2009 Oregon State University Extension Annual Report of Accomplishments and Results

Status: Accepted

Date Accepted: 06/30/2010

I. Report Overview

1. Executive Summary

The Oregon State University Service is one of the three statewide OSU public service units that help Oregon residents tackle many of the state's highet priority economic, environmental, and social issue. Extension's mission is to engage the people of Oregon with research-based knowledge and education that focus on strengthening communities and economies, sustaining natural rsources, and promoting healthy families and individuuals.

Extension is the bridge linking OSU with the people of Oregon. Extension faculty provide problem-solving information and education from the OSU campus as well as the Extension units in all 36 Oregon counties. Because of the changing nature of Oregon's populations, new Extension programs are being developed to reach out to diverse audiences in creative ways. New technologies allow Extension to create learning communities of people with common interests and to reach underserved audiences. Bulding on its nearly 100 years of experience in Oregon, the OSU Extension Service is constantly evolving to meet the changing needs of the state and its people.

While each year is unique, 2009 was more challenging than most as Oregon and the rest of the country road the economic downturn. No Extension positions were lost during the year, mainly due to careful planning and a comfortable fund balace, but 2010 will likely end with 15 to 30 percent less positions on state funding. In response to shrinking state funding, faculty members refocused their efforts on grantsmanship, resulting in a recond number of successful grants (447) and revenues of $35.9 million. This effort was not without a cost. In 2009 there were less impact evaluations conducted and fewer scholarly outputs by Extension faculty.

Success stories not fully captured in this report because evaluation efforts are not complete include a webstie devoted to helping families and businesses survey in tough economic times, a new master volunteer program that addresses climate change and sustainabilty, increased use of technology to deliver programs to the publics, and efforts to more closely align life-long learning (non-formal education) and credit courses in communities across the state.

From a university perspective, OSU Extension is part of the Division of Outreach and Engagement and the debate continues as to whether the Division is an organization or a mission. Transformation is the buzzword on campus. Extension actively involved stakeholders during 2009 to plan for a future in which it will thrive. Streamlining for efficiencies, greater integration of programs, more technology capacity, and new funding models must be part of our transformation,as we prepare for a 2011 centennial celebration of Extension serving Oregon. Extension is also a leader in pursuing Carneigie Classification as an Engaged University with a goal of achieving this credential in 2010.

OSU Extension is proud of its accomplishments and excited for its future. Onward!!

Total Actual Amount of professional FTEs/SYs for this State

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	217.0	0.0	0.0	0.0
Actual	220.5	0.0	0.0	0.0

II. Merit Review Process

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

- Internal University Panel

2. Brief Explanation

The primary review for 2009 came from internal evaluation provided by University leadership, including the Provost and the deans of the five colleges that have active Extension programs. Several key decisions were made this year as a result:

1) Dollars were set aside to fund transdisciplinary urban programming in the Portland Metro area. These dollars were invested in programming identified by community stakeholders as highest priority, including food systems, sustainable living and strengthening urban/rural connections. Outcomes will be reported in the 2010

ROA.

2) All program areas received a 15% decrease in funding allocations. The first 10% was dictated by reduced state funding. The additional 5% was set aside as a reserve to cover any future funding reductions in the current biennium. If no additional reductions are imposed, the 5% is available to fund future innovation and new program directions based on identified priority needs.

3) The organization embarked on a transformation process that will position OSU Extension to be more responsive and resilient for the future. A faculty advisory committee was apppointed to explore and recommend necessary changes. In 2009 the committee began it's work, completing the stakeholder engagement and data collection phases of the charge. It will mid- to late-2010 before implementation of the adopted recommendations for change are implemented.

III. Stakeholder Input

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

- 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
- Survey of selected individuals from the general public

Brief explanation.

Input was solicited through a statewide advisory network that directly advises the Vice Provost for Outreach and Egagement and the Director of Extension. The advisory committee is made up of individuals representing production agriculture and forestry, environmental groups, county government, youth and family-serving organizations, organizations representing coastal issues, business and industry, as well as Extension's volunteer corpes. The committee met twice during the past year and was actively engaged in reviewing and recommending program priorities for the next biennial state plan of work and federal five-year plan. The advisory network also played a pivotal role in advocating state legislative support for Extension and contributed in meaningful ways to the organization's transformation process. In addition, every county in the state utilized an advisory sturcture to identify and set local program priorities for the plan of work processes and contributed to the organizational transformation process.

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
- Open Listening Sessions
- Needs Assessments
- Use Surveys
- Other (Web searches of potential participants, Extension Director's Blog, New Extension Demographer, Visioning Project and Strategic Planning)

Brief explanation.

Many mechanisms were used to identify individuals, groups and organizations that are Extension stakeholders. Some specific efforts follow: Internet searches were used to identify organizations with stakes in various programs. We conferred with partnering organizations to identify and engage appropriate stakeholders. We conferred with existing advisors about other groups and individuals that could provide input. We actively solicted internal input about appropriate stakeholders to add to advisory structures or to survey about need and effectiveness of Extension programming. We utilized demographic data to ensure that all segments of society

are adequately represented among identified stakeholder groups and especially among those groups providing input to the decision-making process.

During 2009 focus groups were held to identify educational needs, both formal and life-long-learning options, in selected remote areas of Oregon. The focus groups' responses helped shape a pencil and paper survey for community opinion leaders and a telephone survey for the general public. The results of these two surveys are currently being analyzed and the findings will be used for the 2011-13 state plan of work and the 2012-16 federal plan of work.

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
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Survey of the general public
- Meeting specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public

Brief explanation.

Both formal and informal methods were used. Formal methods included focus groups and surveys. All inquiry was conducted based upon OSU Institutional Review Board policies, procedures and guidelines. Quantitative data were collected through written surveys distributed to opinion leaders and telephone surveys conducted with the general public. The number of persons sampled was based upon the estimated degree of variation in the target population and desired degree of resolution. For qualitative assessments, care was taken to assure that data were representative of the larger populations. Informal methods engaged advisory committee members in discussion and group priority setting actvities.

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.

Stakeholder input was broadly used throughout the organization. The input influenced budgetary outlays for various programs and subsequently had impact on program delivery and outcomes. Stakeholders served on all faculty search committees and had considerable influence on hiring decisions. This practice has proven over time to better support newly hired faculty members for success and productivity. Involved stakeholders take on greater responsiblility for guiding and protecting the faculty members as they learn their role and their community as well as have increased the stakeholder's understanding of the faculty members' job expectations. Stakeholder input was widely used to set program priorities at all levels of the organization. In addition, with the implementation of SOARS in 2007, each Extension program area is required to develop an annual plan of work that includes a description of how stakeholder input was gathered and used to determine the priority work areas and the associated resource allocations to programs.

Brief Explanation of what you learned from your Stakeholders

The overall plan of work is based on current priorities identified by stakeholders through both formal and informal data collection methods. Three overarching educaitonal themes emerged:

1) Strengthen communities and economies . . . by enhancing economic well-being for individuals, families, businesses, and communities; by helping build leadership skills of Oregonians who desire greater commmunity

involvement.

2) Sustain natural resources . . . by helping individuals and groups manage resources wisely; by enabling Oregonians to make responsible public policy choices.

3) Promote healthy families and indiviudals . . . by helping individuals and families reach their potential; by improving the well-being of Oregon's diverse population.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
3517198	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	3442898	0	0	0
Actual Matching	3442898	0	0	0
Actual All Other	10252804	0	0	0
Total Actual Expended	17138600	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from				
Carryover	3517198	0	0	0

V. Planned Program Table of Content

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Forestry: Enhancing the Competitiveness of Oregon's Forest Enterprises

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
402	Engineering Systems and Equipment	10%			
511	New and Improved Non-Food Products and Processes	30%			
602	Business Management, Finance, and Taxation	20%			
604	Marketing and Distribution Practices	20%			
723	Hazards to Human Health and Safety	10%			
901	Program and Project Design, and Statistics	5%			
902	Administration of Projects and Programs	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	4.7	0.0	0.0	0.0
Actual	4.1	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**
64038	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
64038	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
190702	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Programs will be developed and delivered to increase the knowledge of the public and policy makers leading to improved policy development and implementation. Additionally, programs will teach business owners and forest landowners how to become more

efficient and successful in meeting their objectives leading to enhanced sustainability, profitability, and quality of life by providing training and information leading to creation, maintenance, and retention of profitable value-added forest products industries. Productivity and safety of forestry and forest products company employees will be increased through appropriate training leading to retention of family wage jobs in the forestry sector. Forest health will be enhanced by discovering new uses for underutilized and poor quality fiber from the forest leading to more cost effective thinning and forest management practices.

2. Brief description of the target audience

Public and private forest landowners, primary and value-added forest products companies, and to a lesser extent the public.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	1500	12000	0	0
Actual	1900	12355	0	0

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes

Year	Target	Actual
2009	50	60

Output #2

Output Measure

- Number of workshops planned

Year	Target	Actual
2009	20	18

Output #3

Output Measure

- Group discussions

Year	Target	Actual
2009	10	20

Output #4

Output Measure

- Number of demonstrations

Year	Target	Actual
2009	10	58

Output #5

Output Measure

- Number of public service announcements

Year	Target	Actual
2009	14	13

Output #6

Output Measure

- Number of recurring newsletters published

Year	Target	Actual
2009	11	6

Output #7

Output Measure

- Number of non-recurring TV and other mass media programs

Year	Target	Actual
2009	10	12

Output #8

Output Measure

- Number of web sites maintained

Year	Target	Actual
2009	10	15

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Change in number of jobs in the forest products sector as direct result of application of knowledge and technologies developed and diseminated through OSU.
2	Percentage increase in value of shipments from forest products firms statewide as a result of application of appropriate technologies and information provided by OSU Extension through innovation and educational programs.
3	Change in number of value-added forest products companies in Oregon resulting from innovation developed and communicated by the College of Forestry and the Oregon Wood Innovation Center.
4	Change in small diameter timber used by forest products companies in Oregon (million board feet) resulting from application of new technologies developed and/or taught by OSU and OSU Extension Service.

Outcome #1

1. Outcome Measures

Change in number of jobs in the forest products sector as direct result of application of knowledge and technologies developed and diseminated through OSU.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	463

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Forest industry sales managers needed answers about how the strength properties of second growth Western Hemlock grown in Oregon comparees to old-growth Western Hemlock from Canada. Customers were under the impression that second growth Western Hemlock did not compare favorably to old-growth Hemlock along desired properties of density and knot size.

What has been done
Research and Extension teamed to directly address the properties of second growth Western Hemlock vs. old-growth Western Hemlock. Research focused on testing the wood sources; Extension interpreted the results for education of forest products sales managers. The basic finding was that there is minimal difference between these two wood sources on the properties of most interest to the customers, density and knot size. The science-based information convinced the customers to purchase second growth Western Hemlock from Oregon.

Results
One manufacturer that specizlizes in exports of lumber products reports that one customer has advised potential volumns could reach up to 1000 cubic meters monthly, which if converted to US funds at today's lumber costs equates to roughly $200,000. Had OSU not been able to provide the specific science-based information needed, the manufacturer would not be positioned to pursue this business opportunity and Oregon forest product jobs would be lost.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #2

1. Outcome Measures

Percentage increase in value of shipments from forest products firms statewide as a result of application of appropriate technologies and information provided by OSU Extension through innovation and educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Quality managers in the wood products industry need user-friendly and customizable tools for preforming functions related to statistical process control (SPC). While proprietary software packages for SPC are available, they are generally "one-size fits all" and not suited to the unique context of wood products manufacturing.

What has been done
Several Excel-based spreadsheets were developed to perform statistical process control (SPC) functions such as control charting, histograms, and process capability analysis. Customized versions were provided directly to clientele as part of workshop handout packets as well as on-line via a web-based form. These tools were cutomized for specific industries such as plywood manufacturing and door manufacturing. Users were surveyed via a web-based form.

Results
Feedback from quality specialists has praised the tools, providing quality control and efficiencies. One international company adopted the program and implemented throughout mills around the world, from Yakima, WA to Iowa to New Zealand to India. "The SPC program you developed is an absolute essential vehicle to assist in our competitive advantage . . . and plays a major role in our efforts to compete on a world market scale."

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
901	Program and Project Design, and Statistics

Outcome #3

1. Outcome Measures

Change in number of value-added forest products companies in Oregon resulting from innovation developed and communicated by the College of Forestry and the Oregon Wood Innovation Center.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Forest industries are economically important for Oregon. Stable jobs in the primary forest products industry and new jobs in the value-added sector are needed for the future economic health of the state.

What has been done
The Oregon Wood Innovation Center assisted a new wood products firm by measuring screw pullout stength in particleboard core ceiling panels. Screws were inserted in particleboard using a variety of screw gun clutch settings, depths of insertion, and with and without pilot holes.

Results
As a result, this new company seeking a market niche created an industry leading quality control system using a new torque meter that calibrates drill gun settings accurately in inch-pounds of torque. With improved techniques and products the new company is more competetive, captures a greater market share and has increased its workforce to meet demands.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
723	Hazards to Human Health and Safety
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #4

1. Outcome Measures

Change in small diameter timber used by forest products companies in Oregon (million board feet) resulting from application of new technologies developed and/or taught by OSU and OSU Extension Service.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Western juniper acreage in the Great Basin of the western US has increased dramatically in the past century. As juniper trees dominate a site, erosion increases, stream flows are reduced, forage production declines, and wildlife habitat is altered. Thinning juniper stands has been shown to help restore rangelands; however, such efforts are economically marginal at best in the absence of markets for juniper logs. One step in opening markets for juniper wood products is to gain regulartory approval by building code officials for use of the species. Such approval requires research data on juniper's mechanical properties and durability.

