10	O: Spaces and Places: Student teams will develop design concepts that meet community planning and design needs. I: Completed design project.
11	Entrepreneurs establish or expand their business. Number of business clients establishing new businesses or expanding existing businesses (measured every third year)

Outcome #1

1. Outcome Measures

O: Effective local leadership: Elected officials, decision makers, government agencies, and civic organizations will become knowledgeable about data relevant to their communities. I: Number of participants who increase knowledge about local data and how to find it. (Retrospective Post)

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

O: Entrepreneurs: Current & future Idaho Entrepreneurs learn business practices and develop skills needed for starting a business. I: Number of participants learning skills

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	58

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
People struggle with all the details, where to start in developing businesses and fostering the correct environment.

What has been done
Technical assistance was provided to numerous small businesses - several were start-up businesses, others were established businesses interested in growing. Assistance was provided through workshops and individual consultation and mentoring.

Results
Several businesses have developed new business plans and others have adopted specific practices such as the creation of a web presence. Many business owners have gained new skills and knowledge. These efforts are all continuing.

4. Associated Knowledge Areas

KA Code	Knowledge Area

134	Outdoor Recreation
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

O: Customer: Small business owners and government organizations adopt customer oriented operating practices. I: Percentage of participants indicated adoption of practices. (customer service follow-up checklist)

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

O: Leadership: Incumbent and emerging leaders learn skills for leadership positions. I: Number of participants with increased skills (pre-post test)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Rural communities that rely on volunteers and small groups of people that work well together to accomplish community development. Government and other services are limited in small towns.

What has been done

Asset identification, visioning, and small group decision-making workshops were taught to New Meadows residents interested in community and economic development as part of the Community Coaching for Grassroots Action leadership program.

Results
Ongoing projects were initiated with some successfully receiving funding. A $50,000 grant was obtained to install sidewalks on New Meadows Main Street. Community members have a common vision and better skills for developing effective and positive working relationships.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
903	Communication, Education, and Information Delivery

Outcome #5

1. Outcome Measures

O: Leadership: New leaders will assume leadership roles. I: Number of new leaders serving in communities. (1 yr. follow up checklist/count)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Rural communities that rely on volunteers and small groups of people that work well together to accomplish community development. Government and other services are limited in small towns.

What has been done
Formation of four action teams and a steering committee; Team coaching and leadership training; four trainings to develop a community organization to run the Orofino Farmers Market, including workshops on conducting meetings, writing bylaws, taking meeting minutes, electing officers, creating volunteer job descriptions, running a farmers market, etc.

Results
The action teams were widely credited with results already reported elsewhere. At least three of the MV team leaders sustained throughout the year, and the program just recently started two more teams. Valley County gained two action team leaders. Formation of a formal five member board of directors for the Orofino Farmers Market with bylaws, officers, and volunteers. They successfully took over and ran the market for the 2012 market year (June - Ocotober). A market assessment was conducted by Extension on September 25 with an estimated $1500 in gross sales that day.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
903	Communication, Education, and Information Delivery

Outcome #6

1. Outcome Measures

O: Family Life: Users of web-based family life materials find useful information that addresses their needs. I: Number of participants accessing the materials who rate the information as useful

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	350

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Parents of young children are short on time and timely research based child rearing information. Parents and grandparents are interested in learning deveopmental stages to help them understand development growth.

What has been done
The Just in Time Parenting Newsletter was created for parents of children from prenatal to age 5, with electronic delivery on a monthly or bi-monthly basis. Family newsletters went to over 300

families every 2 months with articles that covered healthy living choices. The website provided information and links to University healthy-living websites. Flyers were distributed at events to promote the EFNP classes being offered.

Results
National data on the JITP show that users rate the information as timely and useful.

4. Associated Knowledge Areas

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

Outcome #7

1. Outcome Measures

O: Human capital development. I: Youth gain understanding of post-high school educational opportunities.(Retrospective pretest)

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

O: Regional business development: Economic and business development organizations collaborate at a regional level to offer comprehensive business training and support to local communities. I: Number of regions, counties or clusters of communities establishing a regional business development effort. (Retrospective Post)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Rural communities are begging for assistance with developing small businesses. Providing services to very remote isolated communities is expensive. Also, in order to be successful, entrepreneurs need a supportive environment that is also lacking in many rural areas. For these reasons, a collaborative approach that links service providers and avoids duplication can provide the consistency and support networks needed by small businesses.

What has been done
In North central Idaho a collaborative effort of community and economic development professionals are working together to help small businesses obtain micro loans.

Results
Three small businesses (graphic arts, small farm & bakery) are in the process of applying for small loans with the assistance of the regional collaborative group.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

Outcome #9

1. Outcome Measures

O: Social Capital Development: Community Partnerships will be developed through community networks and mentoring. I: Number of participants in network and mentoring relationships.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

O: Spaces and Places: Student teams will develop design concepts that meet community planning and design needs. I: Completed design project.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
People in the community of Moore feel the need to have a "nuetral" location to have community activitities and Butte County lacks a large facility for family and community gatherings outside of the school.

What has been done
Members of the Moore Community Association (a Horizon outcome) expressed the need to develope a facility. We have helped facilitate this by putting the MCA in contact with UI Archetecture, the High County RC&D and with Senator Risch's Office who are interested in the project.

Results
The MCA now has developed some criteria for design of the building, have aquired land for the building and are working with the HC RC&D to develop plans and funding for the project.

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
131	Alternative Uses of Land
134	Outdoor Recreation
608	Community Resource Planning and Development
903	Communication, Education, and Information Delivery

Outcome #11

1. Outcome Measures

Entrepreneurs establish or expand their business. Number of business clients establishing new businesses or expanding existing businesses (measured every third year)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	7

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Local business provide employment for local residents, and if locally own further add to the econmic base in rural communities.

What has been done
Assistance was provided through the Business Center to Family Dollar Corp, Bobbies Dollhouse, DeJavue, for regulatory issues promotion and merchanzing of the business. New business formation assistance was provided to Big Wood River Raspberries. Assistance was provided to help expansion for Blue Sage Farm and Green Goat Farm.

Results
Seven businesses were created or expanded in rural Idaho.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Economy
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Kelly's Whitewater Park (Kelly's) in Cascade, Idaho resulted from an asset-driven economic development effort led by the University of Idaho Horizons project. The park was intended to fill the void after the local sawmill closed in 2001.

A 2007 University of Idaho Extension community leadership program (Horizons) provided the necessary momentum to turn this idea into action. The primary intent of this study is to evaluate initial results and identify constraints and leverage potential for the park's economic impact. The study identifies community integration and urban connectivity as constraints and value-added activities as leverage.

The study's secondary purpose is to clarify and validate visitor-counts to aid the community in a more effective discussion.

The study used a quantitative survey design with a self-administered questionnaire. Results are based on 243 interviews conducted at 24 sessions, randomly covering the open park-hours on weekdays and weekend days during the months of July and August. With only eight interviewees (3%) refusing to answer, the survey results are accurate with plus/minus variations of 6% at 95% statistical confidence.

Even though 60% of park visitors originate from within a 2 hour drive, only 8% of the 40,000 unique daily visitors are from Valley County; 26% of visitors are from outside of Idaho. About 10,000 (25%) visitors came specifically for Kelly's. More than half (54%) of visitors had Kelly's as one of several destinations on their trip. The remaining 21% of visitors did not have the park as a planned destination and they were already in Valley County. Taking this into account the study estimates that 15,000 of the 40,000 unique daily visitors were new (incremental) to Valley County. Cascade, not being a strong tourist destination before Kelly's, can count 90% of 40,000 unique daily visitors as incremental.

The survey's results on spending-categories per visitor are extrapolated to visitor spending using typical spending patterns. Average stay per visitor is 1.7 days with an average spending of $43/day, with the whitewater enthusiasts (25% of visitors) spending less - primarily because this relatively younger group favors camping over lodging in a hotel. The survey results on visitor origin and purpose of visit were used to determine the proportion of visitor spending that translates into economic impact.

Key Items of Evaluation

A conservative estimate of Kelly's economic impact on Valley County is then approximately $600,000, representing 7.5 seasonal jobs and a tax impact of around $84,000 (equally divided over state and federal receipts). The estimated impact for Cascade is around $436,000, representing 5.5 seasonal jobs (excluding the jobs at the park). The park's economic impact is not concentrated in Cascade but seems more evenly distributed over Valley County as supported by long-term taxable sales trends in the three different sub-regions of Valley County.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger: Dairy

☑ 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
301	Reproductive Performance of Animals	20%		20%	
302	Nutrient Utilization in Animals	20%		30%	
305	Animal Physiological Processes	20%		20%	
307	Animal Management Systems	20%		20%	
308	Improved Animal Products (Before Harvest)	0%		5%	
311	Animal Diseases	20%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.3	0.0	3.0	0.0
Actual Paid Professional	3.5	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.8	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**
56987	0	106564	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
56987	0	106564	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
267402	0	639530	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Dairy team continued to focus on training for dairy workers, in classrooms and on dairies. New programs included a certification course for milkers (including certification in Spanish) and a series of workshops for middle-managers. Artificial insemination schools were delivered in Spanish and English.

Projects with local dairies included the Treasure Valley Dairy Replacement Heifer project and a number of 4-H and FFA dairy projects. A dairy school was presented in SE Idaho, and consultations with dairy producers were conducted thro0ughout the dairy-producing region of the state.

The Dairy team was engaged in multi-state activity by a chairing committee and submitting fact sheets to the DAIReXNET website.

2. Brief description of the target audience

The target audiences most likely to participate in and benefit from dairy extension programs are: dairy producers, dairy workers, and allied industry.These audiences will participate by serving on planning committees, attending workshops/schools, meeting one-on-one with topic team members, reading extension publications, and participating in on-farm projects.

3. How was eXtension used?

the dairy team contributes to DAIReXNET and uses those resources for their programs.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2044	108670	85	0

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	7	7

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Winter Dairy Forums.

Year	Actual
2012	3

Output #2

Output Measure

- Milker schools.

Year	Actual
2012	5

Output #3

Output Measure

- Calf Schools.

Year	Actual
2012	2

Output #4

Output Measure

- Artificial Insemination Schools.

Year	Actual
2012	3

Output #5

Output Measure

- Feeder Schools.

Year	Actual
2012	2

Output #6

Output Measure

- Popular Press articles.

Year	Actual
2012	6

Output #7

Output Measure

- Abstracts and Proceedings.

Year	Actual
2012	13

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Dairy Producers and workers will increase knowledge by attending dairy schools and dairy forums. I: Number attending schools and forums.
2	O: Dairy workers will increase knowledge and understanding of dairy management practices. I: Percent knowledge change by attendees (as evaluated with pre/post testing).
3	O: Sound dairy management practices will be adopted by dairy operations as a result of attending the management schools. I: Percent of participants with intent to adopt recommended dairy management practices (as evaluated with pre/post testing).
4	O: Dairy workers will use proper techniques taught in dairy education programs (e.g., AI techniques, feeding adjustments, milking techniques). I: Percent of participants demonstrating mastery (assessed at dairy education programs).

Outcome #1

1. Outcome Measures

O: Dairy Producers and workers will increase knowledge by attending dairy schools and dairy forums. I: Number attending schools and forums.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	203

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Milker training improves milking techniques, milk quality, worker and owner satisfaction.

What has been done
Two UI Dairy Extension Spanish and English language AI Schools were held in 2012. One Middle Manager School focused on reproduction of lactating cows was held.

Results
30 people attended these educational events. Those attending the Spanish and English language AI Schools successfully performed semen handling and passed the AI gun through the cervix of a cow.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases

Outcome #2

1. Outcome Measures

O: Dairy workers will increase knowledge and understanding of dairy management practices. I: Percent knowledge change by attendees (as evaluated with pre/post testing).

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

O: Sound dairy management practices will be adopted by dairy operations as a result of attending the management schools. I: Percent of participants with intent to adopt recommended dairy management practices (as evaluated with pre/post testing).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	45

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Hispanic dairy managers usually lack scientific and training knowledge to fully understand and fulfill their responsibilities as diary managers. They also lack of support group where they can get answers in Spanish and English at the same time for better understanding of the topics addressed.

What has been done
Monthly meetings with Hispanic dairy managers, called Dairy Hispanic managers round table.

Results
Hispanic dairy managers have been attending this monthly meetings for more than one year. They are very responsive and happy because Extension is helping them to be better managers. An estimated 150000 cows are affected by what these managers learn in our meetings, since managers from the biggest dairies around the area attend the meetings. Some English speaking dairy or allied industry personnel attend the meetings to learn more and practice their Spanish

too.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases

Outcome #4

1. Outcome Measures

O: Dairy workers will use proper techniques taught in dairy education programs (e.g., AI techniques, feeding adjustments, milking techniques). I: Percent of participants demonstrating mastery (assessed at dairy education programs).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	34

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Improved AI skill should lead to increased AI pregnancy rates. Newly certified AI technicians have increased earning potential and improved employability.

