

# 2008 Oregon State University Extension Annual Report of Accomplishments and Results

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2008 Oregon State University Extension Annual Report of Accomplishments and Results

## I. Report Overview

### 1. Executive Summary

The Oregon State University Extension Service is one of the three statewide OSU public service units that help Oregonians tackle many of the state's highest priority economic, environmental, and social issues. 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 resources, and promoting healthy families and individuals.

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 from Extension units in all 36 Oregon counties. Because of the changing nature of Oregon's population, 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. Building 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.

To carry out its challenging mission Extension is organized into five program areas in which faculty plan and develop educational outreach based on needs identified local by Oregonians, and as a result of research carried out across the university. Interdisciplinary team work within and across these program areas to ensure that the educational programs are effective and successful. The program areas are: agriculture and natural resources, family and community health, 4-H youth development, forestry and natural resources, and ocean and coastal resources (Sea Grant). Faculty are housed in county Extension offices, at Experiment Stations, on campus and with partner agencies such as the Oregon Food Bank, the Portland Public Schools, the Institute of Portland Metropolitan Studies, and Soil and Water Conservation Districts.

#### Total Actual Amount of professional FTEs/SYs for this State

Year:2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	204.0	0.0	0.0	0.0
<b>Actual</b>	219.0	0.0	0.0	0.0

## II. Merit Review Process

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

- Internal University Panel
- External University Panel

### 2. Brief Explanation

The Directors and Associate Directors of Extension in Idaho, Washington and Oregon reviewed respective plans and provided input to each state. The plan was also reviewed internally by the OSU Provost and the deans of the five active Extension programs.

## 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 Engagement 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, and business and industry. The committee met twice during the past year and was actively engaged in identifying and setting program priorities for the next biennial state plan of work and federal five-year plan. In addition, every county in the state utilizes an advisory structure to identify and set program priorities for the plan of work processes.

#### **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)

#### **Brief Explanation**

Many mechanisms were used to identify individual, 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 solicited 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. Since 2006 a full-time demographer within Extension allows us to access, interpret and respond to Oregon's demographics more effectively.

#### **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 surveys and focus groups. Surveys were conducted based upon OSU Institutional Review Board policies, procedures and guidelines. For quantitative data, customized mail and follow-up telephone surveys were used. The number of persons sampled was based upon the estimated degree of variation in the target population and the 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 activities.

**3. A statement of how the input was considered**

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research 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. Stakeholder input was widely used to set priorities at all levels of the organization. In addition, with the implementation of SOARS in 2007, each Extension program area was required to develop an annual program plan of work that included 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 educational 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 community 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 individuals . . . by helping individuals and families reach their potential; by improving the well-being of Oregon's diverse population

**IV. Expenditure Summary**

<b>1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)</b>			
<b>Extension</b>		<b>Research</b>	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
3260454	0	0	0

<b>2. Totaled Actual dollars from Planned Programs Inputs</b>				
<b>Extension</b>			<b>Research</b>	
	<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
<b>Actual Formula</b>	2858461	0	0	0
<b>Actual Matching</b>	2858461	0	0	0
<b>Actual All Other</b>	9808870	0	0	0
<b>Total Actual Expended</b>	15525792	0	0	0

<b>3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years</b>				
<b>Carryover</b>	2858462	0	0	0

## V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Forestry: Enhancing the Competitiveness of Oregon's Forest Enterprises
2	Forestry: Public Engagement for Planning Oregon's Future
3	Forestry: Sustaining Natural Resources
4	4-H Adult and Youth Leadership Development
5	4-H Environmental Stewardship
6	4-H Nutrition and Health
7	4-H Science, Technology, and Engineering
8	Ag: Small Farms and 'Natural' and Organic Production Systems
9	4-H Workforce Preparation
10	4-H Outreach to New and Underserved Audiences
11	4-H Afterschool
12	Ag: Dryland Cropping Systems
13	Ag: Livestock Based Production Systems
14	Ag: High Rainfall and Irrigated Cropping Systems
15	Healthy People, Healthy Communities
16	Healthy Aging
17	Financial Literacy
18	Sea Grant: Water Protection and Management