What has been done
Research on durabilty of juniper fence posts was conducted at OSU's "post farm". Building code officials also requested data on termit resistance. Juniper fence posts were "planted" in Hawaii and a report on results developed after exposure. Theses results, both on durabilty and termite resistance, were disseminated via the OSU Extension western juniper website.

Results
Building code professionals sought reliable information on juniper durability and found it on the Extension website. As a result, western juniper lumber was approved in December 2009 as one of the accepted naturally durable species. The expected outcome will be increased market opportunities for juniper manufacturers as the species has overcome a regulatory hurdle.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes
604	Marketing and Distribution Practices
901	Program and Project Design, and Statistics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

Forest products firms are very senstive to economic pressures created by global competition and the current world economy. In addition, any factor that affects supply of wood can significanty alter the structure of these industries and the impacts of Extension programming.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

Evaluation focused on enhancing the competitiveness of Oregon's forest enterprises showed an increase in job stability and creation, improved innovation and applied technology, increased profits form sales and exports, an increase in opening and expanded markets, and gains in regulatory approval for juniper use.

Key Items of Evaluation

Report on mechanical properties of second growth hemlock: Because of the collaboration between College of Forestry research and OSU Extension, one manufacturer that specizlizes in exports of lumber products reports that a potential customer has advised volumns could reach up to 1000 cubic meters monthly, which if converted to US funds at today's lumber costs equates to roughly $200,000.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Forestry: Public Engagement for Planning Oregon's Future

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
610	Domestic Policy Analysis	30%			
801	Individual and Family Resource Management	20%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	30%			
806	Youth Development	10%			
901	Program and Project Design, and Statistics	5%			
902	Administration of Projects and Programs	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	2.3	0.0	0.0	0.0
Actual	2.6	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**
40626	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
40626	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
120983	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Programs will be developed and delivered to the general public (including youth), civic leaders, and policy makers to increase knowledge and understanding about Oregon's complex forestry sector and its importance to the state's and region's economies.

2. Brief description of the target audience

General public (including youth), civic leaders, environmental groups, policy makers.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	4000	14000	1500	1500
Actual	4070	14000	1200	2140

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes

Year	Target	Actual
2009	20	20

Output #2

Output Measure

- Number of workshops

Year	Target	Actual
2009	5	6

Output #3

Output Measure

- Number of group discussions

Year	Target	Actual
2009	10	10

Output #4

Output Measure

- Number of demonstrations

Year	Target	Actual
2009	10	20

Output #5

Output Measure

- Number of public service announcements

Year	Target	Actual
2009	20	30

Output #6

Output Measure

- Number of recurring newsletters published

Year	Target	Actual
2009	11	18

Output #7

Output Measure

- Number of non-recurring TV and other mass media programs

Year	Target	Actual
2009	20	10

Output #8

Output Measure

- Number of web sites maintained

Year	Target	Actual
2009	10	10

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

Percentage increase in number of public issues-related events attended and time spent engaged in public issues by individuals that had attended OSU Extension Service programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The forestry sector is very important to Oregon's economy, but most Oregonians are buffered from this economic reality. Oregon's population is increasingly urban and disconnected from the realities of forest management and production systems. Oregonians must become better critical thinkers and possess the information necessary to make polictical decisions affecting natural resource-related issues.

What has been done
"Sharing the Forest" provided county elected officials and other commuity leaders with a real world foresty and natural resource tour to inform them about natural resource community contributions as well as engage them in dialogue about natural resource issues and how urban and rural communities can better interact with natural resources. A post-tour survey of participants gave insight to the knowledge increased and aspirations gained.

Results
98% of tour participants indicated increased understanding of how forestry decisions are made
98% reported they got answers to questions they had about forestry issues
95% reported learning new ideas for managing forests
95.5% reported they increased their knowledge of environment and natural resources as they relate to their community

4. Associated Knowledge Areas

KA Code	Knowledge Area
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #2

1. Outcome Measures

Reduction in dollars spent (as a percentage of income) per household for consumables resulting from technologies and edcuational information provided by OSU Extension Service

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #3

1. Outcome Measures

Increase in the number of start-up businesses resulting from innovation and educational programming provided by the OSU Oregon Wood Innovation Center

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual

2009	2	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #4

1. Outcome Measures

Change in percentage of persons exposed to OSU information that recycle.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	4	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Youth in the 21st centruy are becoming an increasingly wired generation, disconnected from their natural environment. A less informed populance is greatly disadvanctaged in making informed decisions about natural resource issues such as climate change, air pollution and water conservation that increasingly affect us all.

What has been done
To engage the broader community in natural resource education a widely diverse group of over 45 agencies, organizations and businesses have teamed to provide experiential learning opportunities on topics ranging from forestry, geology and wildlife to electricity, recycling and farm products. This one day event for families, Kids Day for Conservation, is coordinated by OSU Extension. Evaluation data for 2009 reveals that 99% of participants will return again next year.

Results

Follow up surveys indicated that 80% of participating youth and their parents were currently practicing recyclig, composting, or both, action steps learned at Kids Day.

4. Associated Knowledge Areas

KA Code	Knowledge Area
610	Domestic Policy Analysis
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #5

1. Outcome Measures

Percentage of participants that indicate experiencing less conflict related to natural resource issues.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	20	18

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
610	Domestic Policy Analysis
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Sustainable Living and Climate Masters are two programs in the early development phase and qualitative data is limited to inputs and formative information. Outcome evaluation is scheduled for 2010-2011.

Qualitative data supporting the increase of start-up businesses because of the Wood Innovation Center's work is reported under "Enhancing the Competitiveness of Oregon's Forest Enterprises."

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

Public officials increased their understanding of foresty and natural resource issues as they relate to their community.

Youth and their parents are adopting environmentally friendly practices because of their participation in Extension educational activities and events.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Forestry: Sustaining Natural Resources

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	8%			
122	Management and Control of Forest and Range Fires	10%			
123	Management and Sustainability of Forest Resources	80%			
901	Program and Project Design, and Statistics	1%			
902	Administration of Projects and Programs	1%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	7.8	0.0	0.0	0.0
Actual	8.1	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**
126354	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
126354	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
376278	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Programs will be developed and delivered to increase the knowledge of forest landowners to become better stewards of their properties. They will be given the knowledge necessary to make informed choices to match their management objectives. Landowners will receive knowledge necessary for them to manage not only for timber production but also for an array of non-timber forest uses, many of the uses benefiting society as a whole &ndash examples are water quality and improved aquatic habitat.

2. Brief description of the target audience

Family-owned forest owners are the main audience. Public forest owners and Oregonians living in the rural-urban interface are secondary audiences.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	7000	26000	0	0
Actual	5664	34413	5508	0

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes

Year	Target	Actual
2009	290	283

Output #2

Output Measure

- Number of workshops planned

Year	Target	Actual
2009	30	32

Output #3

Output Measure

- Number of group discussions planned

Year	Target	Actual
2009	25	24

Output #4

Output Measure

- Number of demonstrations planned

Year	Target	Actual
2009	30	35

Output #5

Output Measure

- Number of public service announcements planned

Year	Target	Actual
2009	100	123

Output #6

Output Measure

- Number of recurring newsletters planned for publication

Year	Target	Actual
2009	11	12

Output #7

Output Measure

- Number of non-recurring TV and other mass media programs planned

Year	Target	Actual
2009	35	33

Output #8

Output Measure

- Number of web sites maintained

Year	Target	Actual
2009	15	19

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage increase in net profit from land owned and/or managed by participants (Base = 2005).
2	Change in family-owned forest acres under a systematic plan (base = 2005)
3	Percentage reduction in number and severity of environmental catastrophes on private forest lands (as percentage of all acres in Oregon affected).
4	Percentage of landowners attending Extension Forestry programs that report acquiring new knowledge.
5	Percentage of landowners attending Extension Forestry programs that report using new knowledge.
6	Maximum change in ownership of private forest property as measured by number of acres statewide changing ownership class.

Outcome #1

1. Outcome Measures

Percentage increase in net profit from land owned and/or managed by participants (Base = 2005).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Natural resource enterprises are critical to both rural and urban economies, but expected growth in businesses and net profit in this sector will likely be in the value-added sector usually located near the markets in urban areas. Christmas tree production continues to be one of these key businesses. Dominace of national Christmas tree markets is held by Oregon producers.

What has been done
A three-year study on plant growth hormones to control leader growth was completed. A 24C label for leader control in Christmas trees via a hormonal growth compound, Sucker Stopper, was granted by the Oregon Department of Agriculture for official use. Over 150 Christmas tree growers attended technology transfer meetings and field tours to help them understand use of this new growth control method.

Results
Potential annual savings to the Oregon Christmas tree industry for this new innovation are up to $1.5 million per year. Growers will be surveyed in future years to measure degree of adoption of the new technology and to calculate an actual monetary impact.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics

Outcome #2

1. Outcome Measures

Change in family-owned forest acres under a systematic plan (base = 2005)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	25	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Family forestland owners have a positive impact on the economy through timber production as well as providing a broad array of forest structures, ages, and species mixes that serve important wildlife habitat. These owners nearly always lack formal training in forest management, and many have only limited practical experience managing woodland properties. Yet they face complicated decisions that will have long-term implications not only on their financial well-being but on the productivity and sustainability of their forested ecosystems.

What has been done
A one-session "crash" course was utilized to introduce participants to the elements of a management plan, to stress its usefulness, and to outline a process by which woodland owners could either construct their own plan or employ the services of professional foresters to create one on their behalf. The program utilized reference materials and a website where individuals could access electronic versions of the management planning template and the class work forms, find additional information on management plans, and seek out professional assistance from consultants and agency professionals. Course particpants responded to a follow-up survey conducted one month after completion of the program.

Results
All respondents (44% of participants) indicated they intended to develop management plans. 58% of respondents indicated they had already initiated development of management plans and taken important first steps to compeleting their plans, such as walking their property to identify resources, obtaining aerial photos and maps, identifying their management goals and objectives, and compiling legal and location information about their property. They attributed these actions to having completed the basic management planning class.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics

Outcome #3

1. Outcome Measures

Percentage reduction in number and severity of environmental catastrophes on private forest lands (as percentage of all acres in Oregon affected).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Thousands of rural Oreogn homeowners are surrounded by areas of dense, highly fammable vegetation, the product of decades of fire suppression.

What has been done
Working collaboratively with local organizations, rural homeowners were educated about fire hazard reduction. Cooperative fuels reduction projects that decrease the risk of wildfire to communities were developed as part of the educational program. A 33-page guidebook, "Reducing Fire Risk on Your Forest Property", was also developed.

Results
One location was monitored to assess change and impact of the program on community behavior. The Seven Basins Community Wildfire Protection Plan resulted in planned or completed reduction treatmetns on more than 150 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics

Outcome #4

1. Outcome Measures

Percentage of landowners attending Extension Forestry programs that report acquiring new knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	90	93

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The new national farm bill represents a watershed change in how federal cost share dollars are applied to forestry conservation projects. The new program dictates higher funding amounts for forestry projects but directs the funding through the USDA Natural Resources Conservation Service. The process for Technical Service Provider certification required for consulting foresters working with NRCS was perceived as confusing and inaccessible.

What has been done
OSU Extension partnered with NRCS officials based in Portland to conduct a day-long training for foresters interested in learning how to be TSP certified. The session was a sell out, with more the 45 consulting foresters participating and a dozen more turned away because of limited space. Based on a debriefing session with NRCS, plans are being made in 2010 to offer two more sessions.

Results
Following the day-long training designed to help consulting foresters become certified for completing plans and projects under the USDA-NRCS national TSP program, a survey was conducted:
91% of respondents indicated that because of the training they intended to become certified as TSP providers
93% reported that the training helped them understand what was required to become TSP certified

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #5

1. Outcome Measures

Percentage of landowners attending Extension Forestry programs that report using new knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	63

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Family forest owners in the Pacific Northwest have been adversely impacted by a national housing downturn and subsequent loss of markets for sawlogs, the primary money maker from Oregon forests. Many still need income and are motivated to consider other options such as ecosystem services payments (carbon credit trading, restoration payments, etc.), non-timber forest product income and money from forest based recreation.

What has been done
A team of OSU faculty designed and sponsored a day-long workshop with a variety of speakers who explored alternatives to traditional log markets. The 86 workshop participants represented forest ownership controlling 5500 acres of forestland; 92% of attendees were family forest owners.

Results
Positive outcomes reported via a post-workshop survey included:
76% updated their management plan
68% completed a baseline survey of their property's resources
80% shared their new knowledge with other landowners.
52% are exploring forest certification as an alternative
40% are pursuing carbon credit trading for their property

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #6

1. Outcome Measures

Maximum change in ownership of private forest property as measured by number of acres statewide changing ownership class.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Private family forestlands are a significant part of the landscape, particlularly along the rural-urban interface. In Oregon there are nearly 150,000 private family forestland owners with 10 or more acres. Approximarely 50% of the small forestland owners in Oregon are 65 or older. A significant portion of forestlands will change hands in the next decade or two. Unplanned transfers can often result in a loss of working forestland through forced property sales, land fragmentation, and conversion to other uses.