What has been done
AI schools were taught for beef and dairy producers and employees. Participants learned proper Semen handling and AI technique of cattle.

Results
All students exhibited 100% mastery of the techniques necessary to successfully perform artificial insemination of dairy and beef cattle.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
305	Animal Physiological Processes
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Government Regulations
- Competing Programmatic Challenges
- Other (continuing rapid growth of this industry in Idaho)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Family Economics

☑ 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
801	Individual and Family Resource Management	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	4.7	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
197402	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
197402	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
125710	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Family Economics team created and delivered dozens of presentations for a variety of

participants. Primary emphasis on Personal Credit was delivered through workshops and media releases. Eighty-seven high school teachers participated in the HSFPP training program.

Personal saving strategies were featured in a number of programs, and were augmented by 40 "Welcome to the Real World" classes that were taught in high schools. Retirement planning was taught as a part of Annie's Project and in stand-alone workshops.

Indirect methods to reach learners included newsletter and public media articles and interviews, video spots, and a website.

-

2. Brief description of the target audience

Basic Financial Management: Young adults and those who are new to financial management (widows, divorcees, immigrants, etc.) and individuals who need to improve their financial management practices will use family economics publications, web sites and participate in classes/workshops. Professionals who work with low-income audiences and those with financial challenges will be trained and/or provided with family economics publications and curriculum.

Financial Security in Later Life: Adults will utilize publications, web sites, and educational programs covering retirement planning, investing, government programs benefitting senior citizens, long term care and legal education. Mid-life and older adults who are caretakers of elderly relatives and friends will use publications, the website and/or attend classes. Profesionals who serve elderly clients will use publications, curriculum materials, website and/or training provided by extension.

Youth Financial Literacy: Teachers, youth group leaders, parents and youth will utilize web sites, publications and educational programs. Teachers and youth group leaders will purchase extension curriculum for youth.

3. How was eXtension used?

Faculty contribute to this CoP.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4698	329061	2434	5402

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	2	2	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Newsletter articles published; print or electronic.

Year	Actual
2012	35

Output #2

Output Measure

- Popular Press articles.

Year	Actual
2012	7

Output #3

Output Measure

- Professional or paraprofessional trainings.

Year	Actual
2012	28

Output #4

Output Measure

- Classes, seminars, and workshops.

Year	Actual
2012	179

Output #5

Output Measure

- Websites developed or updated.

Year	Actual
2012	2

Output #6

Output Measure

- Lesson/curriculums developed and published.

Year	Actual
2012	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Participants increase awareness of effective financial management practices.I: Number of participants reporting awareness on end-of-class evaluations.
2	O: Participants gain new personal finance knowledge.I: Knowledge gain reported on end-of-program evaluations.
3	O: Participants adopt recommended financial practices.I: Participant responses on end-of-program and follow-up evaluations.
4	O: Extension Family economics information is accessible to new audiences through Extension websites, social media, and use of technology.I: Number of website sessions and pages visited; number of social media followers, number of participants in Adobe Connect, chat, or other trainings offered via technology.

Outcome #1

1. Outcome Measures

O: Participants increase awareness of effective financial management practices.I: Number of participants reporting awareness on end-of-class evaluations.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	427

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Turn the news on any day and you will find leadership challenges and individual and business financial difficulties. What makes a strong leader? What produces an effective/successful business? Without an answer to these questions, businesses will continue to experience conflicts and employees will continue to seek "better" opportunities.

What has been done
Students from a U of I Accounting class become "leaders" for a day. In this 3 tiered bartering simulation, students work together, work separately and then work as management to make decisions. Although never the same, the results are often similiar.

Results
These students (future leaders of businesses) seek out the most in points to earn one of the three prizes at the end of the simulation. Often "stepping" on other students to reach the top, those with the most points change and adapt rules to make the scale tip in their favor; often forgetting about those that helped them move up. At the end of the simulation, 90% of the students felt that power was abused and 92% felt the simulation helped them/somewhat helped them understand what good characteristics of a manager should be. Another simulation is scheduled for Fall 2012.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #2

1. Outcome Measures

O: Participants gain new personal finance knowledge.I: Knowledge gain reported on end-of-program evaluations.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1386

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Money management is a critical life skill to have in order to be successful. Yet, 40% of American families report living beyond their means and have significant credit card debt. Many children and adolescents are not being taught how to manage their money. Yet, teens are active consumers, spending 98% of their money instead of saving it. Additionally, more than 1 in 5 youths ages 12 to 19 have their own credit cards or have access to parent's credit cards, and 14% have debit cards.

What has been done
Welcome to the Real World was delivered across the state. The program was taught five times in two high schools in Franklin County to a total of 227 students.

Results
Ninety students completed a post evaluation, which had students indicate what they learned during the program: 50% how to write a check, 44% the difference between wants and needs, 65% how to open a savings and checking account, 72% how to balance a checkbook register, 74% how to set up and use online banking, 71% there are budget percentages for different expense categories, 67% there is a relationship between education and potential earnings, and 59% the 'time value' of saving money.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #3

1. Outcome Measures

O: Participants adopt recommended financial practices.I: Participant responses on end-of-program and follow-up evaluations.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1167

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
A good credit score will influence what individuals are paying for loan rates, mortgage rates, credit card rates, and insurance rates. A credit score will also influence job eligibility, access to utilities, military rank, and ability to rent.

What has been done
Extension organized workshops and engaged a credit score expert in the Treasure Valley to help individuals learn the techniques for raising credit scores.

Results
Sixty-four individuals attended the 2 workshops. Before the class only 25% of the participants had ordered a copy of their credit report, after the class 92%. Before the class only 18% had worked to improve their credit score after class 95%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #4

1. Outcome Measures

O: Extension Family economics information is accessible to new audiences through Extension websites, social media, and use of technology.I: Number of website sessions and pages visited; number of social media followers, number of participants in Adobe Connect, chat, or other trainings offered via technology.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	5395

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Idaho legislators are beginning to see the impact of technology on our kids and society. On the ballot for 2012, Proposition 1, 2, 3 addresses the need for technology in our classrooms, outside of our classrooms, and teacher education to support these changes. Our students in the U.S. are falling behind where technology, science, math and engineering are concerned not to mention their financial well-being.

What has been done
A team of interdisciplinary faculty and staff from U of I created, are testing and modifying the Prosperity Quest, a Financial Capability simulation for students 13-college age. Students select an education, a career, and daily life expenses in this interactive game. They "live" with those choices through the "month" in the game.

Results
Moscow High School students came to the University to test the simulation. Before they began, we asked how many had financial literacy education prior (54% replied "none" or "not sure") and if they had a financial plan for their money (84% said "no" or "hadn't given it a thought"). After the simulation, 77% thought it would be a good idea to have a saving/spending plan in place while 18% needed to think about it or didn't have money to manage now. They learned about the value of an education and how quickly expenses use up hard earned money. Also, 3 students in this group were autistic. This simulation made a huge impact on them. Later, one of the students told me she had been trying to "beat the system" on her own. Another student was "stressed" when he didn't have enough time to complete the simulation in our workshop. His teacher told us that she has difficulty keeping him engaged for longer than 20 minutes. He was enthralled with the simulation for the entire time.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Idaho is one of 40 states in the U.S. that have adopted personal finance education standards or guidelines for high school students. Many Idaho teachers are teaching personal finance and it is vital they are adequately prepared to teach this important subject. Results of a national report show that fewer than 20% of teachers felt very competent to teach core personal financial concepts, and only 37% of K-12 teachers had taken a college course in personal finance. This study also reported that 89% of teachers agree or strongly agree that students should take a personal finance literacy course or pass a test for high school graduation (www.nefe.org).

The University of Idaho Extensions yearly NEFE High School Financial Planning Program teacher trainings are needed to improve teachers competency to teach Idaho's youth about personal finance. Without Idaho teachers having the necessary competencies to teach personal finance, our youth's future economic well-being is at risk.

During the past six years, UI Extension provided HSFPP Student Guides that are valued at more than $58,000 to Idaho teachers and youth leaders. Extension leveraged an additional $63,500 of grants and in-kind contributions to conduct HSFPP workshops.
Workshop participants have taught the HSFPP curriculum to over 48,000 students in schools, correctional facilities, church groups, Indian Reservations, and other settings throughout Idah

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Farm and Ranch Management

☑ 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
111	Conservation and Efficient Use of Water	0%		10%	
132	Weather and Climate	0%		10%	
212	Pathogens and Nematodes Affecting Plants	0%		10%	
601	Economics of Agricultural Production and Farm Management	25%		10%	
602	Business Management, Finance, and Taxation	25%		10%	
603	Market Economics	15%		10%	
605	Natural Resource and Environmental Economics	15%		10%	
606	International Trade and Development	10%		10%	
609	Economic Theory and Methods	5%		10%	
610	Domestic Policy Analysis	5%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	3.1	0.0	1.5	0.0
Actual Paid Professional	5.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.3	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**
113975	0	223507	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
113975	0	223507	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
293494	0	262286	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Farm and Ranch Management team delivered a variety of courses and workshops in 2012. Six-week farm management courses were taught in two Eastern Idaho locations (Rexburg, Pocatello), attracting beginning and established farmers and ranchers from 11 counties to learn principles including goal setting, inventory management, performance monitoring, and improved profitability. Farm management schools taught in three Eastern Idaho locations reached both agricultural producers and lenders from 16 Idaho counties with training and insights about useful tools and techniques to manage the business aspects of agricultural enterprises. Elsewhere, educational events included farm tools workshops, marketing workshops, futures workshops, and presentations at various grower meetings covering topics such as fertilizer economics, rental formulation for pasture, and the economics of irrigation efficiency. Farm succession workshops (4-days, 16-hours of instruction) were delivered in several locations.

Extension coordinated a farm business management program for Tribal Members, in collaboration with Idaho State University and the Fort Hall Tribal Tax Department. The Tribal Tax Department provides scholarships to pay for Tribal members to attend this course which runs from the end of October to the middle of March.

Agricultural risk was a primary topic for numerous educational workshops and activities. Extension delivered education through the Farm Safety Day camp and through a syndicated radio interview on conducting a farm hazard identification checklist. Extension provided information on West Nile Virus and Swine flu transmission at county fairs.

The Farm and Ranch Management team members contribute to numerous regional economic studies each year; this year focusing on the Magic Valley. In an annual activity, the economic conditions in Idaho were synthesized and analyzed to create financial projections for the agricultural sector. This project results in published reports, news releases, presentations, and other formats to deliver to decision makers.

2. Brief description of the target audience

The target audience is comprised of farmers, ranchers and agribusiness managers in Idaho who are interested in improving their business management skills. This would include farmers and ranchers who are struggling financially and need to evaluate alternatives and may need help with basic financial management concepts, as well as highly successful farmers and ranchers who want to stay at the cutting-edge, improve their efficiency and/or evaluate alternative crops/cropping systems or alternative livestock/livestock production systems.

Participants will attend workshops, seminars and classes offered in a number of venues, including the traditional commodity schools/conferences as well as specialized farm managment classes. Program participants will also access decision-aid computer programs and other resource material directly from the Agricultural Economics and Rural Sociology web site.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	11305	44437	265	462

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

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	6	10	16

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Farm Management Schools/Classes.

Year	Actual
2012	13

Output #2

Output Measure

- Crop & Livestock Costs and Returns Estimates Published.

Year	Actual
2012	41

Output #3

Output Measure

- Number of Financial Condition of Idaho Agriculture tri-fold distributed

Year	Actual
2012	2385

Output #4

Output Measure

- Media Contacts.

Year	Actual
2012	134

Output #5

Output Measure

- Workshops/presentations at Commodity Schools/conferences, Farm Management Schools or other appropriate venues.

Year	Actual
2012	119

Output #6

Output Measure

- Office/one-on-one consultations

Year	Actual
2012	498

Output #7

Output Measure

- AERS web site visits related to farm management

Year	Actual

2012	200

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Educational material is widely distributed to clientele. I: Number of publications and other resources distributed
2	O: Clientele motivated to obtain knowledge and/or learn new management skills.I: Number of clientele attending educational programs.
3	O: Clients learn about new issues, management practices or marketing tools.I: Number of clientele attending educational programs that indicate a change in knowledge.
4	O: Clientele apply new knowledge about issues, management practices or marketing/risk management tools. I: Number of clientele attending educational programs that indicate an intention to change a practice or that have changed a practice.
5	Economic Evaluation and Modeling of Agricultural Production and Responses to External Factors

Outcome #1

1. Outcome Measures

O: Educational material is widely distributed to clientele. I: Number of publications and other resources distributed

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	949

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Partcipants in classes will utilize their resources to further their education. Publications, budget information, and other resources are a valuable teaching tool in helping participants understand and research a topic in more depth.

What has been done
Educational material and resources are distributed to Annie's Project participants throughout the course. We use Idaho Crop and Livestock Cost/Revenue information to present on enterprise budgeting. We also use resources in tax documentation, estate planning, financial documentation and record keeping systems.