**Program #1**

**V(A). Planned Program (Summary)**

**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	17%			
511	New and Improved Non-Food Products and Processes	31%			
602	Business Management, Finance, and Taxation	25%			
604	Marketing and Distribution Practices	12%			
723	Hazards to Human Health and Safety	11%			
901	Program and Project Design, and Statistics	2%			
902	Administration of Projects and Programs	2%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	6.2	0.0	0.0	0.0
<b>Actual</b>	3.5	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
50320	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
50320	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
100640	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**

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1500	15000	0	0
2008	855	10800	0	0

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

**Patent Applications Submitted**

Year	Target
Plan:	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan	0	0	
2008	16	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

- Number of educational classes

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	50	40

**Output #2****Output Measure**

- Number of workshops planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	20	16

**Output #3****Output Measure**

- Group discussions

*Not reporting on this Output for this Annual Report*

**Output #4****Output Measure**

- Number of demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	7

**Output #5****Output Measure**

- Number of public service announcements

*Not reporting on this Output for this Annual Report*

**Output #6****Output Measure**

- Number of recurring newsletters published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	11	7

**Output #7****Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	8

**Output #8****Output Measure**

- Number of web sites maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	7



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Change in number of jobs in the forest products sector as direct result of application of knowledge and technologies developed and disseminated through OSU.
2	Percentage increase in value of shipments from forest products firms statewide as a result of application of appropriate technologies and information as a result of innovation and educational opportunities provided by OSU.
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 disseminated through OSU.

*Not reporting on this Outcome for this Annual Report*

### **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 as a result of innovation and educational opportunities provided by OSU.

*Not reporting on this Outcome for this Annual Report*

### **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.

*Not reporting on this Outcome for this Annual Report*

### **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.

*Not reporting on this Outcome for this Annual Report*

## **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**

Retirements, re-assignments, college re-organization and new program leadership are all factors contributing to this particular planned program not resulting in measurable outcomes over the past year. New, realistic and measurable outcomes have been established for the new plan of work.

## **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**

**Key Items of Evaluation**

**Program #2**

**V(A). Planned Program (Summary)**

**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	25%			
803	Sociological and Technological Change Affecting Individuals, Families and Communities	30%			
806	Youth Development	10%			
901	Program and Project Design, and Statistics	3%			
902	Administration of Projects and Programs	2%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.1	0.0	0.0	0.0
<b>Actual</b>	1.7	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
105080	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
105080	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
210160	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	5000	15000	2500	1500
2008	3988	12253	1876	1325

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	3	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of educational classes

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	20	39

**Output #2**

**Output Measure**

- Number of workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	5	23

**Output #3**

**Output Measure**

- Number of group discussions

*Not reporting on this Output for this Annual Report*

**Output #4**

**Output Measure**

- Number of demonstrations

*Not reporting on this Output for this Annual Report*

**Output #5**

**Output Measure**

- Number of public service announcements

*Not reporting on this Output for this Annual Report*

**Output #6**

**Output Measure**

- Number of recurring newsletters published

*Not reporting on this Output for this Annual Report*

**Output #7**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	20	37

**Output #8**

**Output Measure**

- Number of web sites maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	14

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	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	Reduction in dollars spent (as a percentage of income) per household for consumables resulting from technologies and educational information provided by OSU Extension Service
3	Increase in the number of start-up businesses resulting from innovation and educational programming provided by the OSU Oregon Wood Innovation Center
4	Change in percentage of persons exposed to OSU information that recycle.
5	Percentage of participants that indicate experiencing less conflict related to natural resource issues.

**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.

*Not reporting on this Outcome for this Annual Report*

**Outcome #2**

**1. Outcome Measures**

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

*Not reporting on this Outcome for this Annual Report*

**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
2008	2	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

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

*Not reporting on this Outcome for this Annual Report*

**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
2008	20	80

**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 political decisions affecting natural resource-related issues.

**What has been done**

'The Watershed in my Backyard -- Project Learning Tree Workshop,' a six-hour training for public school educators, was delivered. Twenty teachers participated, who, in turn, reached a total of 549 students when delivering the program at their schools.