What has been done
The Ties to the Land project was established in 2005 to help Oregon family forestland owners effectively transfer their vision as well as their forest properties from one generation of stewards to the next. The project's mission is to inform a diverse audience of forest owners, their families and communities about the unique benefits and challenges of owning family forestland; inspire families to take appropriate actions to maintain their lands; and provide resources to help landowners and their heirs to act effectively to achieve their goals through succession planning. A comprehensive curriculum is now complete and includes a DVD-based facilitated workshop with a companion workbook as well as educator resources and impact assessments.

Results
The curriculum is being utilized across the nation as Extension colleagues in other states begin to adopt the curriculum (Washington and Minnesota) or discuss adoption and collaboration (Alaska, Mississippi, Wisconsin, New York and Massachusetts as well as Maritime Canada).To date 22 copies of the workshop DVD and 1,278 of the workbook have been sold and shipped to 221 different addresses.

Impact assessment conducted among Oregon participants one year following workshop participation yeilded the following outcomes:
47% of participatns set goals and priorities for a succession plan
60% held a family meeting to open conversation about succession planning
54% consulted attorney, CPA or financial planner
43% updated wills
14% completed succession plan

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

Family Forest owners are exploring alternative income streams to traditional log markets and are taking positive actions because of OSU Extension workshops.

Ties to the Land is helping family forest owners to plan for effectively transfering their vision as well as their forest property from one generation to the next.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

4-H Adult and Youth Leadership Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	30%			
806	Youth Development	70%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	16.1	0.0	0.0	0.0
Actual	15.4	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**
240314	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
240314	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
715646	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

4-H Clubs and other 4-H programming; Trainings and educational events; Curriculum and material development

2. Brief description of the target audience

Youth ages 13-18; Adult volunteers; Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	6000	6000	12000	12000
Actual	7855	8471	13956	17360

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth attending new 4-H leader training sessions.

Year	Target	Actual
2009	1000	1583

Output #2

Output Measure

- Number of youth participating in leadership camps and retreats.

Year	Target	Actual
2009	500	536

Output #3

Output Measure

- Number of youth participating in Junior or Teen Leader training.

Year	Target	Actual
2009	300	401

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of youth acquiring at least one leadership or citizenship life skill as a result of participation in non-formal youth development programs conducted by 4-H.
2	Number of youth applying at least one leadership or citizenship life skill they learned through 4-H.

Outcome #1

1. Outcome Measures

Number of youth acquiring at least one leadership or citizenship life skill as a result of participation in non-formal youth development programs conducted by 4-H.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	6000	6554

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Research indicates that positive youth development programs, like 4-H, need to provide opportunities for youth to learn and practice critical life skills. This is especially true in the area of leadership and citizenship development.

What has been done
Youth from grades 7 through 12 participating in weekend retreats were engaged in educational activities and interactions focused on leadership education. Post-retreat evaluation collected data to measure the increase in knowledge about leadership and the intention to adopt leadership skills.

Results
90% of the youth participating in leadership retreats reported learning or improving the following skills as a result of the 4-H leadership training:
Teamwork
Ability to lead a peer group
Public speaking
Interacting with others who are different than me

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth applying at least one leadership or citizenship life skill they learned through 4-H.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1000	1583

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Rural communities on the Oregon Coast have struggled in recent years with the decline of fishing and timber industries that impact the economy of these once prosperous communities. Despite the growing concerns, many locations also possess a wonderful sense of cummunity. Youth growing up in these communities have the ability to help shape the communities now and in the future.

What has been done
The 4-H Coastal Futures Program was designed to help youth and communities develop skills to engage in community deliberation regarding the future of the Oregon Coast. Youth and adult teams from five communities participated in training to gain skills in planning, hosting and recording community forums; in data organization and alaysis; and in action planning. Following the training youth and adult teams planned and held forums in the communitites and planned a community action project based on what was learned at the forums.

Results
Learning -- End of training evaluations showed youth had significant increases in skills for:
1) Creating youth/adult partnerships (98%)
2) Hosting community forums (94%)
3) Planning a forum (88%)
4) Creating an action plan (81%)

Action -- Youth put the community action skills learned in the training to work almost immediately. Community forums were held at four sites, with 124 people attending one forum and participating in communicty visioning with the youth leaders. One site created an action plan for a series of teen community nights and was granted $2,000 to help implement the project.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

Teens involved in 4-H leadership education programs report increaed knowledge about and intentions for being a leader.

Five communities under 10,000 population in four of Oregon's rural coastal counties have benefited from civic engagement skills learned by youth in 4-H.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

4-H Environmental Stewardship

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	9.0	0.0	0.0	0.0
Actual	9.6	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**
149766	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
149766	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
445997	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•4-H natural science clubs •4-H residential camps •4-H in-school science programming (non-Wildlife Stewards) •4-H Wildlife Stewards programming •4-H After-school science programs •Curriculum and material development

2. Brief description of the target audience

Youth ages 9-18; Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	1000	1000	4000	40000
Actual	1753	1574	7012	43350

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth participating in 4-H environment and natural resource projects.

Year	Target	Actual
2009	15500	15580

Output #2

Output Measure

- Number of youth exhibiting natural science projects at the state fair.

Year	Target	Actual
2009	200	238

Output #3

Output Measure

- Number of 4-H Wildlife Stewards partner schools.

Year	Target	Actual
2009	55	47

Output #4

Output Measure

- Number of youth participating in the 4-H Wildlife Stewards program.

Year	Target	Actual
2009	10000	8087

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of youth gaining knowledge in science or natural resources.
2	Number of youth implenting practices to protect or improve the environment.

Outcome #1

1. Outcome Measures

Number of youth gaining knowledge in science or natural resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10000	12000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Opportunities for hands-on natural science are becoming increasingly scarce in the traditional classroom setting. Many school districts have significantly reduced the amount of class time spent on science. The 4-H natural science enrichment and environmental literacy programs help to bridge this gap by providing students with continued exposure to interactive natural science curriculum.

What has been done
Students ranging from rural to urban areas, kindergarten through 12th grade, including minority populations and economically disadvantaged youth, have been involved in 4-H natural science enrichment and environmental literacy summer camps, after school programming, one-day events and through educational kits available for check-out. An evaluation determined that Extension-led teacher inservice motivated and developed teacher capacity to teach more natural science and environmental literacy in the classroom.

Results
A pre/post self report assessment of knowledge gained by the youth participants resulted in the following outcomes:
64% reported that through the natural science enrichment and environment literacy programs they learned about Oregon's natural resources and environment
63% reported that because of the program they better enjoy Oregon's environment
74% learned to take better care of the environment

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth implenting practices to protect or improve the environment.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1000	1389

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Youth in the 21st century are becoming an increasingly wired generation, disconnected from their natural environment. Through a wide variety of community programs and events 4-H strives to educate and to give youth and adults an understanding of the complexity of natural resources and environmental issues and the science behind them. With an ever increasing need to reduce our carbon footprint and live a more sustainable lifetyle these programs are more important than ever.

What has been done
In 2009, the fifth and final set of a series of outdoor educational materials entitled "Exploring Habitats of the Oregon Upland Prairie" was completed. These laminated, graphically rich, ecology field cards and accompanying educator's guide describe 50 of the most common organisms (plants, fungi, birds, mammals, and reptiles and amphibians) found in an upland prairie habitat. The materials were produced in response to a need by teachers and natural resource educators to engage youth in learning more about the local environment in which they live. To date over 1000 sets of the ecology field cards have been sold to educators and residents from the Pacific Northwest region.

Results
Can youth become a more informed populance about local habitats and the natural resources they contain? After using the ecology field cards and curriculum, educators report students gained knowledge about local native species, as well as increased understanding of biodiversity, interrelationships within ecosystems, the succession cycle within ecosystems and human uses of selected speices. Surveyed educators also indicate that 75% of the students self-reported implementing practices to protect or improve the environment because of what they learned in the "Exploring Habitats" series.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Hiring of new faculty and program assistants during the past two years has resulted in more individuals with a natural resource background conducting youth development programming. That new emphasis has greatly improved the quality and quantity of 4-H environmental efforts.

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

Youth participants in the 4-H natural science enrichment and environment literacy programs report they learned about Oregon's natural resources and environment and aspire to be good stewards of the environment.

Surveyed educators indicate that 75% of the students self-reported implementing practices to protect or improve the environment because of what they learned in the "Exploring Habitats" series.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

4-H Nutrition and Health

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	2.6	0.0	0.0	0.0
Actual	2.5	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**
38905	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
38905	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
115857	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•4-H foods and nutrition projects •4-H foods and nutrition contests •4-H curriculum development •Special 4-H projects related to foods and nutrition

2. Brief description of the target audience

Youth ages 9-18, Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	300	3000	23000	53000
Actual	412	3550	25862	50977

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth participating in Foods and Nutrition Projects.

Year	Target	Actual
2009	10000	13111

Output #2

Output Measure

- Number of youth participating in physical activity projects.

Year	Target	Actual
2009	3000	3520

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of youth gaining knowledge required to select or prepare healthy food.
2	Number of youth making behavioral changes which improving health.

Outcome #1

1. Outcome Measures

Number of youth gaining knowledge required to select or prepare healthy food.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3000	10560

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
It is the adoption and practice of sound nutrition, good eating habits and physical activity that lead to achievement of long term positive health and well being.

What has been done
In school nutrition classes taught by Extension faculty and staff engaged youth in grades K-3 in active learning. The curriculum included science experiments, taste tests, and stories and skits that emphasized the information learned. Changes in knowledge were captured through a pre- and post-test evaluation.

Results
The series of nutrition education classes improved the knowledge of participating youth. Knowledge outcomes included:
*youth know that breakfast should be eaten all days of the week
*youth can select foods that are fruits or vegetables from a collection of eight foods
*youth can select foods that are made with grains from a collection of eight foods
*youth can complete a healthy breakfast by selecting a missing beverage

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth making behavioral changes which improving health.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1500	1583

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
It is the adoption and practice of sound nutrition, good eating habits and physical activity that lead to achievement of long term positive health and well-being. The young people participating in 4-H will be physically fit, adequately nourished, and free from preventable disease as a result of maintaining a healthy diet and active lifestyle.

What has been done
Youth particpated in the 4-H foods and nutrition project through club based programs, learning nutrition and food management skills. Youth also particpated in a variety of foods and nutrition events, such as meal preparation and cooking contests, juding events, cooking exhibits and presentations.

Results
Evaluation of youth participating in the 4-H food and nutrition project reported specific actions and behavior changes:
1) 96% reported that they handle and store food safely
2) 83%) reported that they choose healthy foods to eat on a regular basis
3) 82% reported that they have purchased healthy food to cook and/or eat
4) 81% reported that they cook meals using a recipe, rather than relying on pre-packaged foods
5) 58% reported that they have asked their parents to purchase healthy food for their family

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Appropriations changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

Key Items of Evaluation

Contributes to Childhood Obesity priority:

A series of school-based nutrition education lessons improve the knowledge of participating students in grades K-3.

Youth participating in the 4-H food and nutrition project reported specific actions and behavior changes that contribute to improving their health.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

4-H Science, Technology, and Engineering

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual	6.5	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**
103287	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
103287	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
307584	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•4-H science clubs/programs (animal science, horticulture) •4-H technology clubs/programs (Tech Wizards, Lego Robotics) •4-H engineering clubs/programs/camps (Technology Camp) •National 4-H Technology Conference •After school science programs (not-environmental science) •Curriculum and material development

2. Brief description of the target audience

Youth ages 9-18; 4-H Volunteer leaders; Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	2000	2000	40000	40000
Actual	3348	3451	51209	40164

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth participating in 4-H science and technology projects and programs.

Year	Target	Actual
2009	15000	15580

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of youth gaining skills in science and technology.
2	Number of youth utilizing science and technology skills to improve their school or community.
3	Number of youth whose career choice was affected by participation in 4-H science and technology programs.

Outcome #1

1. Outcome Measures

Number of youth gaining skills in science and technology.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5000	5360

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Recent studies reveal that children are becoming increasingly disconnected from their natural environment. The wired generation feels more at ease "booting up" than putting on their boots to go outdoors.

What has been done
During the summer of 2009, 4-H Science Day Camps across Oregon explored robotics, rocketry, forestry, entomology, water resources, orienterring, renewable/alternative energy, and chemistry as it relates to cooking, art, fiber and fabric . . . all while enjoying the great outdoors. Learning occured through lecture, experiementation, games, role play, hands-on activities and field trips.

Results
An evaluation instrument was designed to measure the science knowledge and skills youth gained from participating in 4-H Science Day Camps. The paired t-test analysis of mean ratings before and after the youth attended the camp reflected science skills and knowledge differences that were statistically significant at the p=>.05 level. When asked what was the most important topic or action learned, responses included food chemistry, energy conservation, basic engineering through robotics and rockety, and watershed management. 85% indicated that an outdoor setting was a "way better" learning environment vs. a classroom setting.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth utilizing science and technology skills to improve their school or community.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1000	1389

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Research points to the success of service-learning in leading to improved retention of learning and skills, increased motiviation, and students who feel more positive about the relevance of learning and school. This is particluarly true for teens who desire to make a difference in their community and on their world.