Results
Participants from the Annei's Project classes have looked back through their resource material and used throughout the year. They have contacted outside resources based on information from the class and found additional information to complement their notebook of material. Several comments made by participants have shown that they see a high importance on using their resource material to help guide them and interpret information more usefully.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
605	Natural Resource and Environmental Economics
606	International Trade and Development

Outcome #2

1. Outcome Measures

O: Clientele motivated to obtain knowledge and/or learn new management skills.I: Number of clientele attending educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1259

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Producers need education in order to increase their level of management. This management can be in several areas. Without this increase in management, operation will be less competitive and less able to keep pace and continue the operation.

What has been done
The U of I Farm Management Team in Southern and Eastern Idaho developed classes to educate producers on how to be more efficient in certain areas. These classes include: Management Tools, Farm Financial Management, Futures Market For Dummies, and Estate Planning.

Results
In Burley and Twin Falls, 11 people took the Tools Class, 11 operations took the Farm Financial Management Class, 11 people took the Futures Marketing class, and 10 took the Estate Planning course.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
605	Natural Resource and Environmental Economics
606	International Trade and Development

Outcome #3

1. Outcome Measures

O: Clients learn about new issues, management practices or marketing tools.I: Number of clientele attending educational programs that indicate a change in knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	262

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Marketing agriculture products is always changing, therefore clientel need information on how to market their different commodites in new ways. Value-added marketing has progressed and is being incorporated in many new industries.

What has been done
A panel of innovative agriculture marketers were brought to the Annie's Project class. Each one presented on their individual marketing plans and strategies. After each presentiion we then opened the floor to a panel discussion to answer specific participant questions.

Results
Several Annie's Project participants indicate that they learned knowledge in our marketing topic presented. After the completion of Annie's Project, one participant met with a grocery chain to sell their commodity. Another participant joined in with Idaho Preferred to market their produce and began utilizing farmers markets.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
605	Natural Resource and Environmental Economics
606	International Trade and Development

Outcome #4

1. Outcome Measures

O: Clientele apply new knowledge about issues, management practices or marketing/risk management tools. I: Number of clientele attending educational programs that indicate an intention to change a practice or that have changed a practice.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	685

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Agriculture is an inherently risky business. With volatile commodity markets and rising input prices, Idaho farmers and ranchers need access to up-to-date farm management information and tools that will help them identify financial problems, evaluate alternatives, and develop a viable business plan with accurate financial statements

What has been done
University of Idaho Extension Educatorsprovided two in-depth Farm and Ranch Management training in southeast Idaho. The objectives of the six week program are to help producers set goals, inventory resources, monitor performance, and improve profitability. Some of the topics covered in the training include: Financial Statements Financial Analysis Machine Costs Enterprise Budgets Employee Compensation Strategic Goals and Mission Statements Cash Flow Budgets

Results
In 2012, forty-nine producers completed the Farm and Ranch Management training in Rexburg and Pocatello. Participants came from Madison, Fremont, Jefferson, Clark, Teton, Bingham, Bonneville, Power, Bannock, Caribou, and Oneida Counties. An evaluation of the program showed the following: After the training 92% of the producers could answer the three course objectives: 1. Where are we now? 2. Where do we want to be? 3. How do we get there? 100% wrote a mission statement, set strategic goals, and completed an income statement, balance sheets, and a financial analysis. 100% said they would or already had recommended the program to a friend. When asked which tools they planned to continue using in the future the responses were: Mission Statements 80% Strategic Goals 68% Balance Sheets 96% Income Statements 96% Machine Cost Program 85% Enterprise Budgets 64% Cash Flow Budgets 84% Financial Analysis 84% FinPack Program 88%

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
605	Natural Resource and Environmental Economics
606	International Trade and Development

Outcome #5

1. Outcome Measures

Economic Evaluation and Modeling of Agricultural Production and Responses to External Factors

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The future of commodity policies is uncertain, as are the impacts on production patterns if the funds for Title 1 of the Farm Bill are dramatically reduced. U.S. Agriculture is also impacted by such external factors as trade legislation, environmental regulations, weather conditions (drought, floods, freezes, etc.), diseases (wind borne, seed borne, and insect borne) and market structures in sectors or businesses which purchase agricultural products as inputs.

What has been done
Research results were generated for projects examining the impact of various plant diseases and insect pressures on crops that are important to Idaho and the Pacific Northwest. Several research projects dealing with onion and potato disease issues are in progress with papers in review at various journals.

Results
The iris yellowspot virus in onions can cause yield losses of up to 60% of the crop, and a shift in the size profile which results in a decrease in product value. Using a visual scale to measure the product damage, each incremental increase in a visual damage rating causes a $2,800 to $5,700

decrease in income per acre of onions grown in Idaho and Eastern Oregon. For each percent infection level in potato virus Y in seed stock of russet Burbank potatoes, between $2.60 and $14.00 per acre in Idaho is lost.

4. Associated Knowledge Areas

KA Code	Knowledge Area
609	Economic Theory and Methods

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The UI cereal team has worked with Kelly Olsen from the Idaho Barley Growers association, to increase our farm management programming to area farmers. We received a grant from the risk management association to produce and deliver a large farm management program. This program included a 12 week course in farm financial management using Finpack, which was taught in Pocatello, Rexburg, and Burley. This program not only included a large number of instruction hours, it also involved getting into the financial books of the farmers to help them make better financial goals and decisions. The grant also supported a farm tools workshop that was held in Pocatello, Rexburg and Burley. These workshops demonstrated the use of a number of computer models, excel worksheets, and programs that assist farmers with financial planning. The grant also included a workshop covering marketing and a final workshop on estate planning. These two workshops were also held in Pocatello, Idaho Falls, and Burley.

We also demonstrated positive changes in behavior in all classes we presented. The futures market workshop is an example of these changes. The results showed that the students increased their knowledge by 31% in the area of futures markets; by 37% in the area of hedging. There was also a measured change in behavior due to this workshop. There was a 43% increase in the frequency the students check and monitor the futures markets for management planning purposes.

A survey of 25 ranchers and ranch wives in Lemhi County indicated that less than 44% of them had a ranch succession plan in place. Working with this information, Lemhi County Extension and Lemhi County Economic Development teamed up to offer a series of workshops to assist ranches in developing a success plan. Utilizing other information from survey regarding topics to cover, it was decided to cover estate planning, communicating within the family, conservation easements, business structure and conflict resolution.

Thirty-five people attended the first workshop and nine people completed all four workshops. It was exciting to see ranches with two generations participating in the workshops. An exit survey indicated that 87.5% of those participating had thought about or discussed an estate plan. Twenty-eight percent of the families had talked with family members about a conservation easement and 14.3% had discussed it before the program. When asked if they had identified their family members' personality compass direction, 25% said they had thought about it, and 50% had them complete the personality compass. All families had thought about or discussed the heirloom scale, values & goals worksheet and a family meeting. Twelve and half percent of them had scheduled a date for a family meeting.

Six months later, two ranch families have had family meetings and are currently working with an attorney to develop an estate plan!

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 8

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
308	Improved Animal Products (Before Harvest)	0%		5%	
311	Animal Diseases	0%		25%	
315	Animal Welfare/Well-Being and Protection	0%		10%	
501	New and Improved Food Processing Technologies	5%		15%	
503	Quality Maintenance in Storing and Marketing Food Products	20%		10%	
504	Home and Commercial Food Service	30%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	30%		15%	
722	Zoonotic Diseases and Parasites Affecting Humans	5%		5%	
723	Hazards to Human Health and Safety	10%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	3.6	0.0	4.0	0.0
Actual Paid Professional	4.6	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.2	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**
59311	0	86368	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
59311	0	86368	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
342742	0	504228	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Food Safety team delivered hundreds of educational programs for widely diverse audiences. Five-week series of food preservation classes were taught in each region of the State. Topics of individual workshops and presentations ranged from bacteria and sour dough to acid canning, to spoilage and drying foods. Team members continue to develop and deliver new programs that tie into special needs/interests of the public, including safe practices for holidays, organic foods issues, and genetically modified foods. The Food Safety team has conducted research leading to development of new food safety knowledge and best practices related to infused oils, garlic, and jerky.

Organized courses of study were delivered for Master Food Safety Advisors across the state. Three sessions of the Preserve@Home web-based course were delivered. One session attracted a diverse sample of publics interested in food safety, but two sessions were delivered for specific targeted audiences including 1) volunteers with food banks, church groups, and community kitchens; 2) food safety advisors serving in Extension offices to respond to public inquiries (in partnership with Washington State University).

UI Extension taught or facilitated the delivery of Ready, Set Food Safe curriculum to high school students in 123 Idaho FCS classrooms; 2404 high school students achieved food handlers certification. The EFNEP and SNAP-Ed educational programs for limited resource families included food safety as part of their outreach to thousands of learners. Germ City was deployed at elementary schools across the state.

Direct education is supplemented by brochures, newsletters and newspaper articles that reach thousands of additional learners each year.

2. Brief description of the target audience

Consumer Food Safety Programs / Just in Time Food Safety / Preserve@Home -- Consumers who need specific information to keep food safe or to avoid risky foods, for example, consumers who call extension offices with questions about food preservation, food storage, etc. Consumer programs cover a variety of topics, for example, using slow cooker safely, preserving foods safely, storing food safely, using labels to avoid allergic reaction, etc. Specific groups of consumers who benefit from targeted food safety information, for example, seniors, parents of young children, volunteers who cook for groups who call extension offices with specific questions, consumers who want food preservation information delivered online.

Food Safety Advisor / Master Food Preserver -- Consumers with particular interest in home food preparation and food safety topics (particularly food preservation and food storage) and in sharing the knowledge with others.

Food Service Food Safety Training -- High school students in foods classes, Adult food service workers

Hand Hygiene Education -- Elementary age children, Families and children at county fairs, adults at health fair settings.

ENP-EFNEP Food Safety -- Limited income families receiving food stamps or eligible to receive food stamps (27 counties), limited income families with children (4 counties).

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7548	214571	5117	8204

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	2	11	13

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of food safety calls answered.

Year	Actual
2012	4229

Output #2

Output Measure

- Consumer food safety classes taught.

Year	Actual
2012	31

Output #3

Output Measure

- Number of new certified Food Safety Advisors (MFPs).

Year	Actual
2012	48

Output #4

Output Measure

- Number of re-certified Food Safety Advisors (& MFP).

Year	Actual
2012	69

Output #5

Output Measure

- Number of volunteer hours logged by FSA/MFPs.

Year	Actual
2012	2418

Output #6

Output Measure

- Students receiving a RSFS certificate.

Year	Actual
2012	150

Output #7

Output Measure

- Participants in hand hygiene education programs.

Year	Actual
2012	4939

Output #8

Output Measure

- Number participants who completed EFNEP series of classes.

Year	Actual
2012	297

Output #9

Output Measure

- Number of participants in ENP one-time classes (keeping food safe).

Year	Actual
2012	750

Output #10

Output Measure

- Number of Preserve@home students passint the final test.

Year	Actual
2012	87

Output #11

Output Measure

- Number of individuals receiving ServSafe certification.
  Not reporting on this Output for this Annual Report

Output #12

Output Measure

- Number of classes taught by FSA-MFP volunteers

Year	Actual
2012	20

Output #13

Output Measure

- Number of food preservation equipment safety checks.

Year	Actual
2012	697

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: People use Just in Time Food Safety Information to help them make decisions about food preparation, storage, etc.I: Number of people who describe that they will use requested advice.
2	O: Food Safety Advisor/Master Food Preserver-Knowledgeable citizens volunteer to help others learn and adopt safe food practices.I: Number of certified Food Safety Advisors and Master Food Preservers.
3	O: Food Service Food Safety Training-High school students are prepared to work in food service jobs.I: Number of students passing the RSFS exam and becoming certified.
4	O: Hand Hygiene Education-People will practice improved hand hygiene for reduction of colds, flu and foodborne illness.I: Hand Hygiene Education-Program participants indicate their intention to adopt recommended health practices.
5	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.
6	O: Other scientists are aware of our research findings. I: Number of refereed scientific journal articles.
7	O: ENP-EFNEP Food Safety-Low income family members will practice safe food behaviors.I: Number of EFNEP graduates reporting intent to adopt practices.
8	O: Interested consumers will learn skills through Preserve@Home I: number of people completing program

Outcome #1

1. Outcome Measures

O: People use Just in Time Food Safety Information to help them make decisions about food preparation, storage, etc.I: Number of people who describe that they will use requested advice.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1286

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With the economy concerns, more and more people are canning and preserving their own food. The Extension office is known as being a reliable source of information on Home Canning. Most canners are concerned about the safety of their home canned food product.

What has been done
Extension educators and volunteers answered thousands of calls, tested hundreds of pressure cooker lids and presented programs on food preservation as requested.