**Results**

In a follow up evaluation six weeks after the school program, 100% of the participating students indicated increased knowledge about watersheds and forests. 100% of the students indicated that they will use at least one new idea learned in Project Learning Tree sometime in the year ahead. 80% of the students indicated that they used at least one new idea learned in Project Learning Tree in the past month.

**4. Associated Knowledge Areas**

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

**Brief Explanation**

Retirements, re-assignments, college re-organization and new program leadership are all factors contributing to this particular planned program not resulting in measurable outcomes over the past year. New, realistic and measurable outcomes have been established for the new plan of work.

## **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**

### **Key Items of Evaluation**

**Program #3**

**V(A). Planned Program (Summary)**

**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%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	7.8	0.0	0.0	0.0
<b>Actual</b>	7.6	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
224960	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
224960	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
449920	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 – 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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	6000	25000	0	0
2008	6759	27658	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	15	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

- Number of educational classes

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	250	226

**Output #2****Output Measure**

- Number of workshops planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	25	22

**Output #3****Output Measure**

- Number of group discussions planned

*Not reporting on this Output for this Annual Report*

**Output #4****Output Measure**

- Number of demonstrations planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	25	26

**Output #5****Output Measure**

- Number of public service announcements planned

*Not reporting on this Output for this Annual Report*

**Output #6****Output Measure**

- Number of recurring newsletters planned for publication

*Not reporting on this Output for this Annual Report*

**Output #7****Output Measure**

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

*Not reporting on this Output for this Annual Report*

**Output #8****Output Measure**

- Number of web sites maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	14

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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
2008	2	4

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Reforestation success is not always an easy task especially on tough sites in eastern Oregon. Competing vegetation can take its toll by robbing newly planted seedlings of essential moisture and nutrients, causing excessive mortality and reduced growth.

**What has been done**

The success of this program can be attributed to initiating locally based long-term applied research trials and demonstrations, delivering workshops and tours, writing publications and newsletter articles, and developing a tree planting video and poster. OSU Extension Forestry provided the expertise to develop and deliver these outputs, which lead to the adoption of improved reforestation practices.

**Results**

As a result of this multi-pronged approach, the majority of landowners now use science-based reforestation methods, including the application of vegetation management tools and site preparation if needed, proper seedling care and handling techniques, correct planting methods and animal damage control. Increased success saves forestland owners money. The long-term economic benefits of investing in more intensive practices are evident when the cost of re-planting failed plantations is compared to the initially more expensive but better surviving plantations. An economic advantage will also occur as trees on faster growth trajectories reach higher value timber products sooner.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
112	Watershed Protection and Management
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
2008	15	20

**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 serves 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 two-year, \$25,000 project funded by the Oregon Forest Resources Institute resulted in a new 'mentored' management planning course. The course was developed and delivered in 3 locations involving 45 participants from 37 families, representing 2995 forest and 7034 non-forest acres. The families worked with a dozen volunteer mentors to develop management plans for their property.

**Results**

Landowners attending were surveyed at the end of the course and again 3-6 months later to measure impact of the course on their management intentions and practices. Landowners thought the most important benefits to writing a management plan were improving forest management and health, establishing priorities, and increasing the income form and the value of their forest. Due to the class, 14 landowners identified priorities and developed an implementation plan to follow over the next five years. Management plans are in place for 2010 forest acres owned by the participants, with additional families currently working with volunteer mentors for plan development during 2009.

**4. Associated Knowledge Areas**

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

**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
2008	5	15

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Thousands of rural Oregon homeowners are surrounded by areas of dense, highly flammable 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 fuel reduction projects that decrease the risk of wildfire to communities were developed as part of the educational program.

**Results**

This statewide effort is resulting in big results for rural communities. For example, one community that implemented a wildfire protection plan six years ago as part of the program has reduced hazardous fuels and wildfire risks on more than 1,000 acres of private land, resulting in improved protection of nearly 500 residences and properties.

**4. Associated Knowledge Areas**

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

**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
2008	90	91

**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 serves 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**

Master Woodland Managers (MWM) is an award winning statewide program that continues to deliver great results. The MWM workshop curriculum remains current to the issues facing small woodland owners and incorporates differentiated adult education strategies. The website is kept up-to-date and offers helpful tools such as serving as a blackboard to post homework and additional reference materials for workshop participants. The quarterly newsletter is mailed to an audience of 400 and is also available on-line. 51 new Master Woodland Managers were trained in 2008, representing 4 counties where urban/rural interface issues influence the understanding and knowledge of natural resources.