What has been done
In the summer of 2009 five 4-H Tech Wizards members, a program designed to help Latino teens to achieve academic success, mentored 14 Latino children on GIS/GPS technology and community mapping. The mentoring assignment is part of the capstone activity for Tech Wizards. This year's project mapped bike paths of a county park system. This community-mapping project also involved buliding a bi-lingual public display at the local park showing the bike paths locations and directions and giving presentations throughout the community on the importance of exercise as part of a healthy lifestyle, hoping to promote and inspired healthy living among the Latino community.

Results
The bike mapping capstone project is one example of service-learning making a difference for Latino youth as well as improving their communities. About 95% of Tech Wizards in grades 9-11 are on track to complete their current grade level and advance to the next level and about 95% of Tech Wizards in grade 12 are on track for high school graduation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. Outcome Measures

Number of youth whose career choice was affected by participation in 4-H science and technology programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	300	401

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The U.S. presently faces a significant challenge -- young people are not prepared with the needed science, engineering and technology (SET) workforce skills to complete in the 21st century. 4-H provides youth with hands-on learning experiences that foster exploration, discovery and passion for the sciences. In Oregon, 4-H is working toward a solution to better prepare middle school youth from populations traditionally under represented in science technology fields or live in under served areas.

What has been done
As part of the 4-H SET initiative, the third annual residential summer science camp was held on the Oregon State University campus. Campers spent two full weeks living and learning together in university laboratories, research forests and science centers. There were 47 participants, 24 males and 23 femails representing grades 6 through 8. Ethnicity/race of the particpants was: Hispanic (23%); Caucasian (43%); Asian (11%); Aftrican-American (4%); Native American (6%); Pacific Islander (4%) and other (9%). Campers came from 24 of Oregon's 36 counties.

Results
Campers reported significant changes in science processing skills as measured by the Science Process Skills Inventory (composite score) from the pre to the post-tests (p = .001). Analysis of variance (ANOVA) found a significant difference in these changes for gender but not by grade groups. Females (M = 3.86, SD = 4.90) had a stronger increase in SPSI scores from pre to post test compared to males (M = 1.00, SD = 3.86).
Questions on the post-test also asked campers about their interest, future intentions, and learning related to science specifically as a result of attending the camp. Ninety-eight percent of campers reported they learned new things about science at camp; 92% reported developing important science skills at camp; 92% felt like a better scientist because of the camp. Eighty-seven percent of campers felt what they learned will help others; 81% reported an increased interest in science as a result of attending camp; 79% reported a desire to take more science classes; 55% reported they intend to pursue a career in science.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

About 95% of 4-H Tech Wizards, a program desinged to help Latino teens achieve academic success, in grades 9-11 are on track to complete their current grade level and advance to the next level and about 95% of 4-H Tech Wizards in grade 12 are on track for high school graduation.

Youth increased their science and knowledge skills through particpation in 4-H Science Day Camps.

Youth participating in 4-H Summer Science Camp reported an increased interest with an intent to pursue(55%) science-oriented careers.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Ag: Small Farms and 'Natural' and Organic Production Systems

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%			
102	Soil, Plant, Water, Nutrient Relationships	10%			
112	Watershed Protection and Management	10%			
204	Plant Product Quality and Utility (Preharvest)	2%			
205	Plant Management Systems	3%			
216	Integrated Pest Management Systems	20%			
307	Animal Management Systems	30%			
308	Improved Animal Products (Before Harvest)	3%			
403	Waste Disposal, Recycling, and Reuse	2%			
604	Marketing and Distribution Practices	10%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	9.5	0.0	0.0	0.0
Actual	7.9	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**
123256	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
123256	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
367050	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

A combination of activities (methods listed below) that are designed to meet the needs and opportunities of the communities of interest will be built upon the research base of the university. These activities will be specifically designed to elicit learning, application of learning, and social, economic and environmental impacts on target populations.

2. Brief description of the target audience

1) Producers of naturally or organically produced crops and livestock products and/or small farms for either life-style, hobby, or commercial purposes. 2) Agricultural infrastructure, suppliers and service providers 3) State and federal agencies overseeing regulatory and incentive based programs

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	26000	100000	1000	1000
Actual	28861	157296	710	1998

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes Delivered

Year	Target	Actual
2009	150	152

Output #2

Output Measure

- Number of Workshops Delivered

Year	Target	Actual
2009	50	52

Output #3

Output Measure

- Number of Group Discussions

Year	Target	Actual
2009	20	21

Output #4

Output Measure

- Number of One-on-one Interventions

Year	Target	Actual
2009	1300	1362

Output #5

Output Measure

- Number of Demonstrations

Year	Target	Actual
2009	34	34

Output #6

Output Measure

- Number of Web Sites Maintained

Year	Target	Actual
2009	5	7

Output #7

Output Measure

- Number of Newspaper Articles Published

Year	Target	Actual
2009	34	38

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase in number of farms that are using best management practices leading to reduced nutrient loading of surface water and soil erosion.
2	Increase in number of farmer's markets statewide.
3	% increase in gross sales at farmers' markets statewide.
4	% increase in gross value of non-traditional crops produced in Oregon
5	Number of farmers (x 1000) using OSU Extension Service information.
6	Economic value derived from application of new information and production methods by participating farmers (Million $).

Outcome #1

1. Outcome Measures

Increase in number of farms that are using best management practices leading to reduced nutrient loading of surface water and soil erosion.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	92

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Over 50% of all farms in Oregon are less than 50 acres in size but still consititute an important contribution to the economy and represent an important group of people needing assistance with management of natural resources.

What has been done
The Pasture and Grazing Management workshop was desinged to assist landowners of small acreage farms to be better stewards of the soil and water resources on their property, evaluating which management practices they intend to implement as a result of knowledge gained in the workshop.

Results
A percentage of the participants had implemented some of targeted management practices prior to attending the workshop. Of the remaining participants, the survey results showed comprehension of benefits of the management practices and desire to implement them on their individutal farms.

42% of the program participants plan to keep animals off pastures during the wet/rainy season.
45 % of the program participants plan to create a sacrifice area for use during wet weather.
63% of the program participants plan to have animals graze pastures to 3" and let the grass rest until it grows to at least 6" before grazing again.
57% of the program participants plan to have their soil analyzed.
57% of the program participants plan to base fertilizer applications on soil tests.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
216	Integrated Pest Management Systems
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse

Outcome #2

1. Outcome Measures

Increase in number of farmer's markets statewide.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The smaller, full and part-time farming operations have demonstrated the ability to contribute greatly to local communities and Oregon's economy when they first understand and then develop viable markets for their products. The OSU research and outreach efforts have also had an impact at the food system level by demonstrating how alternative distribution channels differ from those used in traditonal commodity distribution.

What has been done
Workshops on alternative marketing channels for agricultural professionals were offered. Consumer studies at farmers' markets were developed as a way to help establish a permanent market presence and also to help them grow. Educational programs and publications helped farmers to understand the diverse marketing opprtunities availalbe to them including farmers' markets, farm stands, subscription farms, and sales to restaurants and speciality stores

Results
The focus on matching the farmer with the appropriate market for his/her products and needs has benefited the producer, the consumer and the community. Farmers' markets are buildling in strength and availability across the state.

4. Associated Knowledge Areas

KA Code	Knowledge Area
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

% increase in gross sales at farmers' markets statewide.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

% increase in gross value of non-traditional crops produced in Oregon

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	3

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Small flock poultry production using free range and/or organic production techniques has seen dramatic increases in recent years. In addition, there is renewed interest in raising small numbers of chickens in urban settings. Many producers have interest but little experience in production techniques and feeding of either meat or egg laying birds under these management systems.

What has been done
Educational efforts focused on poultry production included management and feeding information as well as helping potential producers to make the decision as to whether poultry is the correct production animal for their area. In addition, education helped these producers determine the regulatory issues with producing poultry and eggs. These classes/workshops determined that many producers need to have better access to poultry processing and efforts were made to connect producers to sources for small flock poultry processing.

Many small producers have concerns about the cost of feed. In 2008 Wsahington State University and Oregon State Universiyt began a collaborative research program to identify locally production grains to be used in Free Range and Organic Poultry Production. In 2009, research results were reported to producers.

Results
Participants were interviewed three months following the classes/workshops and all interviewed had made adjustments in the business operations and/or plans because of knowledge gained. Those who had begun a poultry operation were reaping financial benefits. One producer revised his marketing strategy to include a diversity of markets and his poultry is now featured in serveral regional resturants. Another producer started a farm fresh organic egg business, selling primarily through farmers' markets. The producer made a very good debute in 2009 and plans to return next season.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
204	Plant Product Quality and Utility (Preharvest)
216	Integrated Pest Management Systems

308	Improved Animal Products (Before Harvest)
604	Marketing and Distribution Practices

Outcome #5

1. Outcome Measures

Number of farmers (x 1000) using OSU Extension Service information.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
New and beginning farmers continue to seek assistance in developing their small farms. Educational programs and resources focusing on niche enterprise development and production systems are most frequently requested.

What has been done
Growing Farms is a workshop series for small acreage farmers who are in their first five years of farming, who are intending to start a farm, or who are considering major changes to their farms. The program focuses on business planning and niche marketing.

Results
Only 20% of participants starting the workshop series had some level of a written business plan. At the end of the series 80% created mission statements and/or written goals, 54% created production plans, 49% created new or improved business plans, and 46% created marketing plans. Important skills and knowledge participates self reported they gained from the Growing Farms series included financial planning, risk management strategies, marketing techniques, and assessing physical resources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
403	Waste Disposal, Recycling, and Reuse

604 Marketing and Distribution Practices

Outcome #6

1. Outcome Measures

Economic value derived from application of new information and production methods by participating farmers (Million $).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	6	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
New and beginning farmers continue to seek assistance in developing their small farms. Educational programs and resources focusing on niche enterprise development and production systems are most frequently requested. It is estimated that small scale-farmers earn between $20,000 - $80,000 net income per year.

What has been done
Because of the increased demand for local foods, especially by restaurants, Extension programs now link growers to consumers. These programs focus on educating producers on production methods and marketing and promoting local foods to consumers through workshops and mass media. To sustain this initiative, a website was developed where local producers can list their season's produce for consumers to buy and at the same time interested bulk buyers who would like to buy from local farmers can list their needs. A blog within the website enables farmers to list what is in season.

Results
As an example of the local foods effort's success, one tourist town currently has 22 restaurants, 85 small farms/growers, 5 food markets, 3 fishing boats, and 23 consumers participating in the food web linkage project. It is estimated that over $129,000 local food trade occurred in 2009 within these groups (source Oregon Coast Community College, small business center). As a result of demand for local foods generated by the web linkage project in a small coastal county, four new farms began production, adding $80,000 - 320,000/year net income to an economically depressed community.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
403	Waste Disposal, Recycling, and Reuse
604	Marketing and Distribution Practices

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

No data was colected on the percentage of increase in gross sales at farmers' markets during 2009. Faculty assigned to the Small Farm program refocused their efforts on grantsmanship as a response to shrinking state funding.

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

Evaluation Results

New and beginning farmers adopt management practices that better protect the environment.

Speciality crop growers/producers increased their profits thanks to lessons learned and successfully applied in a niche enterprise and buisiness planning course.

An increased number of small farm enterprises used direct makreting methods such as farmers's markets, which have increased in number from 18 to 68 statewide in the past 10 years, and local direct methods.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

4-H Outreach to New and Underserved Audiences

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	7.9	0.0	0.0	0.0
Actual	7.2	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
112583	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
112583	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
335267	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•4-H Clubs and Camps •Oregon Outreach Programs •Curriculum and material development

2. Brief description of the target audience

Youth ages K-12, Parents, Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	1000	1000	12000	12000
Actual	1238	1256	13586	15290

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth participating in 4-H outreach programs.

Year	Target	Actual
2009	3600	4119

Output #2

Output Measure

- Number of adult volunteers supporting 4-H outreach programming.

Year	Target	Actual
2009	100	91

Output #3

Output Measure

- Percent of 4-H enrollment from racial or ethnic minorities.

Year	Target	Actual
2009	19	23

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of Latino youth achieving increased understanding of the natural environment.
2	Number of youth gaining knowledge and life skills through participation in 4-H outreach programs.

Outcome #1

1. Outcome Measures

Number of Latino youth achieving increased understanding of the natural environment.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	190

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With a rapidly expanding population of Latino youth in grades K-12, county 4-H programs, desiring to be inclusive of all youth, face multiple challenges in the design, implementation and evaluation of culturally responsive programs that will attract Latino youth. Hiring bi-lingual/bi-cultural faculty and staff, increasing cultural competency on the part of all faculty and staff with regards to Latino culture, and improving the knowledge of programming strategies to meet tht needs and interests of Latino youth have been success strategies of the 4-H Oreogn Outreach Project.

What has been done
4-H Oregon Outreach's Sustainable Community Project serves at-risk, low income and/or Latino youth who are in grades 3-5, with a specific focus on outreach to Latino youth. Youth participate in experiential learning activites related to SET content, including LEGO robotics, digital photography, forestry science, chemistry, horticulture and nutrition. The porgram is delivered through weekly afterschool club-like sessions in school facilities supplemented by field trips and other outings (the Oregon Museum of Science and Industry, the Hatfield Marine Science Center, and summer campus).