Results
Extension Educators are a critical source of safe home food preservation information. Of the clientele surveyed following a request for information, the number who stated that they would use the information provided renged from about 20% - 80%. More than 90% indicate that they will return to extension for future food safety information.

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #2

1. Outcome Measures

O: Food Safety Advisor/Master Food Preserver-Knowledgeable citizens volunteer to help others learn and adopt safe food practices.I: Number of certified Food Safety Advisors and Master Food Preservers.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Interest in home food preservation has always been strong in Idaho and has recently been increasing because consumers want to save money, preserve garden produce, have more control over their food, and live more sustainably As a result of these programs, Idahoans will store and preserve food safely and access to food preservation information by the general public will be increased via volunteers.

What has been done
UI Extension has trained and updated 117 volunteers throughout the year to be able to present programs, take questions, conduct fair judging, and test food safety equipment.

Results
The volunteers volunteered over 2,400 hours of time, answered over 4,000 food safety/food preservation questions, volunteered at numerous food safety equipment clinics and community events.

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #3

1. Outcome Measures

O: Food Service Food Safety Training-High school students are prepared to work in food service jobs.I: Number of students passing the RSFS exam and becoming certified.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
About one-third of employed youth 15-17 years of age work in food service. Over 70% of teens work in food service as their first job. Americans eat many foods that are prepared by others, via a variety of food service formats. Many Idaho high schools have vocational food service programs, including in-school cafes or bakeries, where food is prepared for public sale.

What has been done
The entire Ready Set Food Safe program 6 times (18 classes) in Caribou, Franklin, and Oneida Counties. Additionally, I assisted a high school teacher in teaching the program 1 more time (2 classes) in Malad County.

Results
150 students (approximately 83% of those who took the course) passed the exam with 80% or better to receive an Idaho Food Safety and Sanitation certificate.

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #4

1. Outcome Measures

O: Hand Hygiene Education-People will practice improved hand hygiene for reduction of colds, flu and foodborne illness.I: Hand Hygiene Education-Program participants indicate their intention to adopt recommended health practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2532

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Cold and Flu season is always a popular time to offer hand hygiene education. The school nurses in the Post Falls, Lakeland, and Coeur d'Alene School Districts love Germ City and I have developed a very strong teaching style for this program over the years. Schools are interested in teaching their children to be better hand washers to try to reduce the number of sick days and number of students spreading germs.

What has been done
A 30 minute presentation is provided to each classroom, 15-20 minutes of discussion about germs, when to wash, and how to wash, then each student is allowed inside Germ City to test their hand washing skills.

Results
Youth who were shown and then practiced how to properly wash their hands using glow in the dark lotion learn to identify locations on their hands that they did not wash properly. Participants surveyed after the program indicate their intention to adopt recommended health practice and will share this information at home.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #5

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety

Outcome #6

1. Outcome Measures

O: Other scientists are aware of our research findings. I: Number of refereed scientific journal articles.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #7

1. Outcome Measures

O: ENP-EFNEP Food Safety-Low income family members will practice safe food behaviors.I: Number of EFNEP graduates reporting intent to adopt practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	181

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Children are at higher risk of food borne illness and parents need to use good food safety practices to keep their young children safe.

What has been done
Presented food safety education to 297 graduates of Idaho's EFNEP program.

Results
Of 297 graduates, 61% of participants showed improvement in one or more of the food safety practices (thawing and storing food properly).

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #8

1. Outcome Measures

O: Interested consumers will learn skills through Preserve@Home I: number of people completing program

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	87

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Individuals who are preserving food at home are seeking research-based food preservation education so their efforts result in safe, high quality preserved food.

What has been done
Preserve @ Home is a facilitated, web-based food preservation course with educators from Idaho,Washington, Oregon and Colorado.

Results
Nearly 90% of students completed the class with a grade of 70% of better which indicates increased knowledge of safe home food preservation practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

greater focus on local food supplies and preservation at home.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Ready, Set Food Safeis an Extension curriculum for teaching food service food safety to high school students. This curriculum was developed because seventy percent of high school students work in food service as a first job. About one-third of employed youth 15-17 years of age work in food service. Yet, commercially available (for example, ServSafe) or public health sponsored education in food service food safety is not readily available to this group. Idahoans who use food service establishments expect their food is handled safely.

After completing Ready, Set Food Safe curriculum, students who pass the state-approved certification test earn a food safety and sanitation certificate, also called a food handler's card. Since introduction of Ready, Set Food Safe in 2001 (it has been updated twice), over 16,000 Idaho high school students have earned a certificate. Currently about 2700 students per year receive their food handler's card.

Teachers who use this program do so voluntarily because they see value for their students. Many teachers use the program year after year. Some teachers have emailed expressions of appreciation about the program. One teacher's comment, quoted below from an email received January 9, 2012, is typical of what I hear.

"I really like this program--I found it to be very effective with my students at XX High School and the program's depth really prepares our students to work in the food industry. I feel comfortable when I go to a restaurant and see some of my former Food Science students working in the kitchen and serving food. It also makes me feel good that I can help them gain skills that will actually put money in their pockets immediately and throughout their lifetimes."

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Climate Change: Forest Management

☑ 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
123	Management and Sustainability of Forest Resources	50%		20%	
132	Weather and Climate	15%		20%	
213	Weeds Affecting Plants	15%		20%	
215	Biological Control of Pests Affecting Plants	10%		20%	
216	Integrated Pest Management Systems	10%		20%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.4	0.0	1.5	0.0
Actual Paid Professional	2.6	0.0	2.2	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
263703	0	121654	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
263703	0	121654	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
4081	0	1322321	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Climate Change and Sustainable Energy
A major effort for the Forest Management Team has been participation in a regional NARA Biofuels project (led by Washington State University).

Loggers:
Conducted a needs assessment for 11-12 panhandle extension programming for loggers was from interaction with individual loggers, the Idaho Statewide Logger Education Committee, the Idaho Sustainable Forestry Initiative (SFI) State Implementation Committee, program evaluations from the previous year's LEAP programs, the Associated Logging Contractors of Idaho, and individual and group consultations with cooperating agencies and institutions such as the Idaho Department of Lands, and other UI faculty.
In 11-12 we held one session of Logger Education to Advance Professionalism ("LEAP") and three sessions of LEAP Update, an annual 2-day program in which LEAP graduates build on their professional development with in-depth training on a variety of forestry topics identified each year by loggers.
UI Extension collaborated with most Idaho forest products companies that participate in the "Sustainable Forestry Initiative" (SFI), a national effort of the American Forest and Paper Association. Partially stimulated by SFI, a statewide logger education committee recently developed the Idaho "Pro-Logger" program, administered through the Associated Logging Contractors of Idaho (ALC). Among other standards, the Pro-Logger credential requires participation in LEAP and 16 credits of continuing education annually. With the increased emphasis on providing educational opportunities for loggers, Extension has worked to integrate logger education needs into other education programs as well.

Family Forest Owners:
Conducted a needs assessment for 11-12 family forest owner Extension program using interaction with Idaho Master Forest Stewards, program evaluations from the previous year, six family forest owner focus groups held in 2009-2010, and individual and group consultations with cooperating agencies and institutions, the Idaho Forest Owners Association, the Idaho Forest Stewardship Advisory Committee, and others.
As part of the Idaho Forest Stewardship program, UI Extension provided a series of workshops, field days and other educational activities titled "Strengthening Forest Stewardship Skills" designed to strengthen forest owners' ability to improve forest health and growth.
Panhandle forest owners can choose from over 140 forestry Extension publications available through local UI Extension offices. Extension videos on water quality, "selective" logging, and forest tax management, and can access archived Woodland Notes articles, a database of consulting foresters, links to relevant websites, and a variety of other useful information on the UI Extension Forestry Web site, maintained by Extension forestry staff on the UI Moscow campus.

Professionals:
Conducted a needs assessment for 11-12 panhandle Extension programs for natural resource professionals through interactions with professionals, program evaluations from the previous year, and individual and group consultations with cooperating agencies and institutions.

2. Brief description of the target audience

The primary audiences for this topic team are family forest owners, loggers and natural resource professionals. They have been discussed in detail in earlier sections of this document.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4987	7700	3627	0

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

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	14	14

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, field days, etc.

Year	Actual
2012	30

Output #2

Output Measure

- Number of participants in workshops, field days, etc.

Year	Actual
2012	1299

Output #3

Output Measure

- Number of articles in popular and trade press.

Year	Actual
2012	3

Output #4

Output Measure

- Number of web site "hits".
  Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Continuing Education hours for foresters, loggers, & other natural resource Professionals.

Year	Actual
2012	1109

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Family forest owners manage resources to achieve healthy, sustainable forests.I: Numbers of family forest owners indicating they will adopt recommended practices (e.g., monitor for insect, disease, or animal damage; thin forest trees; complete a forest management plan; etc.).
2	O: Family forest owners' understand issues and practices related to forest ecology, silviculture, and forest management.I: Number of family forest owners participating in educational programs who report an increase in awareness and knowledge of specific forest ecology, silviculture, and forest management issues.
3	O: Loggers operate using recommended forest management practices (e.g., monitor for insect, disease, or animal damage).I: Numbers of LEAP Update participants indicating they will adopt specific improved forest management practices.
4	O: Loggers possess credentials required by forest industry to conduct business.I: Number of loggers who complete continuing education requirements.
5	O: Foresters and other natural resource professionals have knowledge consistent with current scientific understanding and emerging technologies.I: Number of natural resource professionals demonstrating increase in knowledge related to specific forest science and technology topics.
6	O: Other scientists are aware of our research findings. I: Number of refereed scientific journal articles.
7	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.
8	Biological Control in Pest Management Systems of Plants

Outcome #1

1. Outcome Measures

O: Family forest owners manage resources to achieve healthy, sustainable forests.I: Numbers of family forest owners indicating they will adopt recommended practices (e.g., monitor for insect, disease, or animal damage; thin forest trees; complete a forest management plan; etc.).

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

O: Family forest owners' understand issues and practices related to forest ecology, silviculture, and forest management.I: Number of family forest owners participating in educational programs who report an increase in awareness and knowledge of specific forest ecology, silviculture, and forest management issues.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	49

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Family foresters and forest land managers are concerned about weed invasions following logging events.

What has been done
biological control technology transfer workshops and field days were held to instruct attendees on the identification and management of weeds on their property.

Results
Participants inquired about additional information, outreach products and sources to obtain insect releases to implement biocontrol as a management practice. Post evaluations measured an average 68% gain in knowledge of the subject matter.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
132	Weather and Climate
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

O: Loggers operate using recommended forest management practices (e.g., monitor for insect, disease, or animal damage).I: Numbers of LEAP Update participants indicating they will adopt specific improved forest management practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	164

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

O: Loggers possess credentials required by forest industry to conduct business.I: Number of loggers who complete continuing education requirements.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	111

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures

O: Foresters and other natural resource professionals have knowledge consistent with current scientific understanding and emerging technologies.I: Number of natural resource professionals demonstrating increase in knowledge related to specific forest science and technology topics.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

O: Other scientists are aware of our research findings. I: Number of refereed scientific journal articles.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
216	Integrated Pest Management Systems

Outcome #7

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #8

1. Outcome Measures

Biological Control in Pest Management Systems of Plants

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Biological control continues to be proven one of the most effective, environmentally sound, and cost-effective pest management approaches used to controlling arthropod pests and weeds. Despite many advances in recent years, our practical and conceptual understanding of success and failure in applied biological control fall short of meeting certain current and future requirements.

What has been done
Research was conducted on a new candidate biological control agent for houndstongue in the U.S., the seed-feeding weevil Moguones borraginis (F.) under quarantine conditions in the Northwestern Biological Control Insectary and Quarantine (NWBIQ) with closely related native North American congeners of houndstongue. The University of Idaho continued to lead or co-lead international efforts to develop biocontrol agents for Lepidium draba (hoary cress), Lepidium latifolium (perennial pepperweed) and Isatis tinctoria (dyers woad) noxious weeds. Research on the differences of specialist insect herbivory pressure on hoary cress between its native Eurasian and introduced North American range were summarized. Data were summarized and published on competitive interactions between hoary cress and grass species to guide re-vegetation measures following the control of the plant.

Results
Research methodologies were developed that will be adopted by colleagues in future weed biological programs. Research on invasion mechanisms, and plant competition contributed to the growing body of literature on factors that allows exotic invasive plants to successfully compete with native vegetation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Competing Programmatic Challenges

Brief Explanation

The Forest Management faculty continues to make a significant investment into a regional, integrated Extension-Research project that is in the early stages of development.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Global Food Security and Hunger: Health & Human Nutrition

☑ 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
311	Animal Diseases	0%		5%	
313	Internal Parasites in Animals	0%		5%	
701	Nutrient Composition of Food	15%		0%	
703	Nutrition Education and Behavior	30%		10%	
704	Nutrition and Hunger in the Population	15%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%		10%	
722	Zoonotic Diseases and Parasites Affecting Humans	0%		5%	
723	Hazards to Human Health and Safety	10%		20%	
724	Healthy Lifestyle	30%		25%	
903	Communication, Education, and Information Delivery	0%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	6.5	0.0	6.0	0.0
Actual Paid Professional	8.1	0.0	2.6	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
144019	0	62116	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
144019	0	62116	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
5537	0	1404146	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Health and Nutrition logged nearly 1,200 individual teaching events and engagement activities in 2012. In total, these efforts reached more than 67,000 Idaho learners. Activities of this team are grouped into several projects described below.