**Results**

All MWM participants were assessed pre and post training to gauge change in knowledge and behavior. Evaluation results show that 91% of MWM's felt that training contributed greatly to their increased knowledge and management of forestland, which totals close to 30,000 acres. 80% felt well prepared to contact the appropriate technical professional for assistance when needed. MWM volunteers are impacting their community in dramatic and varied methods. According to 2008 logs (n=51), MWM participants volunteered over 2000 hours (2110) and reached over 7000 individuals with information about forest ecosystems. These activities included working with local Home Owners Associations, Extension Tree Schools, meeting with individual landowners, or hosting tours on their own property.

**4. Associated Knowledge Areas**

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

**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
2008	50	49

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Managing a private woodland is not easy. Landowners face a multitude of ecologic, managerial, economic, and legal choices that affect both the land and the owner's future. What landowners do today will also have impacts on other people and future generations. Understanding the complex issues associated with land ownership leads to well informed decisions that benefit the landowner and the public.

**What has been done**

A diverse collection of Extension trained volunteers, publications, workshops and other tools helps landowners help themselves. One such tool earning a reputation for motivating landowners is Extension Tree School. In 2008 three, one-day events, strategically held around the state, featured concurrent educational classroom and field experiences, offering topics designed to increase knowledge, improve skills and change practices.

**Results**

Attendees report the following behavior changes as a result of their Tree School educational experiences:

- 46% increased survival of trees planted
- 53% increased the productivity of their forests by thinning, pruning and fertilizing
- 32% implemented improved record keeping because of computer skills gained
- 58% updated their forest management plan to reflect new understanding of environmental issues
- 47% improved wildlife habitat on their land
- 60% use safety equipment when operating chainsaws

**4. Associated Knowledge Areas**

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

123	Management and Sustainability of Forest Resources
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
2008	3	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Oregon and the nation are confronting a sea change of land ownership transfers in the farm and forest community. Approximately 50% of the small forestland owners in Oregon and the nation are 65 or older. A significant portion of forest lands will change hands in the next decade or two. Unplanned transfers can often result in a loss of working forest land through forced property sales, land fragmentation and conversion to other uses.

**What has been done**

The 'Ties of the Land' project is a collaboration between Oregon State University and local private and public partners. OSU Extension Forestry initiated and directed the project and worked with the OSU Austin Family Business Program, a national leader in family business education, to bring this information to a focused audience. Workshops were developed and delivered, a workbook with companion DVD was distributed to 1278 requests, a website was developed, and an impacts assessment was conducted.

**Results**

The assessment data analysis will be completed in 2009. A manuscript about the program detailing the results found in the impact assessment will be submitted to the Journal of Forestry in 2009. The initial evaluation (post workshop and follow-up) gives some important information on the audience value of the program, some effects on attitudes and even some early impact on behavior. These first layer of evaluation yielded results for the program: a gift of \$160,000 will fund the program for 3 years; members of the design team made 3 presentations at conferences in the US and Canada; and the program received 3 national awards.

**4. Associated Knowledge Areas**

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

The majority of Eastern Oregon landowners now use science-based reforestation methods for long-term economic benefits.

As a result of the Mentored Management Planning program, landowners identified priorities and developed an implementation plan to follow over the next five years., increasing the number of acres under a systematic plan.

Communities that implement a wildfire protection plan have reduced hazardous fuels and wildfire risks on private land, resulting in improved protection of residences and properties.

Master Woodland Masters felt that training contributed greatly to their increased knowledge and the management of their forestland. Extension Tree School attendees report behavior changes as a result of their educational experiences

#### Key Items of Evaluation

**Program #4**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	13.0	0.0	0.0	0.0
<b>Actual</b>	10.6	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
162386	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
162386	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
924349	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	6000	6000	12000	12000
2008	5874	7273	13139	18415

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	6	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth attending new 4-H leader training sessions.  
*Not reporting on this Output for this Annual Report*

**Output #2**

**Output Measure**

- Number of youth participating in leadership camps and retreats.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	500	793

**Output #3**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	300	1611

**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
2008	6000	5704

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Studies show that few Hispanics are involved in school or community leadership opportunities. Yet, leadership skills are considered to be an essential element for young people to feel personal satisfaction and the ability to contribute to society. School dropout rates for Hispanic students continue to be above the state average.