Results
Approximately 190 at-risk, low income and/or Latino youth in grades 3-5 participated in the first year of SET-focused after school programs offered at four elementary schools in two counties. About 45% of participants were Latinos. Data related to SET knowledge gained and applied, increased confidence related to SET content, and improved ability to work effectively as team members was positive and significant.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth gaining knowledge and life skills through participation in 4-H outreach programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1000	3929

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With a rapidly expanding population of Latino youth in grades K-12, county 4-H programs, desiring to be inclusive of all youth, face multiple challenges in the design, implementation and evaluation of culturally responsive programs that will attract Latino youth. Hiring bi-lingual/bi-cultural faculty and staff, increasing cultural competency on the part of all faculty and staff with regard to Latino culture, and improving the knowledge of programming stratgies to meet the needs and interests of Latino youth have been success strategies of the 4-H Oregon Outreach Project.

What has been done
Out-of-school 4-H activities for Latino youth included dance and other performing arts, computers, videography, GIS/GPS, soccer, arts and crafts, natural resources and exploration of Latino culture. Program delivery modes include 4-H clubs, afterschool programs, day and overnight campus, special events and conferences.

Results
Seventeen counties conducted ongoing outreach activities. As a result an additonal 3929 Latino youth particpated in 4-H; 91 Latino adults served as 4-H leaders contributing nearly 24,000 hours; 111 Latino youth contributed over 8,000 hours as program volutneers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)
- Case Study

Evaluation Results

Evaluations of specific Oregon Outreach programs revealed that Latino youth increased knowledge and skills in targeted areas and parents were very positive about resources 4-H offered to youth.

Oregon Outreach's Sustainable Communities Project data indicated that at-risk, low income and/or Latino youth gained and applied SET knowledge, increased confidence related to SET content, and improved ability to work effectively as team members as a result of participating in the project.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Ag: Dryland Cropping Systems

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	17%			
111	Conservation and Efficient Use of Water	27%			
112	Watershed Protection and Management	7%			
205	Plant Management Systems	6%			
216	Integrated Pest Management Systems	10%			
502	New and Improved Food Products	10%			
511	New and Improved Non-Food Products and Processes	10%			
601	Economics of Agricultural Production and Farm Management	8%			
604	Marketing and Distribution Practices	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	17.0	0.0	0.0	0.0
Actual	16.6	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**
259250	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
259250	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
772036	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

A combination of activities (methods listed below) that are designed to meet the needs and opportunities of the communities of interest will be built upon the research base of the university.

2. Brief description of the target audience

1. Crop producers primarily in the Columbia Basin of Oregon and Washington and Western Idaho.2. Agricultural infrastructure and service providers in Oregon, Washington and Idaho3. State and federal agencies managing both regulatory and incentive based programs

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	32000	100000	1000	1000
Actual	29676	133680	1657	932

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes Delivered

Year	Target	Actual
2009	113	117

Output #2

Output Measure

- Number of Workshops Delivered

Year	Target	Actual

2009	113	118

Output #3

Output Measure

- Number of Group Discussions

Year	Target	Actual
2009	56	59

Output #4

Output Measure

- Number of One-On-One Interventions

Year	Target	Actual
2009	471	494

Output #5

Output Measure

- Number of Demonstrations

Year	Target	Actual
2009	28	29

Output #6

Output Measure

- Number of Web Sites Maintained

Year	Target	Actual
2009	4	6

Output #7

Output Measure

- Number of Newspaper Articles Published

Year	Target	Actual
2009	38	38

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Acres of improved wheat varieties planted times the proven economic advantage above the industry norm (Million $).
2	Acres planted to new crops as a result of OSU research and Extension programs times the proven economic advantage over the norm (Million $)
3	Established value of application of new technologies per acre time the number of acres affected (Million $)
4	% reduction in soil erosion when new technologies are employed.
5	Percentage of farmers using Extension information.
6	Value of new processes and products applied because of OSU Extension programming (Million $).

Outcome #1

1. Outcome Measures

Acres of improved wheat varieties planted times the proven economic advantage above the industry norm (Million $).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Variety selection is the most important management decision made by growers. Selecting adapted varieties that combine high yield potential and a high level of pest resistance are essential for the economic viability of wheat production in Oregon.

What has been done
Trial locations are selected to capture the range of environmental conditions in the wheat production areas of Oregon. Trials are located both on-farm in collaboration with growers and on-station in collaboration with Oregon experimental research stations. Results are reported through email alerts, web publications, as well as delivered to clientele through presentations at grower meetings, crop tours, and field days.

Information on the adaptability, yield, and pest resistance of commonly grown commercial varieties as well as new and/or potential varieties from the PNW breeding programs is collected, analyzed, and delivered to growers through the statewide variety trials. This data is augmented with the large plot on-farm variety trials which provide growers with an opportunity to evaluate varieties under conditions that are more representative of current farming practices. Together these trials improve the grower's ability to select varieties that are best adapted to their environment and increase farm profitability.

Results
The economic impact of the variety testing program is best measured through the adoption of new higher yielding wheat varieties such as ORCF-102, Tubbs06, and Goetze. On average these newer wheat varieties increase yield across the state by 3 to 7 bushels per acre compared to Stephens. Since 2005, Stephens acreage in the state has been reduced by 15% (115,000 acres) because growers have adopted these newer higher yielding varieties. At current wheat prices (~$4.80/bu) this represents an economic impact of $1.6 to 3.8 million across the state that is related to the research and outreach efforts of the variety testing program.

4. Associated Knowledge Areas

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

112	Watershed Protection and Management
205	Plant Management Systems
216	Integrated Pest Management Systems
502	New and Improved Food Products
511	New and Improved Non-Food Products and Processes
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #2

1. Outcome Measures

Acres planted to new crops as a result of OSU research and Extension programs times the proven economic advantage over the norm (Million $)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	9

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In Oregon, soybeans are a relatively new crop, with growers jockeying to find local processors and a profitable market. Markets are currently available for soybean producers, including the identity-preserved food grade market for whole beans and food grade oil, biofuel and feed markets. Except for the biofuel market, organic production increases the value of soybeans and processed components.

What has been done
Starting with field trials, information on growing soybeans and markets in Eastern Oregon has been shared with growers via meetings, publications, field tours and newsletters. Two early adopters are involved in applied research efforts for nitrogen controls and organic methods. Of particular interest to growers is information on available markets and bushel values.

Results
Producers find growing soybeans offers many benefits, including ease of production, low production costs, a lower water requirement than corn or alfalfa, and ample market opportunities. The same machinery is used for raising soybeans as for wheat, and soybeans do not require nitrogen fertilizer if they have been inoculated. Local markets are currently paying $0.30 to $1.50 above the Chicago Board of Trade Price of $9.31 per bushel, depending on end use.

4. Associated Knowledge Areas

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

111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
205	Plant Management Systems
216	Integrated Pest Management Systems
502	New and Improved Food Products
511	New and Improved Non-Food Products and Processes
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

Established value of application of new technologies per acre time the number of acres affected (Million $)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Conventional fallow, which is practiced on about 3,850,000 acres on the Columbia Plateau, is a tillage-based practice used to increase soil water storage in low precipitation zones. It is an integral part of a relatively low risk cropping system that has been used to produce winter wheat for more than a century. The primary disadvantage of conventional fallow is the potential for soil erosion caused by wind and water. Soil erosion can be reduced by delaying and minimizing tillage operations or by eliminating tillage completely. No-till or reduced till cropping systems are met with skepticism by many farmers due to concerns about yield reductions associated with inadequate seed-zone moisture and delayed seeding.

What has been done
Extension faculty conduct on-going field research that evaluates agronomic practices and the profitability of reduced tillage fallow, no-till fallow, and annual cropping systems. They also serve as principal investigators for locally-adapted variety testing programs. Seven-to-twelve lines or varieties are tested each year using standardized, and statistically valid, experimental designs.

Extension faculty conduct in-the-field, research demonstrations during the annual crop tours and field days across the Columbia Plateau. Other demonstrations are organized on an as needed basis. Power point and poster-format presentations are delivered at conferences, seminars, meetings, and workshops for clientele.

Results
Findings of "no difference" between water storage in no-till fallow and conventional fallow were the precursor to a renewed interest in no-till fallow. No-till fallow acreage in one county has increased from 2500 acres to about

35,000 acres during the last nine years. Interest in no-till fallow continues to grow and is fostered by the applied research which shows that grain yields are reasonably good and are a function of variety selection. Continuous (no-till) spring wheat cropping systems have increased from 2000 acres to about 6000 acres. This increase is due, in part, to acceptable yield and favorable profit margin results from long-term (10 year) annual cropping field experiments. No-till cropping systems reduce soil erosion. The estimated reduction in soil erosion, where no-till or reduced till systems have been implemented, is 2.5 tons per acre per year. The value of this reduction, calculated at $6.00 per ton, is $510,000 annually.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
205	Plant Management Systems
216	Integrated Pest Management Systems
502	New and Improved Food Products
511	New and Improved Non-Food Products and Processes
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #4

1. Outcome Measures

% reduction in soil erosion when new technologies are employed.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Litigation has characterized the relationship between environmental organizations, federal, state and local natural resources management agencies, and agricultural natural resource users.

What has been done
The OSU Extension Service partnered with county Soil & Water Conservation Districts to organize and host a one day tour and meeting of individuals from 10 environmental organizations, three non-profit foundations, and 21

federal, state and local government entities. The purpose of the tour was to explain what agriculture does on the land to conserve natural resources and protect endangered species. The groups then met to discuss ways of positively collaborating on future conservation projects that will continue to protect natural resources and endangered species, provide agricultural producers with a fair return on their investment, and promote sustainable rural communities in the Mid-Columbia region of Oregon.

Results
The Lower John Day Working Group continues to meet on a monthly basis, and developed a list of priority resource concerns and demonstration projects the organizations will work on collaboratively. Grant funding proposals are being developed to finance these priority projects, including submission of a $1.5 million Oregon Watershed Enhancement Board (OWEB) Strategic Investment Program proposal as recommended by OWEB.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures

Percentage of farmers using Extension information.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Value of new processes and products applied because of OSU Extension programming (Million $).

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

While each state defined outcome is being addressed in a systematic and forward moving manner, in any given year qualitative data may not be collected on all defined outcomes included in the plan of work. Impact statements are crafted wtih data that is valid and reliable. Less evaluation occurred in 2009 as faculty members refocused their efforts on grantsmanship as a response to shrinking state funding.

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

Evaluation Results

Since 2005, acreage across the state planted in lower yield wheat varieties has been reduced by 15% (115,000 acres) because growers have adopted newer higher yielding varieties. At current wheat prices (~$4.80/bu) this represents an economic impact of $1.6 to 3.8 million across the state that is related to the research and outreach efforts of the variety testing program.

Producers find growing soybeans offers many benefits, including ease of production, low production costs, a lower water requirement than corn or alfalfa, and ample market opportunities.

No-till cropping systems reduce soil erosion. The estimated reduction in soil erosion, where no-till or reduced till systems have been implemented, is 2.5 tons per acre per year. The value of this reduction, calculated at $6.00 per ton, is $510,000 annually.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Ag: Livestock Based Production Systems

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	8%			
112	Watershed Protection and Management	8%			
121	Management of Range Resources	8%			
205	Plant Management Systems	20%			
303	Genetic Improvement of Animals	20%			
307	Animal Management Systems	20%			
308	Improved Animal Products (Before Harvest)	3%			
311	Animal Diseases	4%			
315	Animal Welfare/Well-Being and Protection	4%			
501	New and Improved Food Processing Technologies	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	30.0	0.0	0.0	0.0
Actual	31.5	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**
491990	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
491990	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
1465126	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

A combination of activities (methods listed below) that are designed to meet the needs and opportunities of the communities of interest will be built upon the research base of the university.

2. Brief description of the target audience

1.Ranchers, dairy producers and animal product processors2.Agricultural infrastructure, suppliers and service providers3.State and federal agencies managing both regulatory and incentive based programs

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	76000	100000	1000	1000
Actual	68398	248196	3077	866

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	8	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Education Classes Planned

Year	Target	Actual
2009	282	291

Output #2

Output Measure

- Number of Workshops Planned

Year	Target	Actual
2009	282	263

Output #3

Output Measure

- Number of Group Discussions Planned

Year	Target	Actual
2009	141	198

Output #4

Output Measure

- Number of One-On-One Interventions Planned

Year	Target	Actual
2009	1176	1996

Output #5

Output Measure

- Number of Demonstrations Planned

Year	Target	Actual
2009	71	73

Output #6

Output Measure

- Web Sites Maintained

Year	Target	Actual
2009	3	4

Output #7

Output Measure

- Newspaper Articles Planned

Year	Target	Actual
2009	94	95

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increased market value (Million $) created by application of new processes and animal products.
2	Economic value of assistance from OSU Extension Service professionals as reported by producers (Million $).

Outcome #1

1. Outcome Measures

Increased market value (Million $) created by application of new processes and animal products.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	2	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Oregon is unique among western states because it still has a number of smaller independent family owned dairy processors. Since 2000 there has been a significant increase in artisan cheese production. Today there are 19 licensed artisan cheese producers which include a mixture of cow, goat, and sheep milk producers.

What has been done
The OSU dairy processing Extension program is focused on assisting both the traditional dairy processors as well as the newer artisan cheese makers. However the objective of the program remains the same for both target groups: to promote the production of safe and high quality dairy products and support a healthy and sustainable dairy industry in Oregon.