Health & Nutrition faculty participated in more than 300 classes in nutrition education (exclusive of the SNAP-Ed and EFNEP projects) reaching 9,456 contacts; and faculty reported 240 individual consultations with learners about nutrition topics.

The Low-Income and Underserved Audience projects (EFNEP, SNAP-Ed, and SENP) included approximately 900 educational events (classes and one-on-one teaching) reaching nearly than 50,000 contacts in 35 counties. Approximately 30,000 of these learners were youth contacts made through partnerships with local parks and recreation programs and with schools, both in class and through summer and afterschool programs.

The Nutrition and Chronic Disease project logged 31 educational events in 2012 reaching 271 contacts with an interest in diabetes and diabetes prevention.

In the Healthy Lifestyles/physical activity project, more that 750 classes were delivered, the majority targeting seniors with education about strength or balance training, or for broader age ranges, general activity and fitness training related to weight management and overall health. This project logged 6,338 learner contacts.

Health & Nutrition faculty participated in more than 300 classes in nutrition education (exclusive of the SNAP-Ed and EFNEP projects) reaching 9,456 contacts; and faculty reported 240 individual consultations with learners about nutrition topics.

2. Brief description of the target audience

The target audience varies by program. For the program targeting low-income and underserved audience, the UI Extension reaches these individuals in 35 counties through three programs - the Expanded Food and Nutrition Education Program (EFNEP), the Extension Nutrition Program (ENP) and the Senior Extension Nutrition Program (SENP). EFNEP and ENP, funded through USDA, target mainly adults and youth while the SENP, funded through the Area Agency on Aging (AAA), targets seniors at high-nutritional risk and most of them are low-income or vulnerable. The target audience for the Nutrition

and Chronic Disease program includes those interested in learning how to manage or prevent type 2 diabetes and osteoporosis. The target audience for the diabetes classes includes adults with type 2 diabetes, pre-diabetes, or caregivers. The target audience for the osteoporosis classes includes adults with osteoporosis, osteopenia, or those who have a history of these diseases in their family and youth whose bones are still growing and developing. The target audience for the Healthy Lifestyles program includes adult and youth who have poor nutritional habits, are inactive, are overweight or obese and have difficulty managing stress.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	26764	52353	28189	11851

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	7	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Develop Extension publications that can be used in either the low-income underseved population project, the nutrition anc chronic disease project, or the healthy lifestyles project

Year	Actual
2012	1

Output #2

Output Measure

- Submit a journal article based on research conducted in either the low-income, underserved population project, healthy lifestyles project or the nutrition and chronic disease project

Year	Actual
2012	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Improved physical condition of individuals enrolled in a physical activity program. I: Number of individuals who felt physically stronger from the Strong Women classes, Fit and Fall Proof classes, Strength & Balance and Kick Your Boot Camp classes.
2	O: Adult ENP participants will plan to change a dietary or activity behavior after completing a nutrition or physical activity class.I: Number of adult ENP participants who indicate their intention to improve their diet or physical activity.
3	O: Adult EFNEP participants will improve their diets after completing 6 core lessons.I: Number of adults that improve their diets by at least one food group (determined through pre/post 24 hour recalls).
4	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

Outcome #1

1. Outcome Measures

O: Improved physical condition of individuals enrolled in a physical activity program. I: Number of individuals who felt physically stronger from the Strong Women classes, Fit and Fall Proof classes, Strength & Balance and Kick Your Boot Camp classes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1016

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Heart disease is killing more women than men and more Women are living with heart disease than men. Following a lifestyle that includes a healthy diet, weight control, and appropriate levels of activity will reduce the risk of developing heart disease. Women over 40 who work their muscles through a larger range of motion and lift weights will reduce falls and reduce bone loss associated with osteoporosis and osteopenia.

What has been done
Fifteen Strong Women healthy lifestyle classes were taught across the State to women 40 and older. Aerobic exercise and nutrition information was taught to promote healthy lifestyles of moving and eating nutritious foods.

Results
Participants reported an increase in intensity of aerobic exercise and length of time they were able to exercise. An increase from 20 minutes to 30 minutes and more exercise and longer walking from 1/2 mile to 1 mile. Participants also increased the amount of weight that they were able to lift which has been shown to reduce bone loss and increase balance which leads to a reduction in falls.

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

O: Adult ENP participants will plan to change a dietary or activity behavior after completing a nutrition or physical activity class.I: Number of adult ENP participants who indicate their intention to improve their diet or physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2831

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Nutrition education is critical for limited income individuals that have a poor dietary intake. Poor diet and physical inactivity are associated with an increased risk of a number of chronic health conditions including cardiovascular disease, diabetes, some cancers, high blood pressure as well as overweight and obesity.

What has been done
The SNAP-Ed program targets limited resource adults. The SNAP-Ed program Nutrition Advisors taught classes at Easter Seals/Working Solutions, Food Banks, Low-income housing units to reach this number of adults.

Results
Based on a follow-up survey, participants increase their fruits and vegetable consumption, increased their whole grain consumption and increased their low-fat dairy consumption. A report has been compiled by the Idaho Hunger Task Relief Force in Idaho. The report is titled: Nutrition for all Ages: Strengthening Participation, Collaboration and Program Design for the Idaho Extension Nutrition Program. This is a result of focus groups and evaluation of a series of Nutrition classes taught at the Head Start Center.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

724 Healthy Lifestyle

Outcome #3

1. Outcome Measures

O: Adult EFNEP participants will improve their diets after completing 6 core lessons.I: Number of adults that improve their diets by at least one food group (determined through pre/post 24 hour recalls).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	288

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Obesity, poor health, and limited physical activity are major health concerns. Past years of data showed that the EFNEP improved the health and well-being of its limited resource families. Research showed that better health was associated with reduced health care costs, less absenteeism from work, less dependence on emergency food assistance, thus leading to public savings.

What has been done
In FY2012 290 low-income adults enrolled in the Southern District EFNEP; 147 graduated. The graduates learned how to: improve their diets, improve their nutrition practices, stretch their food dollars further, and increase their physical activity rates.

Results
From the EFNEP Reporting System (NEERS5) 90% (133 of 147) of the participants showed improvement in one or more of the nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels, or has children eat breakfast). Also, at exit 32% had a positive change in physical activity. At exit 54% reported exercising 30 to 60 minutes per day, whereas only 44% did so at entry.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior

704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

Outcome #4

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases
313	Internal Parasites in Animals
701	Nutrient Composition of Food
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Two hundred forty-four women, in 11 Idaho counties, ages 29-89, participated twice a week in a Strong Women Stay Young Extension Program for six weeks. Participants completed 6 strength training exercises and received nutrition information at each class. They significantly increased their arm and leg strength by 46-80 percent; increased their intake of fruits, vegetables, whole grains, and low-fat dairy products; and improved their ability to complete daily activities.

Women who participated in the six-week Strong Women Stay Young program reported that they were able to get in and out of their chair or car easier and complete gardening activities. Some tried other physical activities because of their increased strength.; these included golfing, kayaking, hiking up a mountain, snow shoeing, and walking more frequently

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Climate Change: Soil, Water, Waste and Air Management.

☑ 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	10%		15%	
102	Soil, Plant, Water, Nutrient Relationships	10%		15%	
111	Conservation and Efficient Use of Water	10%		15%	
132	Weather and Climate	10%		10%	
133	Pollution Prevention and Mitigation	15%		5%	
205	Plant Management Systems	10%		10%	
307	Animal Management Systems	5%		10%	
312	External Parasites and Pests of Animals	0%		5%	
403	Waste Disposal, Recycling, and Reuse	15%		5%	
405	Drainage and Irrigation Systems and Facilities	10%		5%	
601	Economics of Agricultural Production and Farm Management	5%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	7.0	0.0
Actual Paid Professional	6.7	0.0	6.7	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
281342	0	513479	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
281342	0	513479	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
246457	0	2504509	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Soil, Water, Waste and Air Management team is highly integrated, participating in active projects to discover new knowledge, demonstrate and transfer new technologies, and work to understand local variants that impact resource-based enterprises and the environment. Research activities include comprehensive groundwater studies, field and greenhouse experiments to understand the effects of various compounds in dairy waste water on soils and crops, plant responses to organic nutrients, and composting of farm waste. This work has resulted in a variety of scientific journal publications and a book chapter, professional presentations and reports. New anaerobic digestion systems and biofilters have been developed and used for demonstrations during tours and field days. Field demonstrations help growers and other stakeholders understand local conditions related to nitrogen uptake and fertilizer efficiency, use of cover crops and green manures, water quality monitoring, on-farm composting, manure application, and recycling.

Public issues education about topics such as the Cooperative Conservation Initiative Program, water quality issues, zoning issues, and many others becomes the subject matter for Soil, Water, Waste, and Air team outreach. Applied activities have been shared through a host of workshops and classes and numerous field days and tours. Faculty have produced an array of refereed and Extension publications, web-based fertilizer guides and nutrient management resources. Much of the Extension faculty's work is made possible through collaborations and participation on various citizen and professional alliances concerned with environmental quality and agricultural sustainability.

Extension hosted the Idaho Nutrient Management Conference for the fifth consecutive year. Certified graduates of the master water stewards program "IDAH$_2$O" attained sufficient knowledge and skill to serve as volunteers in collaborative watershed-scale research projects, while gathering water quality information for their communities. ~

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2. Brief description of the target audience

• Producers and Processors provide input and feedback about programs, cooperate on demonstration trials and research, and participate in educational programs
• Professional Consultants provide input and feedback about programs, cooperate on demonstration trials and research, and participate in educational programs.

• The public affected by Nutrient and Waste Management (NWM) issues provide input and feedback about programs and participate in educational programs.
• Local and/or state officials who either develop or implement rules and regulations related to nutrient management.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7010	98330	1105	539

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	5	55	60

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

● Educational workshops, seminars and presentations to producer groups: number of events.

Year	Actual
2012	89

Output #2

Output Measure

- Applied and basic laboratory and field research experiments, number of projects

Year	Actual
2012	16

Output #3

Output Measure

- Newsletters distributed (number of issues) and number of articles submitted for other newsletters

Year	Actual
2012	23

Output #4

Output Measure

- Tours and Field Days

Year	Actual
2012	20

Output #5

Output Measure

- Research and demonstration projects

Year	Actual
2012	22

Output #6

Output Measure

- Professional development credits awarded for participation in courses

Year	Actual
2012	33

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Growers use best practices for water, pesticide, nutrient, or waste management. I: Number of program participants indicating adoption of recommended practices (follow-up survey data) or indicating intention to adopt recommended practices (post-program questionnaire)
2	Producers are aware of issues and knowledgeable of practices that affect the environmental and economic sustainability of crop production. I: Percent of participants reporting that their knowledge had been increased because of their participation in program.
3	Producers are better able to manage pests, nutrients, waste, irrigation systems while protecting water, air, and-or soil resources. I: Number of pest management, nutrient management, waste management, irrigation management plans written with producers.
4	Plant-Soil Feedbacks in Forested and Agricultural Ecosystems
5	Optimizing Biological Processes for Use in Remediation and Biotechnology

Outcome #1

1. Outcome Measures

Growers use best practices for water, pesticide, nutrient, or waste management. I: Number of program participants indicating adoption of recommended practices (follow-up survey data) or indicating intention to adopt recommended practices (post-program questionnaire)

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	106

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Gooding County CAFO issue with sturgeon farm. Water quality and number of animal units. Permitted for 30,000 they want 200,000. Neighbors oppose because of WQ concerns. Planning and Zoning contacted University of Idaho to mediate btween neighbors, fish farm and to write a report of recommendations.

What has been done
Several site visits were made to evaluate situation. Visit with all parties and P&Z. Produced and submitted report: Report of recommendations for improved water quality regarding modification of existing aquaculture CAFO at the Awalt Family Revocable Trust, Bliss Idaho. Answered questions at public hearing.

Results
Sturgeon farm gets permitted for 175,000 animal units. Required to implement waste management recommendations in UI report. Improved water quality will result. Economic impact of increased animal units from 30K to 175K: caviar = $3,480,000; meat = $199,400

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
132	Weather and Climate

133	Pollution Prevention and Mitigation
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Producers are aware of issues and knowledgeable of practices that affect the environmental and economic sustainability of crop production. I: Percent of participants reporting that their knowledge had been increased because of their participation in program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	276

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Pesticide applicators are required to attend 6-15 hours of continuing education to retain their certification and license. This audience is available to learn best management practices to protect human health and the environment from the use of pesticides. Pesticides remain a very important tool to sustainable food production.