**What has been done**

A day-long conference for at-risk youth in grades 7-12 was conducted with input from a youth and adult mentoring committee. During the event the youth participated in a series of educational workshops and leadership trainings. Colleges and employers from the area presented seminars and counseled with students about post-secondary opportunities. Topics included communication skills, goal setting, resume writing, interviewing techniques, and group dynamics.

**Results**

Survey results indicated that 98% of the participants indicated that the program helped them understand the importance of completing their education and securing a college education. Significant positive changes were also noted in the following knowledge areas: understanding the responsibilities of being a leader, understanding how to work as a team member, and understanding how to find information about college.

**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
2008	1000	860

**3c. Qualitative Outcome or Impact Statement**



**Issue (Who cares and Why)**

Empowering teens refers to a process through which adults begin to share responsibilities and power with young people. The Eastern Oregon Leadership Retreat Youth Council is a program that models factors to empower youth with the confidence and leadership skills needed to plan and implement a regional youth leadership event.

**What has been done**

The Youth Council training is a 2-day event for 8th-12th grade youth selected as youth council members by their peers, representing 6 eastern Oregon counties. The training provides council members opportunities to: 1) learn what constitutes a leadership event; 2) learn how to plan the event to attain specific goals; 3) practice the skills learned in the training by actually implementing a regional event; and 4) teach leadership classes to peers at the event.

**Results**

An IRB-approved evaluation was implemented to gain statistical results of the training's effectiveness. The analysis showed significant gains in knowledge and skills learned. Youth indicated an increased feeling of bonding as a leadership team, felt better prepared to teach and lead activities, gained an understanding of personality traits and the acceptance of diversity, and gained an appreciation of the importance of team building and evaluation. The survey results also indicated that the youth felt they had above average amount of practice in leading activities, improved their skills and knowledge of teaching leadership to their peers; were able to interact with their peers better, and thought training was effective in preparing them to lead. The evaluation results show that the training program is an effective and successful model which, in partnership with adults, provides youth the responsibility and power for planning, teaching and leading.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development
802	Human Development and Family Well-Being

**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**

Extension sponsored leadership training helped Hispanic youth understand the importance of completing their education and securing a college education. The training also increased understanding of leadership responsibilities and how to work as a team member.

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

**Key Items of Evaluation**

**Program #5**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	7.0	0.0	0.0	0.0
<b>Actual</b>	6.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
92352	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
92352	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
525696	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1000	1000	4000	40000
2008	1057	1309	4140	41742

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	4	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	15000	30862

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	200	155

**Output #3**

**Output Measure**

- Number of 4-H Wildlife Stewards partner schools.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	55	47

**Output #4**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10000	6961

**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
2008	10000	8571

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As the effects of urbanization accelerate in many parts of the country, environmental impacts and urban-rural interfaces have emerged, resulting in unique challenges and opportunities. Oregon communities are among those that are rapidly changing and the urban-rural divide is especially pronounced in regards to how natural resources are managed. Economically and socially, Oregon is becoming more dynamic and complex. 41% of the total state population lives in the Portland metropolitan area, the state's largest city. Eastern Oregon comprises over half the total land in Oregon but only 4.3% of the population resides there, making it one of the remaining frontiers of the country.

**What has been done**

The 4-H Urban-Rural Exchange between urban families and rural ranchers was designed to help bridge the urban-rural divide. 42 Portland middle school students with 10 adult chaperones (teachers and parents) participated in a 5-day exchange. Students participated in 3-hours of orientation to prepare them for their exchange and were assigned readings on eastern Oregon natural resource issues. Students in teams of two were matched with ranch families who also participated in an orientation to prepare for hosting. During the exchange, students lived and worked with their host families, participating in all daily ranch chores and community activities.