The Oregon Cheese Stories event was organized in collaboration with the OSU Food Innovation Center and the Oregon Department of Agriculture marketing department. The objective of the event was for artisan cheese makers to meet and educate cheese buyers. Eleven artisan cheese makers presented their stories and cheese to potential buyers from San Francisco to Seattle. The event was well received by cheese makers and buyers alike. It has been decided to repeat this event on bi-annual basis.

Results
The Oregon Cheese Stories event resulted in increased sales contracts, especially for newly established cheese makers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
121	Management of Range Resources
205	Plant Management Systems

303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies

Outcome #2

1. Outcome Measures

Economic value of assistance from OSU Extension Service professionals as reported by producers (Million $).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	3	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
2009 found Northeastern Oregon still suffering from the effects of the 2007 drought and the 2008 grasshopper infestation, only at a slightly reduced rate of infestation. It was reported (Oregon Department of Agriculture 2008) that over 730,000 acres in one county alone were infested with grasshoppers with infestation rates averaging 22 per square yard, and a range of 5 to over 200 per square yard.

What has been done
Extension faculty partnered with Oregon Department of Agriculture personnel and USDA APHIS personnel conducting ground surveys and educational programs as well as one-on-one ranch visits helping local producers and land management agencies understand how to identify problems, formulate scenarios and potential financial impacts, and then manage accordingly. Two public educational meetings were held with over 75 participants, with newspaper articles and press releases about grasshopper integrated pest management alternatives helping to spread the word. Due largely to early detection and collaborative action, successful grasshopper spraying in 2008 and nymphal grasshopper spraying by property owners during the spring of 2009, the fall surveys showed slightly less than 21,000 acres infested in 2009.

Results
At the rate of reported infestation in 2008, forage loss was equivalent to 21,041 tons of forage. The value of the forage can be computed three ways: $4.28 million in lost alfalfa hay production, 56,109 Animal Unit Months valued at $1.4 million, or $3.16 million in lost grass hay production. The total economic value of Extension's assistance to producers is one of these three calcuations, not the sum.

4. Associated Knowledge Areas

KA Code	Knowledge Area

102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
121	Management of Range Resources
205	Plant Management Systems
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

Evaluation Results

The Oregon Cheese Stories event resulted in increased sales contracts with buyers from San Francisco to Seattle, especially for newly established cheese makers.

Total economic value of Extension's assistance to producers fighting grasshopper infestation averaged $2.95 million in 2009.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Ag: High Rainfall and Irrigated Cropping Systems

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	16%			
111	Conservation and Efficient Use of Water	6%			
112	Watershed Protection and Management	5%			
204	Plant Product Quality and Utility (Preharvest)	15%			
205	Plant Management Systems	20%			
216	Integrated Pest Management Systems	20%			
403	Waste Disposal, Recycling, and Reuse	3%			
405	Drainage and Irrigation Systems and Facilities	6%			
502	New and Improved Food Products	4%			
603	Market Economics	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	66.0	0.0	0.0	0.0
Actual	66.5	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**
1038034	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1038034	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
3091220	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

A combination of activities (methods listed below) that are designed to meet the needs and opportunities of the communities of interest will be built upon the research base of the university.

2. Brief description of the target audience

1. Crop producers in this group of crops generally produced in the high rain fall or irrigated production system in Oregon2. Agricultural infrastructure, suppliers and service providers3. State and federal agencies managing both regulatory and incentive based programs

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	126000	400000	1000	1000
Actual	179750	451562	6390	1798

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	44	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes Planned

Year	Target	Actual
2009	493	529

Output #2

Output Measure

- Number of Workshops Planned

Year	Target	Actual

2009	493	526

Output #3

Output Measure

- Number of Group Discussions Planned

Year	Target	Actual
2009	246	242

Output #4

Output Measure

- Number of Demonstrations Planned

Year	Target	Actual
2009	123	144

Output #5

Output Measure

- Number of One-On-One Interventions Planned

Year	Target	Actual
2009	2052	2420

Output #6

Output Measure

- Web Sites Maintained (Planned)

Year	Target	Actual
2009	6	9

Output #7

Output Measure

- Number of Newspaper Articles Planned

Year	Target	Actual
2009	164	198

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Thousands of acres of improved varieties planted
2	Thousands of acres of new crops planted
3	Economic impact of new varieties planted (Million $)
4	Economic value of new crops planted (Million $)
5	Improvement in air, soil and water parameters resulting from application of new technologies (% Improvement)
6	Sales value (Million $) of new value added products
7	Value of information received by growers (Million $; reported value based on survey results)

Outcome #1

1. Outcome Measures

Thousands of acres of improved varieties planted

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Thousands of acres of new crops planted

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Many rural communities are highly dependent upon agriculture as the mainstay of their ecoomies. The use of new technologies, improvements of input efficiences, and develop of new markets and new products will assist the agricultural industry in maintaining important contributions to the social, economiic and environmental well-being of the community.

What has been done
A team of OSU Extension faculty and researchers received $600,000 of Sun Grant funding to establish trial plantings of many types of crops with the potential for biofuel application. The goal is to determine local optimal planting dates and feasibility.

Results
Arundo, a highly productive giant cane form which biochar is processed, is an early favorite that could supply coal replacement at the local power plant. Arundo can be invasive; however, the applied research results have determined that arundo does not flower at Oregon's latitude and may be contained where planted.

4. Associated Knowledge Areas

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

204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities
502	New and Improved Food Products
603	Market Economics

Outcome #3

1. Outcome Measures

Economic impact of new varieties planted (Million $)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Oregon has a diverse, economically important berry crop industry with about 20,000 acres harvested for a farm gate value of over $140 million in 2008. Berry crops are grown on over 1000 family farms in Oregon. Blueberry and blackberry acreage continues to grow with new growers requiring basic information on all aspects of production. Existing growers struggle to remain economically viable in this global market.

What has been done
Applied research on production systems in blueberry continues, studying the impact of fertility, planting system, cultivar, and weed management method on establishment, production, and economic grower returns. Studies in alternative production systems for blackberry show an increased yield and quality as well as extend the fruiting season for higher-value niche markets.

Results
In blueberries, prior to research and Extension programs conducted, ALL blueberry fields were planted at 4' apart in the row. After conducting research on high-density plantings, ALL new plantings are established at 3' or less in the row, thus increasing yield. Estimated impact: $3 million (per year). In addition, no blueberries were trellised in Oregon (or elsewhere) prior to OSU research on trellising. Trellising increased machine-harvest efficiency by up to 8% of total yield or one additional ton/acre. Now over 90% of all blueberry plantings are trellised. Impacts of this program were estimated at $5 million/year.

Applied research in trailing blackberry showed that brushing fields in winter reduces potential thorn contaminants in machine-harvested berries by over 65%. Now more than 4,000 acres are brushed in winter. Estimated impact: $1 million. Production system research has shown that Siskiyou, a cold-sensitive cultivar, can produce 160% higher yield in alternative year, than in every year production systems. Impact in 2009: $100,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities
502	New and Improved Food Products
603	Market Economics

Outcome #4

1. Outcome Measures

Economic value of new crops planted (Million $)

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Improvement in air, soil and water parameters resulting from application of new technologies (% Improvement)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	7	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
On a monthly basis, Oregon Department of Environmental Quality monitors the pesticide levels in streams and rivers in the Walla Walla Valley from 11 sites in and near orchards. Pesticide concentration results are presented by the DEQ to the Blue Mountain Horticulture Society on a quarterly basis and at their annual meeting in February.

What has been done

The Pesticide Stewardship program focused on improving water quality and fish habitat by reducing pesticide concentration in the county's waterways. In 2007, in response to higher than expected pesticide concentrations in the Little Walla Walla River, Extension faculty initiated an intensive education program for growers and their pesticide applicators.
In 2007, 2008 and 2009, Extension coordinated the Oreogon Department of Agriculture Pesticide Applicator Core Course in English and Spanish and this included one-on-one demonstrations and training for calibration of spraying equipment, drift management, and establishment of buffer zones between orchard blocks and waterways. In 2007 there were 32 participants and in 2008 there were 37 participants (7 Hispanic). In 2009 there were 41 participants (6 Hispanic).
As an incentive to encourage participation in the Pesticide Stewardship Program, a pesticide cleanup and empty container disposal event was sponsored by US EPA and Oregon DEQ, and hosted by Extension.

Results
The most noteworthy findings from these data are the significant reductions in median and maximum pesticide concentrations in Walla Walla Valley streams and rivers between 2006 and 2007, and this was sustained through 2009. In addition, while Diazinon was detected eight times at the two sites in 2006, no detections were found in 2007. This far exceeded Oregon DEQ and EPA expectations and has been sustained in 2009 with a further reduction in pesticide residue levels.

As a result of the pesticide cleanup event, 20 area growers brought in waste: 7,630 pounds of a wide array of waste pesticides were collected (including organophosphates and legacy chemicals like DDT), and 3,000 pounds of empty plastic pesticide containers were collected for recycling.

In 2009, residues have been reduced even further and another 10,000 pounds of waste pesticides (including 12 pounds of Dieldrin) were removed from the Valley and 6,500 pounds of empty plastic pesticide containers were recycled.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities

Outcome #6

1. Outcome Measures

Sales value (Million $) of new value added products

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Low commmodity prices, high input costs and limited markets leads to a farming system that is not sustainalbe. Development of new markets and value added products will assist the agricuture indstry in maintaining important contributions to social, economic and environmental well-being of the state.

What has been done
The processed vegetable industry is developing a marketing program focused on sustainable agriculture. Many Wilamette Valley vegetable processing companies have goals to become Food Alliance Certified within the next 3 three years. (The food alliance was initiated through a Kellogg Foundation funded project initiated by OSU Extension). The OSU Extension IPM program in processed vegetables is providing growers and processers with specific, credible data that substantiates that they are "walking their talk" and actually reducing pesticide use. The industry is referring to this effort as Stewardship Marketing, a value added concept with the more urban customer concerned about sustainability.

Results
During 2006-2009, 21 snap bean growers based insecticide application decisions on 1) OSU Extension's VegNet regional pest population trends, 2) sweep net sampling, and 3) action thresholds. During this period, the number of acres that were not sprayed with an insecticide for beetle control increased from 89 no-spray-acres (3.3% of bean acreage) to 587 no-spray-acres (23% of bean acreage). Asana (esvenvalerate) and Sevin (carbaryl) use was reduced by 30% and 50% respectively.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
502	New and Improved Food Products
603	Market Economics

Outcome #7

1. Outcome Measures

Value of information received by growers (Million $; reported value based on survey results)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	12

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
VegNet is a regional pest monitoring network paid for by the Oregon Processed Vegetable Commission, established and maintained throughout the growing season by OSU Extension.

What has been done
The regional data is analyzed each week and reports pest population trends to over three hundred farmers and agricultural professionals in an email newsletter.

Results
One example of VegNet's success: During the 2009 growing season, a localized outbreak of Bertha Armyworm was detected. Growers were warned in time to prevent crop damage, saving at least a thirty acre planting of drip irrigated bell peppers grown for processing with a farm gate value of approximately $25,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
403	Waste Disposal, Recycling, and Reuse
405	Drainage and Irrigation Systems and Facilities
502	New and Improved Food Products
603	Market Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

While each state defined outcome is being addressed in a systematic and forward moving manner, in any given year qualitative data may not be collected on all defined outcomes included in the plan of work. Impact statements are crafted wtih data that is valid and reliable. Less evaluation occurred in 2009 as faculty members refocued their efforts on grantsmanship in response to shrinking state funding.

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

Evaluation Results

Applied research and Exetnsion education has resulted in ALL new blueberry plantings being established at 3' or less in the row for high-density impact, thus increasing yield. Estimated impact: $3 million (per year).

Trellising blueberries increased machine-harvest efficiency by up to 8% of total yield or one additional ton/acre. Now over 90% of all blueberry plantings are trellised. Impacts of this program were estimated at $5 million/year.

Applied research in trailing blackberry showed that brushing fields in winter reduces potential thorn contaminants in machine-harvested berries by over 65%. Now more than 4,000 acres are brushed in winter. Estimated impact: $1 million.

As a result of a pesticide cleanup event, 20 area growers brought in waste; 7,630 pounds of a wide array of waste pesticides were collected (including organophosphates and legacy chemicals like DDT), and 3,000 pounds of empty plastic pesticide containers were collected for recycling.

Becasue of the Stewardship Marketing program the number of acres planted in snap beans that were not sprayed with an insecticide for beetle control increased from 89 no-spray-acres (3.3% of bean acreage) to 587 no-spray-acres (23% of bean acreage). Asana (esvenvalerate) and Sevin (carbaryl) use was reduced by 30% and 50% respectively.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Healthy People, Healthy Communities

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	80%			
704	Nutrition and Hunger in the Population	10%			
724	Healthy Lifestyle	10%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	16.5	0.0	0.0	0.0
Actual	16.9	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**
263726	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
263726	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
785365	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Stakeholder input will be acquired from numerous sources, including state government agencies, the Oregon Food Bank, local funders, consumers, food policy councils, health care provider organizations, and other organizations and consortia. Programs will be delivered based on several factors, including the identification of critical audiences at local levels, working organizational partnerships, and input from OSU researchers. Target audiences will be identified and the most effective programming options will be identified and implemented.