What has been done
A variety of topics are presented at pesticide recertification classes to ensure the best and useful information is brought forward to current applicators. Topics such as understanding pesticide labels, environmental protection, personal safety, and best methods for pest control are presented.

Results
Post class evaluations were conducted for three pesticide recertification classes. From those programs 92% of class participants indicated their knowledge of pesticide use and safety increased as a result of the class.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
132	Weather and Climate
133	Pollution Prevention and Mitigation
205	Plant Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities
601	Economics of Agricultural Production and Farm Management

Outcome #3

1. Outcome Measures

Producers are better able to manage pests, nutrients, waste, irrigation systems while protecting water, air, and-or soil resources. I: Number of pest management, nutrient management, waste management, irrigation management plans written with producers.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Plant-Soil Feedbacks in Forested and Agricultural Ecosystems

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Invasive species pose a threat to the sustainability of agriculture and timber production in Idaho. This research focuses on gaining a better understanding of plant-soil feedbacks and how they may contribute to the success of invasive species and be utilized to design more sustainable agroecosystems.

What has been done
Changes in how vegetation have influenced soil macroinvertebrate communities and the influence of composted dairy manure on plant available nitrogen in eroded and non-eroded agricultural soils was investigated.

Results
Overall impacts include new knowledge available for land managers dealing with invasive species. The most important impact of this work is improved knowledge of how a common invasive fern may influence tree nutrition and growth.

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

Optimizing Biological Processes for Use in Remediation and Biotechnology

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Optimization of biological processes can produce economic advantage when applied to biotechnological processes such as waste treatment or remediation. The research examines biological process optimization through the use of several mathematical techniques including random search, hill-climbing, local search and genetic algorithms.

What has been done

Methodologies were developed during this project and included: 1) A computer-based code for implementing Genetic Algorithms (GA) within the context of microbiological experiments, 2) A spectrophotometric high through-put method to analyze for perchlorate inaqueous solution, and 3) A general approach for optimizing microbiological systems to perform a specified function, e.g. bioremediation of xenobiotic contaminants.

Results
Adoption of such a methodology may prove cost effective when compared to other remediation schemes and ultimately save on environmental cleanup costs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
403	Waste Disposal, Recycling, and Reuse

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Global Food Security and Hunger: Potatoes

☑ 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
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		10%	
202	Plant Genetic Resources	10%		15%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%		10%	
204	Plant Product Quality and Utility (Preharvest)	10%		10%	
205	Plant Management Systems	20%		15%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	10%		10%	
503	Quality Maintenance in Storing and Marketing Food Products	10%		5%	
603	Market Economics	10%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.5	0.0	11.0	0.0
Actual Paid Professional	4.9	0.0	10.4	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
96531	0	259246	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
96531	0	259246	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
308674	0	5785270	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Potato Team is highly integrated, participating in active projects to discover new knowledge, demonstrate and transfer new technologies, and work to understand local variants that impact potato production and storage. Members of the Team meet regularly and otherwise collaborate with industry associations and the Idaho Potato Commission to understand needs of stakeholders. Zebra Chip was an important topic for stakeholders, and was included in the portfolio of research and Extension activities targeting diseases and pests. Work continued on Potato Viruses X and Y, wireworm, Late Blight, and Early Blight), including field and greenhouse experiments to understand the ecology and treatment options for serious potato pests in the field and in storage, nutrient management questions, and the value of various soil amendments. Field demonstrations help growers and other stakeholders understand the impact of various planting and pest management practices and irrigation needs and strategies. These applied activities have been shared through the Idaho Potato Conference as well as a host of workshops and classes and numerous field days and tours. Spanish language workshops were delivered for the thirteenth consecutive year at the potato conference. Faculty produced an array of refereed and Extension publications and publications in various trade journals and targeted media. Much of the Extension faculty's work is made possible through collaborations and participation on various citizen and professional alliances concerned with environmental quality and agricultural sustainability.

2. Brief description of the target audience

Target audiences are potato producers, field agronomists, consultants, and industry representatives..

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1465	579465	0	579762

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

Patent Applications Submitted

Year:	2012
Actual:	3

Patents listed

201200157, Huckleberry Gold - Potato
201200158, Palisade Russet - Potato
201200159, Teton Russet - Potato

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	6	35	41

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Seminars, workshops, field day presentations.

Year	Actual
2012	104

Output #2

Output Measure

- Trade Journal Articles.

Year	Actual
2012	52

Output #3

Output Measure

- Field Days.

Year	Actual
2012	9

Output #4

Output Measure

- Individual Consultations.

Year	Actual
2012	378

Output #5

Output Measure

- Graduate Students.

Year	Actual
2012	0

Output #6

Output Measure

- Workshops conducted.
  Not reporting on this Output for this Annual Report

Output #7

Output Measure

- Email Information Dissemination.

Year	Actual
2012	491

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Growers apply best potato management practices. I: Number of growers adopting recommended practices
2	O: Growers are aware of pest incidence. I: Number of Subscribers to pest alert website
3	O: Growers are knowledgeable about best potato management practices. I: Number of growers gaining knowledge about practices who have attended workshops or seminars.
4	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

Outcome #1

1. Outcome Measures

O: Growers apply best potato management practices. I: Number of growers adopting recommended practices

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	295

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Potato virus Y in seed potatoes. Potato virus Y can lead to yield and quality reductions in commercial potatoes. Seed and commercial growers as well as process and fresh potato buyers are very concerned about internal tuber defects caused by the new tuber necrotic strains of this virus.

What has been done
Extension presentations and magazine articles were delivered stressing the importance of very low levels of potato virus Y in the seed potatoes used for both seed and commercial production.

Results
The amount of PVY in Idaho seed potatoes has gone down by more than 20% over the last 4 years.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
503	Quality Maintenance in Storing and Marketing Food Products

603 Market Economics

Outcome #2

1. Outcome Measures

O: Growers are aware of pest incidence. I: Number of Subscribers to pest alert website

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

O: Growers are knowledgeable about best potato management practices. I: Number of growers gaining knowledge about practices who have attended workshops or seminars.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	392

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Produce growers are mandated to successfully pass the USDA GAP/GHP Audit to contract and sell with certain packers or processors. This means each grower must have a food safety plan implemented and have all required documents for the audit.

What has been done
One activity was a presentation was made on Food Safety and Good Agricultural Practices (GAP) at the Grower's Own Conference, Twin Falls, ID, Feb. 3, 2011. This was directed at small farms and organic producers.

Results
The presentation was ranked a 3.49 out of 4 (4 = very useful). There were 37 attendees and survey respondents. At least 9 people made comments that they will implement a GAP type plan.

4. Associated Knowledge Areas

KA Code	Knowledge Area

102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #4

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

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

202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Other (disease outbreak)

Brief Explanation

programmatic shift in emphasis to respond to threat of potato virus Y and other pathogens.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Exit surveys distributed at the University of Idaho Potato Conference and collected after each presentation indicate that growers gained knowledge and will make changes in their farm management techniques based on information gained at the conference.

Evidence of the impact of education is apparent in the continuing decrease in potato virus Y (PVY) in the Idaho seed potato system. In 2007, 60% of the seed lots in the Idaho Seed Potato system contained some level of PVY and 27% of the lots contained more than 2% PVY and could not be increased for any additional years (the industry term for this is "ineligible for recertification"). For the 2010 season, the percentage of seed lots with some PVY is down to 40% and the percentage of lots ineligible for recertification is down to only 8%. Because of our extension and research activities targeting the reduction of PVY, Idaho seed potatoes are now some of the highest quality seed available in North America.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Global Food Security and Hunger: Small Acreages and Emerging Specialty Crops

☑ 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
102	Soil, Plant, Water, Nutrient Relationships	20%		25%	
111	Conservation and Efficient Use of Water	10%		25%	
202	Plant Genetic Resources	20%		20%	
205	Plant Management Systems	20%		25%	
212	Pathogens and Nematodes Affecting Plants	20%		5%	
604	Marketing and Distribution Practices	10%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	2.8	0.0	1.3	0.0
Actual Paid Professional	3.4	0.0	1.1	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
110465	0	49003	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
110465	0	49003	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
86150	0	525366	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Small Acreages and Emerging Specialty Crops team continued to deliver intensive educational programs that focus on sustainable use of lands and natural resources, including the 15-week "Living on the Land" and "Cultivating Success" courses delivered in multiple locations across the State. Other educational events for small acreage farmers and ranchers were delivered through several conferences and as individual workshops covering topics such as fruit production, weed identification and pesticide certification training, soil health, food safety and marketing of local fruits and vegetables. There is growing interface among our small farms, horticulture, and nutrition education teams to deliver programs that connect the farm to the plate to overall health.

Efforts to deliver education about farm business planning grew to include an online course: Planning for Profit II. Faculty organized a number of events which focused on Farmers Markets, direct marketing opportunities, opportunities for enterprise development, and agri-tourism. The team delivered educational messages through numerous media including websites (and an on-line course offering), Extension publications and a small farms newsletter.

•

2. Brief description of the target audience

Target Audiences

Established and prospective small-acreage, specialty crop producers, processors, and marketers. Small acreage landowners who desired to learn how to manage their land in a sustainable manner to protect natural resources.

Underserved Audiences

Provide resources for people with small acreages who wish to start, continue, or expand specialty horticultural enterprises. Women farmers and limited resource farmers are often in this group. There is also the potential to reach Hispanic and Asian farming audiences.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5609	94352	327	135

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	6	6

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Small Farms Conference in northern Idaho.

Year	Actual
2012	1

Output #2

Output Measure

- Small Acreage Farming Course.

Year	Actual
2012	1

Output #3

Output Measure

- Ag Entrepreneurship/business planning Course.

Year	Actual
2012	2

Output #4

Output Measure

- Living on the Land course.

Year	Actual
2012	2

Output #5

Output Measure

- Living on the Land Tour.

Year	Actual
2012	2

Output #6

Output Measure

- Eastern Idaho/NE Utah Ag Diversity conference

Year	Actual
2012	0

Output #7

Output Measure

- Farmers Market workshop with ISDA

Year	Actual
2012	5

Output #8

Output Measure

- five-year LOTL report

Year	Actual
2012	0

Output #9

Output Measure

- Pasture management/livestock management workshop

Year	Actual
2012	3

Output #10

Output Measure

- Specialty crops workshops

Year	Actual
2012	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Producers and landowners gain knowledge about natural resource management, sustainable farm production, marketing and/or business management principles and practices. I: Number of participants completing workshops, farm tours, short courses or in-depth courses such as Living on the Land, Stewardship of Small Acreages, Sustainable Small Acreage Farming or Agricultural Entrepreneurship.
2	O: Producers and landowners adopt recommended land management, production and/or marketing practices due to University of Idaho extension programming. I: Number of producers indicating they did (or intend to) adopt recommended land management, production and/or marketing practices after attending an educational class, workshop, one-on one contact or reading UI information.
3	O: Landowners and farmers achieve success in protecting their natural resources and/or maintaining a successful business.I: Number of past class participants who volunteer to host tours of their farm or speak to new students in classes, workshops or at conferences.
4	O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

Outcome #1

1. Outcome Measures

O: Producers and landowners gain knowledge about natural resource management, sustainable farm production, marketing and/or business management principles and practices. I: Number of participants completing workshops, farm tours, short courses or in-depth courses such as Living on the Land, Stewardship of Small Acreages, Sustainable Small Acreage Farming or Agricultural Entrepreneurship.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	314

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Growers and land owners who are trying to be more sustainable by protecting their natural resources and producers operating viable farm businesses need accurate information and guidance on implementing best practices.

What has been done
Offer 3 part Diggin Deeper Series in Lewiston attended by an average of 20 farmers and ag professionals each night. Offered a 9 week online Small Farm Advanced business planning called Planning for Profit II to 31 people statewide. Offered a 2 day marketing and agritourism conference with ISDA in Moscow attended by over 50 farmers and ranchers.

Results
Digging Deeper Series evaluations show that approximately 90% increased their knowledge about various aspects of cover crop benefits to soil quality, fencing and paddock desing for rotational grazing and carbon and Nitrogen cycling in the soil. Planning for Profit course: Evaluations indicate that 100% of attendees increased their knowledge on how to: 1) monitor and evaluate their farm financial plan, 2) evaluate the potential of direct markets, and 3) assess the feasibility of a new farm enterprise. Marketing/Agritourism workshop:Level of knowledge increase was indicated on a 1-5 scale (with 5 being highest). 1) Identifying an appropriate agritourism enterprise = 4.47; 2) minimizing risks associated with agritourism = 4.2; 3) How food hubs and online marketing cooperatives work = 4.67; and 4) potential opportunities through online marketing = 4.58.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants

Outcome #2

1. Outcome Measures

O: Producers and landowners adopt recommended land management, production and/or marketing practices due to University of Idaho extension programming. I: Number of producers indicating they did (or intend to) adopt recommended land management, production and/or marketing practices after attending an educational class, workshop, one-on one contact or reading UI information.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	175

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Small acreage management consists of many different practices, Many of the new/newer landowners in the Treasure Valley do not come from an ag background and do not have the prior experience with these practices

What has been done
Numerous best management practices (BMP) are covered during the 15 week LOTL course. 3-5 months following the class an offer for an extension educator to come for a site visit is made to all participants. It is not required for alumni to have a site visit done on their property.