**Results**

At the end of the exchange, students, chaperones and host families were asked to reflect on their experience using a pre-post self-report assessment. Significant changes were reported in the Portland participants' attitudes regarding natural resources management. An increased understanding and appreciation of ranchers and their rural lifestyle was also reported by urban participants. 70% of the participating urban youth gained a broader understanding of natural resources management, particularly public lands; 80% of the urban youth reported a new global view of Oregon urban/rural diversity. Both urban and rural participants agreed with the need for urban and rural residents to work together for maintaining healthy Oregon natural resources. Ranch family members also reported changes in attitude or increased awareness in their understanding and appreciation of how urban youth are actively involved and knowledgeable about natural resource management.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

Number of youth implementing 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
2008	1000	1700

**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**

In response to this growing disconnect OSU Extension is giving youth an opportunity to learn about the natural environment through a one day, free, fun, family-oriented event. Kids Day for Conservation is organized in a free choice learning environment that allows participants to wander through different educational stations spending as much time as they choose on a particular topic. In this hands-on learning environment, youth learn about native flora and fauna, soils, water, outdoor recreation, historical use of land, agriculture and more.

**Results**

Evaluation results indicated participants are increasing their knowledge about conservation, the community and use of natural resources. The follow up surveys indicated that 80% of participating youth and their parents began practicing one of the listed action steps learned at Kids Day:

Fixed leaky toilets and faucets  
 Made and put out bird houses  
 Recycling  
 Composting  
 Planted native species

**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****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 and their parents are adopting environmentally friendly practices because of their participation in 4-H educational activities and events.

Rural and urban families agreed that working together is necessary to maintain healthy Oregon natural resources.

**Key Items of Evaluation**

**Program #6**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	6.0	0.0	0.0	0.0
<b>Actual</b>	4.4	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
67725	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
67725	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
385510	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	3000	3000	23000	23000
2008	2990	945	25905	24714

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	2	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth participating in Foods and Nutrition Projects.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	8000	7934

**Output #2**

**Output Measure**

- Number of youth participating in physical activity projects.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3000	1693

**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.

*Not reporting on this Outcome for this Annual Report*

**Outcome #2**

**1. Outcome Measures**

Number of youth making behavioral changes which improving health.

*Not reporting on this Outcome for this Annual Report*

**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**

A statewide impact evaluatin of 4-H nutrion and health programs was conducted and reported in 2007.The next 4-H Nutrition and Health evoaluation of increased knowledge and behavior change is scheduled for 2010.

**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**

**Program #7**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	7.5	0.0	0.0	0.0
<b>Actual</b>	6.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
90813	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
90813	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
516934	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	2000	2000	40000	40000
2008	1057	1309	41408	40424

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	3	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	15000	8190

**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
2008	5000	4215

**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**

Natural science topics can be challenging to teach in the classroom. For maximum learning potential an outdoor setting is best. A Natural Science Day Camp for 6th graders was a solution that school administrators and Extension educators agreed could do the trick of helping youth become more connected with science. Subjects covered in the week-long event hosted at a local park included habitats, geology, pond study, stream flow, forestry, insects, birds, wildlife, safety and orienterring.

**Results**

An evaluation instrument was designed to measure the knowledge and skills gained from participating in the Science Camp. The paired t-test analysis of mean ratings before and after the youth attended the Camp reflects differences that were statistically significant at the  $p < .05$  level. When asked what was the most important topic or action learned, responses included elementary survival skills, how to use a compass, geology and an awareness of nature all around. 88% indicated that a park 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
2008	1000	562

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Research points to the success of service-learning in leading to improved student retention of academic learning and skills; increased student motivation; decreased dropout rate; and students who feel more positive about the relevance of school in their lives and view school as a more favorable environment. This is particularly true for teens who desire to make a difference in their community and on their world.

**What has been done**

Teens who had been successful within the 4-H Natural Resource Education program were recruited to serve as volunteer ambassadors, instructional assistants, and counselors for various science-oriented programs targeted for elementary and middle school-aged children. The teens selected for the service learning experience received an orientation to their responsibilities and training on public speaking, media interactions, hospitality, and teaching methodologies.