2. Brief description of the target audience

The target audience will consist of low-income and high-risk families, including parents, children, and seniors.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	11000	85000	50000	55000
Actual	12544	66892	79522	14275

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Educational Events and Workshops to be Delivered

Year	Target	Actual
2009	330	384

Output #2

Output Measure

- Demonstrations to be Conducted

Year	Target	Actual
2009	330	373

Output #3

Output Measure

- Newsletters to be Published

Year	Target	Actual
2009	100	114

Output #4

Output Measure

- Web Sites to be Developed/Maintained

Year	Target	Actual
2009	3	5

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of participants that will indicate positive change related to nutritional content of food purchases for their family.
2	Percentage of participants that report improved food resource management (meal planning and food budgeting).
3	Percentage of participants that report improved food safety practices such as preparation, thawing and storing procedures.
4	Percentage of participating families that will report increased physical activity among their children.

Outcome #1

1. Outcome Measures

Percentage of participants that will indicate positive change related to nutritional content of food purchases for their family.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	60	69

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Poor nutrition is linked to chronic illnesses such as obesity and diabetes. Studies show that 59% of adult Oregonians are obese or overweight, and 22% of 8th graders are overweight or at risk of being overweight. Only 28% of Oregonians reported eating five or more servings of fruits and vegetables per day. There is a clear need for high-quality nutrition education for Oregon families. Low-income families are particlurly at risk for devleoping poor nutirtion and low physical activity behviaors.

What has been done
Through nutrition and healthy food preparation classes Extension faculty and staff trained Pantry Partner volunteers who work with persons receiving emergency food boxes from food pantries. As part of a series of classes, food pantry volunteers learned about preparing low-cost, easy-to-prepare, healthy recipes. They were able to practice using an OSU approved healthy recipe to see how easy it was to prepare and to include nutritious ingredients. This hands-on experience helped them to teach recipients of emergency food pantry boxes how to best use the foods they receive.

Results
In program evaluations, volunteers reported that they changed their food purchasing practices to save money and to imporve nutritional content, changed their food preparation methods to ensure food safety, and were more aware of food pantry culture and hunger as a result of completing the Pantry Partners Training course.

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

Percentage of participants that report improved food resource management (meal planning and food budgeting).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	70	73

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Persons eligible for SNAP need to 1) manage their food resources, 2) use thrifty shopping practices to purchase nutritious foods and 3) plan, buy and prepare affordable meals and snacks.

What has been done
The Oregon Food and Nurtrion Education Program is designed to assist limited resource audiences in acquiring the knowledge, skills, attitudes, and changed-behavior necessary for nutritionally sound diets, and to contribute to their personal development and improvement of the total family diet and nutritional well-being. OFNEP classes include curriculum for adults and youth. The goal is to provide educational programming that will increase, within a limited budget, the likelihood that all SNAP recipients and those eligible for SNAP are making healthy food choices and choosing active lifestyles consistent with the most recent Dietary Guidelines for Americans. Programming covers the lifespan.

Results
OFNEP adults participating in a series of classes (using one of these curricula: Eating Smart, Being Active; Oregon Hispanic Curriculum; Simply Good Eating) completed pre/post written surveys. Data analyzed gave the following results:

78% of participants showing improvement in one or more food resources management practices (plans meals, compares prices, does not run out of food or uses grocery lists).

84% of participants showing improvement in one or more nutrition practices (plans meals, makes healthy food choices, prepares foods without adding salt, reads nutrition labels or has children eat breakfast.

57% of participants showing improvement in one or more of the food safety practices (thawing and storing foods properly).

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

Percentage of participants that report improved food safety practices such as preparation, thawing and storing procedures.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	60	88

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Home gardening continues to be popular, productive and provides cost saving for families. With the down-turn in the local economy, saving money is critical for families. There was nearly 30% increase in vegetable seeds sales for summer 2009. More and more people are growing their own gardens, but lack the knowledge and skills to preserve the excess for use year round. There continues to be a demand for information and training in the life skill of food preservation and food safety. There is more and more focus on the safety and quality of our foods and the importance of healthier diets utilizing more fruits and vegetables.

What has been done
A statewide Food Preservation and Safety Hotline is maintained and supported by well-trained and certified Master Food Preserver volunteers. Phones are answered Monday through Thursday from 9 to 5, from June to October. Individuals call from across the state (and beyond) seeking assistance on food preservation and food safety issues. Topics range from is this recipe safe, to how long do I process my tomatoes at 2,500 feet, what happens if I forgot to acidify my tomatoes, to my freezer got unplugged...now what do I do. Total volumn of calls in 2009 was 5554, a 10% increase over the preceding year.

Results
The extensive outreach of the Food Preservation and Safety Hotline is possible because of the Master Food Preserver volunteers. The training program is a 12 week, 6 hour/day commitment with approximately 40 new trainees annually, assisted by approximately 15 to 20 veteran volunteers. Certification exam scores attest to the level of expertise gained in the training program: the average score equaled 100.6 points out of a possible 105 points; scores ranged from 92 to 104 points.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #4

1. Outcome Measures

Percentage of participating families that will report increased physical activity among their children.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	53

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Physical activity and healthy eating are essential for good health. Unfortunately, too many Oregonians have poor eating habits and are not active enough. Inactivity and poor food choices contribute to obesity, high blood pressure, heart disease, cancer and diabetes -- leading causes of disease and death in Oregon.

What has been done
The Professor Popcorn curriculum helps youth participants develop skills and knowledge to select a balanced, nutritious diet. By increasing knowledge of MyPyramid, and the importance of food safety and physical activity, youth develop a positive attitude about nutrition and health, adopt healthy eating behaviors and stay physically active. Youth participated once a month in the Professor Popcorn curriculum series. Pre and post tests were administered for assessing both knowledge and behavior change.

Results
26% of the students reported improvement in doing things like running, riding a bike, and playing sports every day. On average, students reported practicing this behavior "almost always".

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Volunteers being trained to assist low income families in Food Panties reported that they changed their food purchasing practices to save money and to imporve nutritional content and changed their food preparation methods to ensure food safety because of lessons learned in their training course.

78% of adult OFNEP participants showed improvement in one or more food resources management practices (plans meals, compares prices, does not run out of food or uses grocery lists).

Key Items of Evaluation

Contributes to the Food Safety priority: The extensive outreach of the Food Preservation and Safety Hotline is possible because of the Master Food Preserver volunteers. Certification exam scores attest to the level of expertise gained in the training program, with an average score of 100.6 points out of a possible 105 points. Scores ranged from 92 to 104 points.

Contributes to the Childhood Obesity priority: 26% of the students completing the Professor Popcorn program reported improvement in doing things like running, riding a bike, and playing sports every day. On average, students reported practicing this behavior "almost always."

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Healthy Aging

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	50%			
802	Human Development and Family Well-Being	50%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	3.7	0.0	0.0	0.0
Actual	3.2	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**
49922	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
49922	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
148666	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Stakeholder input will be acquired from agency partners including Oregon Senior and Disabled Services in the Dept. of Human Services, the regional Area Agencies on Aging, Oregon AARP, and others. Programs will be delivered based on the identification of critical audiences at local levels, working organizational partnerships, and input from OSU researchers. Target audiences will be identified and the most effective programming options will be identified and implemented. Extension activities will be coordinated with the recently established Center for Healthy Aging Research on the OSU campus.

2. Brief description of the target audience

The target audience will consist of older adults living in Oregon (particularly those at some risk with regard to their health and well-being), family caregivers, and professionals.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	1250	0	0	0
Actual	1351	0	0	0

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Educational Events, Workshops, and Demonstrations to be Conducted

Year	Target	Actual
2009	60	61

Output #2

Output Measure

- Public Service Announcements to be Delivered

Year	Target	Actual
2009	5	9

Output #3

Output Measure

- Newsletters to be Published

Year	Target	Actual
2009	12	13

Output #4

Output Measure

- TV and Media Programs to be Delivered

Year	Target	Actual
2009	3	4

Output #5

Output Measure

- Web Sites to be Developed and Maintained

Year	Target	Actual
2009	1	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of participants that indicate increased knowledge about healthy aging practices including diet, activity, medication management, health monitoring, and family relationships.
2	Percentage of participating family health care providers that report informed decision-making related to older adults in their care.
3	Percentage of participants reporting improvement in their overall (age-adjusted) health status as a result of the program.

Outcome #1

1. Outcome Measures

Percentage of participants that indicate increased knowledge about healthy aging practices including diet, activity, medication management, health monitoring, and family relationships.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	60	67

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Chronic conditions like diabetes, fibromyalgia, arthritis and high blood pressure require medical attention for the life of the patient. Studies have found that teaching self care management to those with chronic conditions helps them stay healthier longer and reduces health care costs over their lifetimes.

What has been done
The 6-week Chronic Disease Self-Management Program teaches individuals with diseases such as diabetes, arthritis, osteoporosis, asthma, cardiac difficulties and cancer how to more effectively manage their disease conditions. The approaches taught include:

*techniques to deal with frustration, fatigue, pain and isolation

*exercises for maintaining and improving strength, flexibility and endurance

*medication management

*nutrition information

*approaches for improving communication with family, friends and health care professionals.

Results
Evaluation studies demonstrated that participants in the chronic disease self-management training program developed the following:

*improved self-efficacy

*improved health status (by their own assessment as well as the assessment of their health providers)

*reduced emergency room use/doctor visits.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Percentage of participating family health care providers that report informed decision-making related to older adults in their care.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	73

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The Lifespan concept recognizes all caregivers need occasional breaks, whether caring for a child with a disability or a spouse with dementia. Caring for someone who requires intensive or round the clock care can leave a caregiver stressed out and exhausted. Even with an infrastructure of respite care providers and a referral system in place, many families cannot afford the cost of respite care.

What has been done
Family Care Connection, part of OSU Extension Service in Lincoln County, serves as the central point of contact for respite care services for the county:

*Providing respite-related information to the community

*Recruiting and training paid and volunteer respite providers,

*Connecting individuals and/or families with respite care providers and,

*Linking individuals and/or families with respite care payment resources.

Results
The primary purpose of respite care is to give relief to families and caregivers from the extraordinary demands of providing ongoing care. Respite is a wellness concept. Program outcomes evaluations show that respite strengthens the ability of families and primary caregivers to continue to provide care in the home. Occasional

relief supports family stability and well-being. The health and wellness benefits for both caregiver and care recipient, plus the financial savings due to a family's increased ability to continue to provide care in the home, are proven in the impact studies conducted. The stability of community based Family Community Connection program provides both economic and social benefits for Lincoln County.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

Percentage of participants reporting improvement in their overall (age-adjusted) health status as a result of the program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	40	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Chronic disease conditions are inevitable companions to the aging process. A "silver tsunami" is the term often used to portray the increasing presence of aging adults in Oregon and the nation.

What has been done
A collaboration of individuals and organizations in southern Oregon, (public and private, university and community) has developed a system of disease self-management instruction using the evidence-based Stanford University approaches, "Living a Healthy Life with Chronic Conditions." This project provided the 6-class instruction to nearly 1,000 adults and trained 69 program leaders to deliver the classes on an on-going basis in a five county region.

Results
Participants in the 6-week series of workshops documented improvements in self-efficacy (3.7 to 4.3 on a five point scale) and a pre-post test indicated changes in health-related self-management behaviors (E.g. increased use of pain management approaches, increased physical activity/exercise). Periodic 6 month follow-ups of a random sample of participants indicate over 80% are continuing to use the approaches they learned in class.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Senior participants in the 6-week series of "Living Well" workshops documented improvements in self-efficacy (3.7 to 4.3 on a five point scale) and a pre-post test indicated changes in health-related self-management behaviors (E.g. increased use of pain management approaches, increased physical activity/exercise).

Evaluation studies demonstrated that participants in the disease self-management training program developed improved self-efficacy, improved health status (by their own assessment as well as the assessment of their health providers), and reduced emergency room use/doctor visits.

Program outcome evaluations show that respite strengthens the ability of families and primary caregivers to continue to provide care in the home, supporting family stability and well-being. The health and wellness benefits for both caregiver and care recipient, plus the financial savings due to a family's increased ability to continue to provide care in the home, speak to both the economic and social benefits of the community based respite program.

Key Items of Evaluation

Periodic 6 month follow-ups of a random sample of "Living Well" participants indicate over 80% are continuing to use the approaches they learned in class and are living a more healthy life with chronic conditions.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Financial Literacy

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%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	1.2	0.0	0.0	0.0
Actual	1.2	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**
17559	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
17559	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
52289	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Stakeholder input will be acquired from various sources including agency partners, local housing authorities, and coalitions related to financial management such as county-level consumer credit counseling bureaus. Programs will be delivered based on the identification of critical audiences at local levels, working organizational partnerships, and input from OSU researchers. Target audiences will be identified and the most effective programming options will be identified and implemented.

2. Brief description of the target audience

The target audience will consist of low-income and high-risk families, including parents, children, and seniors.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	210	0	0	0
Actual	492	0	0	0

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

Patent Applications Submitted

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Educational Events and workshops to be Conducted

Year	Target	Actual
2009	25	28

Output #2

Output Measure

- Newsletters to be Published

Year	Target	Actual
2009	6	7

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of participants indicating increased knowledge and skill in financial planning.
2	Percentage of participants indicating application of acquired financial management practices.