Results
From the 2012 Caldwell-LOTL class, 5 of the 14 units that completed the class requested to have a site visit. During these site visits 38 BMP had already or were in the process of being adopted with and addition 14 more planned for the future. Weed & Pest management tied as the number 1 BMP implemented, followed by septic system management, and a ties for 3rd with improved fertilization and irrigation systems.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants

Outcome #3

1. Outcome Measures

O: Landowners and farmers achieve success in protecting their natural resources and/or maintaining a successful business.I: Number of past class participants who volunteer to host tours of their farm or speak to new students in classes, workshops or at conferences.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	18

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Increasing Best Managment practices and building sustainable land use help enhance the enviroment, help communities strive financially in building small-farm enterprises, and provide educational information to new participants who take the LOTL class.

What has been done
Alumni who have activley enhanced their small-acreage are invited to give presentations, host tours, and participate in additional classes to help motivate and educate current participants. Each year we hold an LOTL tour at a LOTL Alumni's house to show how land managment goals can be reached.

Results
Eighteen LOTL alumni came to classes and tours to present on new topics that were incorporated into the LOTL class. Evaluations have shown that LOTL participants gain "a great deal" of knowledge in the weed managment section. We have also recieved additional inquiries on LOTL alumni researching their water rights and irrigation practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants

Outcome #4

1. Outcome Measures

O: An increase in the number of trained graduate students prepared to enter the workforce. I: Number of M.S. and Ph.D. candidates relevant to this topic team.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

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

212 Pathogens and Nematodes Affecting Plants

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Populations changes (immigration, new cultural groupings, etc.)
- Other (growing interest in local food entrepreneurism)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Our Lining on the Land class retrospective evaluation showed large improvement in participants' knowledge, preparedness, understanding and skills in land stewardship and best management practices. Large improvement was also seen in participants' ability to find resources to support their small acreages. Site visits following the class show that class members are implementing the BMP's they have learned about in class.

We had at least two families move their garden or proposed garden site after learning they were planting on the leach field of their septic system. Planting edible plants in the leach field is not recommended because of an increased risk of illness due to food poisoning because of bacteria & virus in human waste. We also had one family start a gopher control business as a result of the class.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Global Food Security and Hunger: Sugar Beets & Minor Crops

☑ 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
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
111	Conservation and Efficient Use of Water	5%		10%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		10%	
202	Plant Genetic Resources	10%		10%	
205	Plant Management Systems	20%		5%	
211	Insects, Mites, and Other Arthropods Affecting Plants	15%		10%	
212	Pathogens and Nematodes Affecting Plants	15%		10%	
213	Weeds Affecting Plants	15%		10%	
215	Biological Control of Pests Affecting Plants	0%		10%	
216	Integrated Pest Management Systems	10%		5%	
402	Engineering Systems and Equipment	0%		5%	
511	New and Improved Non-Food Products and Processes	0%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	6.5	0.0
Actual Paid Professional	3.3	0.0	6.7	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
89400	0	417015	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
89400	0	417015	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
243761	0	2918184	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The sugar beet and minor crops team integrated field research, demonstration, and outreach education primarily related to numerous crop pests and diseases, and to irrigation systems and soil moisture relationships. Field studies and tours were conducted in collaboration with growers and in UI Agricultural Experiment Station fields to study onions, sugar beets, dry beans, and sweet corn. Pest diagnostic services and treatment recommendations are provided for growers. Economically important pests studied and reported include onion thrip, Rhizoctonia, Aphanomyces, leaf minor and curly top. Significant efforts were devoted to weed management, pesticide registration, development and extension of knowledge about IPM tools, and soil moisture/irrigation protocols influencing pests and diseases. A survey was conducted to learn about IPM practices currently used by sugar beet growers.

New and practical information was shared through a dozen regional conferences and commodity schools. PNW pest management handbooks were updated and IR-4. Faculty prepared a host of Extension publications and research publications explaining their findings to end users and to other scientists.

2. Brief description of the target audience

Growers of minor crops in Idaho and western U.S., EPA, USDA, ISDA and other western departments of agriculture, regional land grant institutions, public interest groups, crop advisers and farm workers throughout Idaho are a targeted audience of this program. Other targeted audiences include sugar beet growers, growers of minor crops, and those who advise growers (i.e. sugar company fieldmen and agronomists, chemical companies, seed companies and consultants).

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4781	130439	120	218

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

Patent Applications Submitted

Year:	2012
Actual:	1

Patents listed

201300085, Durola - Rape

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	30	31

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Presentations at grower conferences and other non-extension venues.

Year	Actual
2012	73

Output #2

Output Measure

- Workshops, schools and conferences.

Year	Actual
2012	34

Output #3

Output Measure

- Field tours and demonstration projects.

Year	Actual
2012	10

Output #4

Output Measure

- Applied and basic laboratory and field research experiments

Year	Actual
2012	41

Output #5

Output Measure

- Professional invited presentations.

Year	Actual
2012	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: growers use best practices in the production of sugar beets and minor crops. I: Percentage of Idaho growers indicating adoption of recommended practices (folloe-up survey data).
2	O: Producers are aware of issues and knowledgeable of practices that affect the environmental and economic sustainability of sugar beet and minor crop production. I: The percent of participants who report increased knowledge in pre/post-program surveys.
3	O: Development of new research information. I: Research publications (peer reviewed).
4	Plant Disease Identification and Management of Southwest Idaho
5	Biopesticide Co-products from Brassicaceae Seed Meals

Outcome #1

1. Outcome Measures

O: growers use best practices in the production of sugar beets and minor crops. I: Percentage of Idaho growers indicating adoption of recommended practices (folloe-up survey data).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	266

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Glyphosate resistant weeds pose a threat to sugar beet growers in Idaho and eastern Oregon.

What has been done
Faculty members made four presentations at The Amalgamated Sugar Company Grower Meetings at Nyssa, OR, Nampa, Twin Falls, Burley and Aberdeen on the importance of glyphosate resistance management and strategies for resistance management.

Results
In a survey of the growers following this presentation, over 20% said they were using or would use herbicide tank mixtures as a glyphosate resistance management strategy.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

O: Producers are aware of issues and knowledgeable of practices that affect the environmental and economic sustainability of sugar beet and minor crop production. I: The percent of participants who report increased knowledge in pre/post-program surveys.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	222

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
As a result of stakeholder input, the OnePlan PAR and FMP was developed to help producers understand pesticide recordkeeping requirements and do a better job complying with federal and state regulations and label requirements.

What has been done
The OnePlan PAR and FMP was developed as an interactive website to assist with pest management decisions related to farm management planning.

Results
We have over 260 consistent users of the OnePlan PAR and FMP website. 100% of the users said the website tool was useful to them and their operation. 57% said they were more confident in their ability to supply worker protection information to their employees.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants

213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

O: Development of new research information. I: Research publications (peer reviewed).

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants

Outcome #4

1. Outcome Measures

Plant Disease Identification and Management of Southwest Idaho

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Southwest Idaho is a diversified crop production region with a variety of seed and fruit crops, ornamental and nursery plants, which are subject to a variety of biotic and abiotic diseases. Accurate and timely identification of the cause is critical to prevent or minimize losses, and to promote rational use of pesticides. Characterization and documentation of new or re-emerging diseases and pathogens is critically important to the agriculture, green industry, and the plant protection personnel. Idaho accounts for over 80% of all the sweet corn seed produced in the U.S. Identification of efficient seed treatments to ensure superior field performance of the seed is critical to the sustainability of sweet corn seed industry in Idaho. Southwest Idaho is the third largest producer of summer storage type onions in the U.S. and, therefore, identifying cultivars less susceptible to the major diseases like Iris yellow spot and powdery mildew is important to minimize losses to the growers.

What has been done
More than 200 plant samples were analyzed for diseases and the results, along with disease management options were conveyed to the clients. Reports of new disease occurrence relating to blight of yellow nutsedge, powdery mildew of lilac, bacterial spot of plum and pluot have been submitted for publication.

Results
Home owners, master gardeners, nursery operators, county extension agents, commercial growers (fruit, onion, potato, poinsetta, lillies, etc.) were able to adopt appropriate disease management strategies based on the disease identification and management information provided. Onion growers were able to utilize the real-time pest and disease information posted on the website.

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #5

1. Outcome Measures

Biopesticide Co-products from Brassicaceae Seed Meals

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Brassicaceae oilseed crops including rapeseed (Brassica napus), mustard (Brassica juncea and Sinapis alba), and camelina (Camelina sativa) exhibit rotational and environmental quality benefits making them excellent choices as rotational crops for the production of advanced liquid biofuel feedstocks. Substituting a mustard crop for a pulse crop can significantly reduce the amount of herbicide used in the cropping system. Brassicaceae crops are extremely competitive with most common annual weed species, reducing the need for chemical weed control in the crop. Natural chemicals produced by Brassicaceae plant tissues also appear to provide pest control benefits that exceed those expected from an average break crop. Including Brassicaceae crops in a rotation has a number of other advantages. Increased plant available N has been measured in soils following mustard crops equal to that typically measured after a legume. Brassicaceae crops are highly drought tolerant and require less water than small grains. Although Brassicaceae species afford the aforementioned benefits with respect to agroecosystem sustainability and produce excellent quality oils for advanced biofuel feedstocks, acreages are limited by low financial returns to growers. An increased financial incentive to grow Brassicaceae oilseed crops will only occur if the oils and associated co-products command higher prices. Given the competing price of petroleum feedstocks, the value of oils produced from Brassicaceae species is unlikely to increase in the foreseeable future. Thus, the only way to develop an economically viable, regionally significant liquid biofuels industry based on oilseeds is to increase co-product value.

What has been done
Multiple value-added products from various Brassicaceae meals including those from mustards and rapeseed were isolated. Procedures were developed for analysis of glucosinolates in

Brassicaceae seed meals using time-of-flight (TOF) mass spectrometry (MS) combined with high performance liquid chromatography (HPLC) and compared to a traditional method involving glucosinolate analysis using HPLC combined with UV detection. Reproducibility, detection limits, accuracy, and precision were determined for the new HPLC-TOF method. Experimentation related to large-scale glucosinolate extraction was also conducted using water and alcohols as solvents. We are in the process of optimizing extraction efficiency for that can be scaled up for industrial purposes.

Results

The newly developed method of glucosinolate analysis allows for decreased time of analysis and decreased cost. Glucosinolate analysis as accomplished with the new HPLC-TOF method does not require desulfation, thus saving the cost of several reagents. The overall result is that glucosinolates can now be quantified in 3 h and compared to nearly 24 h. This will greatly improve our ability to determine the effectiveness of glucosinolate isolation from mustard seed meals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
511	New and Improved Non-Food Products and Processes

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Other (climate)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Idaho One Plan; Pesticide Applicator Reporting Program

As a result of stakeholder input from a Canyon County crops advisory committee, the Pesticide Applicator Recordkeeping tool (PAR) was developed in 2009-2010 and fine-tuned for further promotion to producers and applicators. We added the Soil Fumigant Management Planner (FMP) to the PAR computerized tool, this year. The FMP was developed as a result of a competitive grant we received from the US EPA two years earlier. We have provided the new US EPA regulatory requirements, checklists, and GAPs as dictated by the label revisions. These soil fumigant changes are a result of a major federal re-registration effort by EPA and it is mandatory that all applicators have a fumigant management plan with signed documentation.

Our new FMP tool fulfills all federal and state re-registration requirements. I have continued working with the collaborative team consisting of UI Extension (Hirnyck and

Neufeld), Idaho Association of Soil Conservation Districts and USDA-NRCS. We gave 11 presentations in 2011-2012 to continue promoting the program, in addition to handing out promotional flyers and pens with the logo and website. We obtained grants from three commodity commissions in order to pay for additional programming development and maintenance and promotional supplies. We have seen the number of users gradually increase as a result of our PAR presentations during 2011-2012, now up to 260 consistent users.