**Results**

Trained youth volunteers assisting with science-oriented programs increased by 52% during 2008. Community partners evaluating the youth volunteers were especially pleased with how the teens were able to take their science knowledge and present it in a way that younger children could understand and integrate into action. Teens reported improving public speaking skills, expanding their content knowledge in various subjects and gaining confidence for interacting with the public.

**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
2008	300	480

**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 compete 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 underrepresented in science technology fields or who live in underserved areas.

**What has been done**

As part of the 4-H SET initiative, the second 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. An \$80,000 grant was received from the ExxonMobil Bernard Harris Foundation to support full scholarships for the target audience. There were 48 participants, 24 males and 24 females representing grades 6 through 8. Ethnicity/race of the participants was: Hispanic (26%); Caucasian (34%); Asian (11%); African-American (11%); Native American (11%); Sub-continent Indian (4%); and other (4%). Participants came from all of Oregon's 36 counties.

**Results**



Pre and post questionnaires were developed for use in this study. The pre-test consisted of the following scales: 1) the Science Process Skills Inventory (SPSI) (Arnold & Bourdeau, 2006); and 2) the Competent, Caring, Connection, Character, Confidence & Contribution subscales from the PYD Inventory (Arnold & Meinhold, 2005). The post-test consisted of all the items in the pre-test plus supplementary items. The additional items included on the post-test asked campers about their interest in science and future intentions with science classes and careers. Overlapping data from the 2007 Summer Science Camp were compared to the 2008 data. ANOVA analysis revealed no significant difference between 2007 data and 2008 data.

In 2007, 80% of campers reported an increased interest in science, 78% reported planning to take more science courses, and 55% reported planning a career in science. In 2008, 93% of campers reported increased interest in science as a result of attending camp; over 82% reported a desire to take more science classes; and 65% reported planning 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

Youth volunteers are utilizing science and technology skills to improve community-based science education for elementary and middle school-aged children.

Youth participating in 4-H Summer Science Camp reported and increased interest (65%) in science-oriented careers.

Youth increased their science and knowledge skills through participation in Natural Science Day Camp.

##### Key Items of Evaluation

**Program #8**

**V(A). Planned Program (Summary)**

**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	5%			
102	Soil, Plant, Water, Nutrient Relationships	10%			
112	Watershed Protection and Management	10%			
204	Plant Product Quality and Utility (Preharvest)	5%			
205	Plant Management Systems	10%			
216	Integrated Pest Management Systems	10%			
307	Animal Management Systems	10%			
308	Improved Animal Products (Before Harvest)	10%			
403	Waste Disposal, Recycling, and Reuse	10%			
604	Marketing and Distribution Practices	20%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.5	0.0	0.0	0.0
<b>Actual</b>	10.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
213120	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
213120	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
757760	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	26000	100000	1000	1000
2008	24370	92628	290	265

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	33	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of Educational Classes Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	150	158

**Output #2**

**Output Measure**

- Number of Workshops Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	50	53

**Output #3**

**Output Measure**

- Number of Group Discussions

*Not reporting on this Output for this Annual Report*

**Output #4**

**Output Measure**

- Number of One-on-one Interventions

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1300	1365

**Output #5**

**Output Measure**

- Number of Demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	34	36

**Output #6**

**Output Measure**

- Number of Web Sites Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	5	5

**Output #7**

**Output Measure**

- Number of Newspaper Articles Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	34	36

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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	Increased 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
2008	100	105

**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 constitute 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 small farm education program used a variety of delivery methods to teach management practices for achieving small farm stewardship, with emphasis on water and soil. However, evaluation data measuring gains in learning and understanding of soils related topics was collected at a series of workshops held during 2008.

**Results**

Pre and post-tests were administered to all participants (N=176). 92% of the participants showed increased knowledge after workshops; 72% expressed an interest in and an ability to improve soil fertility on their land. A six-month follow up contact with participants indicated that 105 had implemented at least one best management practice since the workshop.

**4. Associated Knowledge Areas**

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

**Outcome #2****1. Outcome Measures**

Increase in number of farmer's markets statewide.

*Not reporting on this Outcome for this Annual Report*

**Outcome #3****1. Outcome Measures**

% increase in gross sales at farmers' markets statewide.