Outcome #1

1. Outcome Measures

Percentage of participants indicating increased knowledge and skill in financial planning.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	75	84

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
People today are experiencing the challenge of meeting their every day financial obligtions. Those who are particularly at risk are low income families or individuals that are unable to obtain affordable housing due to previous evictions and credit problems.

What has been done
OSU Extension has teamed with St. Vincent DePaul to provide a renter's rehabilitation program called Second Chance with information on basic financial management. The Second Chance program involves 5 to 20 participants every eight weeks, with 60 plus total participants in the past year.

Results
Second Chance participants identified the following skills/actions they plan to take:
- Track where money goes = 73%
- Have written goals = 60%
- Determine wants vs. needs = 60%
- Determine my expenses = 60%
- Develop a spending plan = 60%
- Spend wisely = 56%
- Determine my debt = 53%
- Use rule of 3/consumer skills = 53%
- Check credit report = 50%
- Increase income = 46%
- Rebuild my credit = 46%
- Learn to say no = 46%
- Track spending habits = 46%
- Set a budget = 40%
- Get better organized = 40%

4. Associated Knowledge Areas

KA Code	Knowledge Area

801 Individual and Family Resource Management

Outcome #2

1. Outcome Measures

Percentage of participants indicating application of acquired financial management practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	55

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With the statistical increases in longevity in the U.S., individuals now have the potential of living 20 to 25 years past their retirement age. Increased cost of living and escalating health care expenses cause seniors to worry. The challenge is to make sure their retirement funds last as long as they do.

What has been done
A series of classes targeted for seniors were held, with particular focus on strategies for managing retirement funds and investments to support them throughout their lifespan.

Results
Participants in the financial management program for seniors reported making the following changes in their personal finances four months after the program ended:
Calculated their net worth -- 68%
Established an advanced directive -- 63%
Consulted a professional -- 58%
Prepared a power of attorney -- 58%
Planned for potential changes in status -- 53%
Prepared an up-to-date beneficiary list -- 47%
Checked credit report -- 42%
Established an emergency reserve account -- 37%

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
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Populations at risk for problems relating to personal financial management gained knowledge and skills and made behavior changes that lead to a more seculre future.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 16

1. Name of the Planned Program

Sea Grant: Water Protection and Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	3.8	0.0	0.0	0.0
Actual	4.1	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**
64038	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
64038	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
190702	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

We will work with officials and residents on programs and policies that lead to: a) more effective watershed management, b) stormwater and non-point source pollution mitigation, c) enhancement of local basins, d) sustainability of fish and wildlife populations and the ecosystems they reside in and e) awareness, prevention and control of aquatic invasive species. These activities that will promote adoption of watershed-friendly management practices by individuals, watershed councils, governments and non-governmental organizations. Dedicate effort to involve youth in educational programs leading to change in behavior and application of appropriate practices. Work with the Invasive Species Council will be used to assess the effectiveness of programming in increasing awareness, preventing, controlling and eliminating invasive species.

2. Brief description of the target audience

Watershed council members, educators, watershed-affiliated agencies, landowners, watershed recreationists, and other interested groups or individuals through leadership development, community involvement

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	500	1500	0	0
Actual	671	1548	320	0

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

Patent Applications Submitted

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes to be Conducted

Year	Target	Actual
2009	10	17

Output #2

Output Measure

- Number of Workshops to be Conducted

Year	Target	Actual
2009	5	6

Output #3

Output Measure

- Number of Group Discussions to be Conducted

Year	Target	Actual
2009	2	4

Output #4

Output Measure

- Number of Demonstrations to be Conducted

Year	Target	Actual
2009	1	5

Output #5

Output Measure

- Number of Newsletters to be Published

Year	Target	Actual
2009	2	3

Output #6

Output Measure

- Number of Web Sites to be Developed and Maintained

Year	Target	Actual
2009	1	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of local program/policy changes leading to improved watershed health, invasive species management, or enhancement of local basins.
2	Watershed-friendly practices employed by individuals, watershed councils, governments and NGOs adopted as a result of OSU programming.
3	Number of youth participating in educational programming and watershed-friendly projects.
4	% increase in reporting of invasive species as a result of OSU programming.

Outcome #1

1. Outcome Measures

Number of local program/policy changes leading to improved watershed health, invasive species management, or enhancement of local basins.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	13

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Population growth, land use development and land management continues to affect water resources and salmonid habitat. Agencies and local government organizations have limited ability to educate local planning groups, neighborhood associations, real estate developers, homeowners and land managers on the impact of land use on stormwater, water qulaity and salmonid haitat.

What has been done
Extension Sea Grant delivered a wide offering of workshops and shortcourses; field tours and work parties put new knowledge into action. Publications, newsletters and websites reinforced messages. Primary audiences were watershed councils, landowners and public officials.

Results
Examples of impact as a result of this educational effort include:
1)Coos Bay Watershed Association and Luckiamute Watershed Council adopted new fish habitat restoration prioritization strategies and restoration project implementation plans, contributing to improved conditions in the watersheds they serve.
2)Managers at Malheur Wildlife Refuge (USFWS) modified water release plans at four irrigation dams and are planning to redesign the fish passage stuctures at one of these dams to improve redband trout migration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

Watershed-friendly practices employed by individuals, watershed councils, governments and NGOs adopted as a result of OSU programming.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	25	34

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is critical need to protect and restore the functions and values of watershed resources for fish, water conservation and other values. These watershed issues, unless addressed, can cause significant social dislocation and strife throughtout our society.

What has been done
Working with local government officials, LID (Low Impact Development) "Stormwater Solutions" workshops in Willamette Valley and Rogue River areas revealed that most participants had very little self-reported knolwedge of LID before the workshops. As a result their perception of the barriers to LID implementation were high.

Results
Responses to a post-LID workshop evaluation revealed successful cases where increased knowledge led to adoption of or consideration of LID practices:
1)As a direct result of city officials attending the LID class,
the City of Medford approved a "small streets" ordinance, reducing and retaining the amount of stormwater running off impervious transportation surfaces by 65%.
2)The City of Brookings adopted new stormwater management ordinances as result of the city manager's participation
3) Prior to the workshop city prepresentatives in Southern Oregon were resistant to try LID or evaluate its function. Today they are actively engaged in weighing the benefits and impacts for their communities.
4) A small municipality on the Oregon coast is in the process of drafting a set of design standards that follow LID practices. When completed the standards will make a significant difference for the future of this growing community.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #3

1. Outcome Measures

Number of youth participating in educational programming and watershed-friendly projects.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	3750

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Oregon is increasingly threatened by aquatic invasive species, not the least of which are the quagga and zebra mussels, that if established will create major ecologic, health and economic harm to the state. Once established in open waters, aquatic invasive species are almost impossible to eradite. Education that leads to prevention and early detection are the most cost effective (and often the only effective) solution.

What has been done
The Watershed and Invasive Species Education program (WISE) trained 43 teachers in 2009. The teachers implemented their new knowledge about invasive species in a number of classroom activities, from mentioning it as an example in science class to doing a class research project. Of the 43 teachers trained, 17 directed a stewardship project within their community, thoroughly addressing invasive species awareness, spread and impact in a watershed context.

Results
Examples of student powered stewardship projects from 2009 include:
1)Developed a short-wave raido broadcast on invasive species at Devil's Lake, a popular recreation destination.
2)Developed games, poems, puzzles, skits and stories to educate other youth about aquatic invasive species. Students presented their materials at a community Earth Day Celebration.
3)Conducted a watershed assessment that included documenting impacts and spread of invasive species. Students developed an action plan and are now working to restore the site by removing invasive species.
4)Created invasive species claymation films and a book about zebra mussels. The book received the Oregon Invasive Species Council's "Invader Crusader" award in 2009.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #4

1. Outcome Measures

% increase in reporting of invasive species as a result of OSU programming.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	33

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Oregon is increasingly threatened by aquatic invasive species, not the least of which are the quagga and zebra mussels, that if established will create major ecological, health and economic harm to the state. Once established in open waters, aquatic invasive species are almost impossible to eradicate. Education that leads to prevention and ealry detection are the most cost effectvie (and often the only effective) solution.

What has been done
In partnerhisp with Oregon Publich Broadcasting (OPB), SOLV, and the Nature Conservancy, the Oregon Invasive Species Council with OSU Sea Grant Extension is leading a statewide public awareness, prevention and action campaign focused on invasive species, both aquatic and terrestrial. The campaigne was launched in Spring 2008.

Results
Extension Sea Grant programming resulted in 254 new invasive species reports in 2009 and responded to approximately 125 during the 2009 field season. Over 50% (67)of the 125 examined were verified as false identification and 23 reports are atill pending verification. Of the remaining (35) verified as invasive species, the primary culprit is Himalayan blackberry.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

The Watershed and Invasive Species Educaton program has exceeded expectations and outcomes. Additional grants have been secured in order to keep up with the demand for staff time devoted to the project.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

Evaluation Results

95% of all local govenment officials participating in a Low Impact Development workshops reported acquiring new information that will influence their decision-making and actions for the future; 70% reported adopting at least one personal behavior change as a result of participating in the workshop.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 17

1. Name of the Planned Program

4-H Positive Youth Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	16.1	0.0	0.0	0.0
Actual	16.6	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**
259250	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
259250	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
772036	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

4-H programs that build life skills; 4-H clubs and other relevent delivery methods; trainings and educational events; curriculutm and material development; this program plan includes many 4-H project areas as well as county 4-H fair

2. Brief description of the target audience

Youth ages K-12, 4-H volunteer leaders, Extension educators

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	400	600	4500	45000
Actual	430	720	4250	46950

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

Year: 2009
Plan: 0
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	9	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- % of youth enrolled in clubs participating in fairs

Year	Target	Actual
2009	65	82

Output #2

Output Measure

- Number of youth participating in 4-H Afterschool programs

Year	Target	Actual
2009	1500	1812

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of youth acquiring at least one life skill as a result of participation in non-formal youth development programs conducted by 4-H.
2	Number of youth applying at least one life skill they learned through 4-H.

Outcome #1

1. Outcome Measures

Number of youth acquiring at least one life skill as a result of participation in non-formal youth development programs conducted by 4-H.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	6000	7720

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Recent research has highlighted the important need for youth to be meaningfully engaged during the after school hours between 3 and 6. Afterschool programs provide a structured atmosphere for students to improve academic skills, engage in community service activites and have fun with positive peer and adult role models.

What has been done
Faculty evaluated the short-term (learning) outcomes of the 4-H Afterschool Science program through the use of an end-of-session evaluation that asked participants to rate their knowlege, skill level and opinion of science before and after participating in the program. A total of 475 youth in grades 4-6 who participated sometime during the past three years completed the retrospective evaluation. Parents also completed retrospective evaluations measuring the changes they observed in their children as a result of the program.

Results
Youth completed evaluations asking them to assess their knowledge about the specific science subject before and after their participation in the program on a scale of 1 (low) to 5 (high). A statistically significant increase in knowledge was reported by youth participatns with a mean of 2.8 (before) and 4.6 (after) participation in a six week session.

396 parents responded to the evalution. Parents also reported a statistically significant growth in their child's knowledge about the science topic from a mean of 2.2 (before) to 4.2 (after) on the same scale.

Youth reported a statistically significant change in science skills with a mean of 3.5 (before) and 4.6 (after) on a scale of 1 (very bad) to 5 (very good). Parents also indicated statistically significant growth in their child's skills form a mean of 2.2 (before) to 4.2 (after) on the same scale.

Participants reported an increase in how much they like science that was statistically significant with a self reported mean of 3.8 (before) to 4.5 (after) utilizing a scale of 1 (I hate it) to 5 (I love it). 79% indicated they thought they would be more likely to enroll in elective science classes at the junior high and high school levels as a result of their participation in the program.

97% of parents responding indicated this program increased their child's interet in science and 91% indicated thier child would be more likely to enroll in elective science classes in junior high and high school.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Number of youth applying at least one life skill they learned through 4-H.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1000	1546

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Oregon's natural beauty and its environmental quality are highly valued by Portland Metro residents. Despite these valued qualities, residents face many critical environmental issues. Understanding the environment from a global perspective and finding common ground to address pressing environmental issues to preserve the qulaity of life valued will require an engaged and educated citizenry.

What has been done
The 4-H program in collaboration with local school districts, parent groups, and community partners mobilized parents and community support for raising youth achievement toward higher math and science skills and increased public understanding about challenging science issues through 4-H afterschool forestry and wildlife clubs. 35 parents and community 4-H volunteers were recruited, trained and supported to develop, coordinate, deliver and evaluate an afterschool program for 179 youth (ages 7-12) in seven schools. The program included an after-school club program, a one week summer resident camp and a student summit for participating youth.

Results
Participants reported on a 1-4 survey scale, with 1 equaling "none" and 4 equaling "a lot!", the following program impacts of learning achieved and practices adopted:
I learned about Oregon's forests - 3.7 mean out of 4
I am able to better enjoy Oregon's forests - 3.7 mean out of 4
I have become a good steward of the environment - 3.7 mean out of 4
I now take care of the environment - 3.7 mean out of 4
I understand that things I do affect the environment -3.8 mean out of 4
I understand how my qulaity of life depends on forest health - 3.8 out of 4

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

Youth in the afterschool science program reported a statistically significnat increase in their knowledge and skills and in the liking of science.

Youth reported learning to take care of the envirnoment and to repsect nature because they participated in a 4-H afterschool forestry program.

Key Items of Evaluation