A survey was conducted at the end of 2011, and 100% of those surveyed said the PAR was useful to them and 85% said this program helped ensure they were in compliance with federal and state worker protection regulation. Of those surveyed 22% used the new soil fumigant management plan feature and 40% of those said it was helpful to them. We have more PAR presentations planned for 2013 in order to educate pesticide applicators on the usefulness of the program and the addition of the soil fumigant management planner, which a new label requirement for soil fumigant applications. We plan to solicit funding through the commodity commission grant process for website maintenance and updates/additions, and promotional materials and handouts. We plan to continue to measure program impacts with an end of the year survey on the website.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Childhood Obesity: 4-H Youth Development

☑ 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
724	Healthy Lifestyle	20%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	20%		0%	
806	Youth Development	60%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	17.0	0.0	0.0	0.0
Actual Paid Professional	19.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
232181	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
232181	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1660345	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The 4-H Youth Development Team engaged about 34,000 youth in life-skills focused learning, through traditional club programs in each county in Idaho, summer camps, day camps, science camps (including robotics, GPS, Entomology, Geology, Aeronautics, and more), livestock camps, and other project camps (some in collaboration with neighboring States), and a host of other venues for reaching children.

Faculty and 4-H Coordinators supported or managed 4-H afterschool programs and managed 4-H activities at County Fairs, including training of judges. 4-H professionals provided leadership and curriculum training to adult 4-H volunteers and to youth volunteers. Primary emphases were placed on projects and activities that promote interest in science, engineering and technology, and that promote healthy living choices.

4-H faculty were engaged in multi state efforts to create and pilot new curricula, to train livestock judges, and to provide professional development for 4-H professionals. Older 4-H members were challenged to become productive citizens through the 4-H Ambassadors program, Teen Training, Camp Counselors programs, Know Your Government. Outreach to underserved youth included significant efforts with the Shoshone-Bannock and Nez Perce Tribes, with numerous afterschool programs (two partially supported by CYFAR grants), through Operation Military Kids, and with targeted day camps.

2. Brief description of the target audience

- Idaho youth, ages 5-18
- 4-H Volunteers
- Adult and youth volunteers
- Teachers and Out-of-school instructors
- Youth in school enrichment and afterschool programs
- Low income youth and families
- Youth-at-risk
- Youth Development staff
- Community Leaders
- Hispanic youth and adult volunteers
- American Indian youth and adult volunteers
- Children and families with military ties

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	27747	253876	55206	126348

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	10	7	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth in educational classes, workshops, trainings, seminars taught (individual teaching contacts).

Year	Actual
2012	2490

Output #2

Output Measure

- Number of volunteers in educational classes and workshops.

Year	Actual
2012	5838

Output #3

Output Measure

- Number of opportunities to promote 4-H Youth Development (publications, newsletters, columns, radio PSA's, radio/TV appearances).

Year	Actual
2012	579

Output #4

Output Measure

- Number of educational classes, workshops, trainings, seminars taught (teaching contacts).

Year	Actual
2012	33512

Output #5

Output Measure

- Number of 4-H clubs or groups.

Year	Actual
2012	391

Output #6

Output Measure

- Number of youth attending statewide 4-H events.

Year	Actual
2012	3380

Output #7

Output Measure

- Number of volunteers attending county, multi-county, district, state, regional, and national events.

Year	Actual
2012	2774

Output #8

Output Measure

- Number of hits on the web site each year.

Year	Actual
2012	136694

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	O: Youth will expand science, engineering, and technology skills through participation in 4-H Youth Development Programs. I: Number of youth participating in 4-H Youth Development programs designed to expand science and technology skills.
2	O: Participants will increase their knowledge of healthy living. I: Number of youth participating in healthy living activities and programs.
3	O: Youth will learn life skills through participation in 4-H Youth Development programs. I: Number of youth indicating life skill development
4	O: Participants will adopt healthy lifestyle behaviors. I: number of youth who change behaviors, such as eating healthy snacks and increasing physical activity.
5	O: Participants will learn leadership skills through participation in 4-H Youth Development programs. I: Number of youth indicating live skill development through completing an evaluation survey.
6	O: Participants will build leadership and youth development skills through training and support. I: Total number of volunteers receiving one or more trainings.
7	O: Increased participation of underserved audiences through relevant programs. I: Number of underserved youth participating in 4-H Youth Development programs.
8	O: Participants will learn to design youth-adult partnerships. I: Number of committees, councils, and boards with youth and adults serving together.

Outcome #1

1. Outcome Measures

O: Youth will expand science, engineering, and technology skills through participation in 4-H Youth Development Programs. I: Number of youth participating in 4-H Youth Development programs designed to expand science and technology skills.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	14694

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Teaching SET principles within many of the animal science areas has declined significantly over the years. The ability of members to understand and communicate information especially related to nutirtion and health care have been impacted. We also have had some interest expressed in Robotics, but have had difficulties in finding resources to provide leadership within this area.

What has been done
We specifically focused several educational programs for youth and adults on animal nutrition and health care in an effort to re-infuse a greater understanding of science back within our livestock project areas. A couple of our leaders were able to be connected with other resources in the community which previously had experience in teaching youth-based robotics programs.

Results
We have seen some increases already in the ability of our members to more effectively understand and communicate the basic principles of proper nutrition, ration development and proper health care. These principles are an inportant step in helping youth develop good management skills in effectively producing high-quality market animals. One of the robotics teams from Kootenai County ended up winning the Idaho FLL tournament and advanced on to the World Festival which was held in St. Louis, MO.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2

1. Outcome Measures

O: Participants will increase their knowledge of healthy living. I: Number of youth participating in healthy living activities and programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	10707

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a terrible epidemic of obesity in the United States. Parents aren't eating healthy and therefore are not teaching their children to eat healthy.

What has been done
Healthy Living School enrichment activities were provided. Garden planted by Juvenile Offenders. Classes taught to juvenile offenders on topics of healthy living and gardening. After school and summer camps also taught healthy living.

Results
Juvenile offenders planted and maintained a vegetable garden at the Bannock County fairgrounds. Youth learned to preserve food safely and to incorporate fresh fruits and vegetables into their diets.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
806	Youth Development

Outcome #3

1. Outcome Measures

O: Youth will learn life skills through participation in 4-H Youth Development programs. I: Number of youth indicating life skill development

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1732

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In a small community with double digits unemployment, a high number of teen suicides, and a low rating in healthy practices, Gem and Boise Counties youth NEED life skill and coping skills opportunities.

What has been done
Through the EYSC (Engaging Youth, Serving Communities) grant, we were able to survey and evaluate twelve of the core team youth. In the 2013 year, we plan to survey all of our 4-H youth and use a similar evaluation tool.

Results
Every one of the 12 youth completing the EYSC life skill survey reported that their leadership skills, oral presentation skills, knowledge of community issues, and confidence had significantly increased in one year of working with other teens and adults in our Community. These surveys and results are reflected in the EYSC Annual Report from Gem/Boise Counties.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #4

1. Outcome Measures

O: Participants will adopt healthy lifestyle behaviors. I: number of youth who change behaviors, such as eating healthy snacks and increasing physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1643

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Being healthy is a priority of all individuals and families. With education and knowledge people will be able to make better decisions that can affect their health for their lifetime. The Healthy living program targets theses issues by teaching participants how to: prepare and cook nutritious meals, increase their fruit and vegetables, whole grains, and low-fat dairy consumption and decrease fat, sugar, salt and calorie intake.

What has been done
Enrichment activities for the CYFAR SCP 4-H Afterschool program are centered on the life skills development of critical thinking, healthy life style choices, positive identity and communication. The life skills of a healthy lifestyle choices is selecting a way of living that is in accord with sound condition of body and mind, prevention of disease and injury. Positive identity is valuing oneself, having pride in oneself, understanding one's abilities.

Results
Three life skills, communication, self-responsibility, and healthy lifestyle choice, were assessed. Children who were eight years and older and in third grade or higher were included in the rating calculations. Children were asked to select how they felt about each indicator statement. Ratings were shown as faces on the survey. ☹ Never = 1; :| Sometimes = 2; and ☺ Usually = 3 (N=19). Children completed the both pre survey in October 2011 and the post survey in May 2012. As a group, the children indicated that they sometimes to usually accomplished the indicator statement for the life skill. Below is the average response rating for each life skill and indicators. Communication = 2.35; Self-responsibility = 2.54; Critical Thinking = 2.18; and Healthy Lifestyle Choices = 2.56. The second column shows the change from pre-survey to post.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
806	Youth Development

Outcome #5

1. Outcome Measures

O: Participants will learn leadership skills through participation in 4-H Youth Development programs. I: Number of youth indicating live skill development through completing an evaluation survey.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	453

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Providing an opportunity for youth to practice and develop their leadership abilities in a safe, supportive environment is vital for them to gain confidence to assuem future leadership roles - be it as a teen while yet in school, or as an engaged citizen within their respective communities later in life.

What has been done
We have provided workshops for leaders and youth in helping to foster more active engagement of youth within their respective clubs. Leadership retreats have occurred to foster development of important life skills. Opportunities have been increased at the local level for teens to take a more active leadership role within 4-H.

Results
It is been reported that several clubs which had previously had adult leaders how took overly controlling roles have backed off and are now "coaching" youth in assuming greater leadership in overall club operations. We had over 40 participants in our 2nd annual District Teen Leadership Retreat, held in January. The evaluations have revealed definite increases in the youth's confidence to move into respective leadership roles at the club and local level. This past year, we have increased the number of teens who have served in various fair superintendent roles (on equal footing as adult superintendents) and our Panhandle Ambassadors assumed leadership in coordination of the Fair achievement recogntion ceremony.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

O: Participants will build leadership and youth development skills through training and support. I: Total number of volunteers receiving one or more trainings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2142

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The 4-H youth development program is based on research based curriculum, using experiential learning methods, and intends for the volunteers to provide the Essential Elements of Youth Development. Training and support for volunteers delivering 4-H programming is important to maintain the standards and values of the program, and to manage the risks involved with youth programming.

What has been done
Required trainings are held for all individuals desiring to volunteer with Canyon county 4-H - adults and teen leaders. They are held four times during the year. Trainings were also held at each Leaders Council meeting to educate volunteers on specific, requested topics. Volunteers are also encouraged to attend the District Super Saturday training day and the annual State Leaders Forum.

Results
New volunteers to the program receive a three and a half hour training before they are allowed to meet alone with youth in the 4-H program. New volunteers report in a pre/post evaluation statistically significant increase in knowledge in nine key learning areas after attending the training. Volunteers who attend the Leaders Council trainings are better informed and more

effective in delivering 4-H programming to their club. They are better able to lead projects, work with youth club officers, and able to offer a better learning environment to youth in their club.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #7

1. Outcome Measures

O: Increased participation of underserved audiences through relevant programs. I: Number of underserved youth participating in 4-H Youth Development programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	8170

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Low income, Hispanic or at-risk youth comprise the majority of Idaho 4-H's underserved audience. Resources are typically limited for these youth, therefore positive youth development to help build life skills and help youth see a future for themselves is important.

What has been done
Afterschool programs with the Caldwell school district were delivered to youth who had test scores below grade level, or youth who were recommended for the program by counselors because they needed additional educational enrichment, or at the request of parents. The majority of youth in these programs are Hispanic. Spring and summer day camps were developed and marketed to families not currently involved in 4-H.

Results
Youth participating in the afterschool programs learned life skills in teamwork, communication, and respect for each other. Behavior over the course of the program improved and youth looked forward to "what's next". All of the day camps reached minimum enrollment and most reached maximum enrollment. Youth learned about opportunities available to them and important life skills

they can apply as they grow and become productive citizens.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #8

1. Outcome Measures

O: Participants will learn to design youth-adult partnerships. I: Number of committees, councils, and boards with youth and adults serving together.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	132

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Adults and youth need to learn how to work with each other. Youth want to participate in community leadership roles which allow them to make decisions which affect their lives, yet consistently they are not asked for their opinions.

What has been done
The Elmore County 4-H Youth Development Program is a team effort with adult volunteers, staff, and youth working together to achieve both statewide goals as well as county and individual club goals. Youth and adults are continuously being educated and trained to successfully work together. Youth are encouraged to make and take leadership opportunities in all meetings, events, and activities.

Results
Youth and adults are learning the skills to work with each other and are enhancing their leadership abilities including presentation skills, speaking skills, writing skills, teaching skills, and teamwork skills. We have a greater number of youth stepping up take leadership roles in all aspects of the 4-H program as they see the adults value their input and decisions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Other (nothing of significant, unanticipated impact)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Pre-post surveys were given to youth attending several day camps, Teen Conference, and numerous other events for youth. The information gathered indicates a greater ability to make decisions and increased personal confidence in their own participation and leadership skills. Youth reported an increase in thinking about choices before decisions were made, an increase in consequences of decisions and being happy with choices made. Additionally, observations following the various camps include increased decision making, ability to follow directions, enhanced problem solving skills, and incorporation of other experiences and knowledge into their problem solving processes.

Idaho Master Gardner Volunteers, certified as Junior Master Gardener Teachers and 4-H Leaders were instrumental in developing and coordinating a multi-week, multi-school afterschool program in Canyon County for the Spring 2012 with Extension faculty and volunteers. Because of their efforts, hundreds of youth attended programs where they received education on basic botany, healthy food choices, ecosystems, insects and soil biology. A large proportion of these youth were from Hispanic backgrounds.

Key Items of Evaluation