*Not reporting on this Outcome for this Annual Report*

**Outcome #4****1. Outcome Measures**

Increased 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
2008	5	5

**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**

A six-week business planning course for speciality crops was developed and delivered in 2001, and has been a staple in the small farm program. Seven years after the completion of the first course, in-depth interviews were conducted with three selected participants who had turned their business plan into a successful enterprise.

**Results**

The small-acreage blueberry producers, who run this enterprise in conjunction with their bed and breakfast, expanded the berry operation to meet demands of local farmer markets. The cut-flower business originally sold to a wholesale flower marketer but now has expanded to include speciality vegetable crops, marketing both flowers and vegetables exclusively on-line. The purebred swine producer continues to experiment with less expensive rations and alternative foods and has developed a breeding and farrowing plan that works to help maximize income. The three businesses generate a combined income of \$900,000 annually for their owners.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
604	Marketing and Distribution Practices
204	Plant Product Quality and Utility (Preharvest)
102	Soil, Plant, Water, Nutrient Relationships
308	Improved Animal Products (Before Harvest)
216	Integrated Pest Management Systems

**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
2008	5	5

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Agriculture and natural resources will continue to be an important part of the economy of rural and urban Oregon. Landowners of less than 50 acres with livestock represent a growing segment of the farming community. Many have little or no experience raising animals and need assistance with management of natural resources and new enterprises.

#### What has been done

Workshops offering a basic course in small acreage stewardship and animal husbandry were offered for new and beginning farmers. Workshop evaluations were used at the end of the Goat and Small Farms workshop and the Basic Sheep Production workshop to collect basic data about the educational program and to evaluate if the landowner intended to use the information presented (N=101). Additionally, post-workshop surveys were distributed to evaluate which management practices they implemented as a result of the educational program.

#### Results

Evaluation data collected directly after Extension small farm workshops indicated that 68% of the participants planned to use the information presented. In follow up surveys mailed 8 to 10 months after the workshop, 62% of those returning surveys (n=60) reported they had implemented at least one practice learned; 28% implemented 4 or more practices.

#### 4. Associated Knowledge Areas

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

#### Outcome #6

##### 1. Outcome Measures

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

*Not reporting on this Outcome for this Annual Report*

#### 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 outcomes evaluation was conducted in 2008 on farmers markets, so data about the increase in market numbers or in gross sales are not available.

#### 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 increased their profits thanks to lessons learned and successfully applied in a niche enterprise and business planning course.

Landowners raising livestock on 50 acres or less implemented management practices that reduce nutrient and soil runoff.

Estimated farmer's market sales for 2008 topped \$30 million. This is approximately equal to farm receipts for Oregon hazelnuts.

An increased number of small farmers uses direct marketing methods such as farmer's markets which have increased in number from 18 to approximately 100 in the past 12 years.

### **Key Items of Evaluation**

**Program #9**

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

4-H Workforce Preparation

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.2	0.0	0.0	0.0
<b>Actual</b>	1.1	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
17393	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
17393	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
99006	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

4-H programming that builds life skills 4-H programming specifically targeted to workforce prep 4-H programming in entrepreneurship and financial management

**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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	300	300	1500	1500
2008	176	218	690	1234

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth participating in 4-H programming directly related to workforce preparation.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1500	300

**Output #2**

**Output Measure**

- Number of 4-H volunteers leaders supporting workforce preparation programs.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	300	60

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of youth gaining knowledge about careers and the preparation required for them.
2	Documentation of how youth are taking steps to prepare for education and careers beyond high school.
3	Documentation of program participants post-secondary or career attainment.

**Outcome #1**

**1. Outcome Measures**

Number of youth gaining knowledge about careers and the preparation required for them.

*Not reporting on this Outcome for this Annual Report*

**Outcome #2**

**1. Outcome Measures**

Documentation of how youth are taking steps to prepare for education and careers beyond high school.

*Not reporting on this Outcome for this Annual Report*

**Outcome #3**

**1. Outcome Measures**

Documentation of program participants post-secondary or career attainment.

*Not reporting on this Outcome for this Annual Report*

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

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

**Brief Explanation**

The resources devoted to this planned program have been re-directed and evaluated outcomes of this planned program are being incorporated into the Science, Engineering and Technology program.

**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
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention

**Evaluation Results**

**Key Items of Evaluation**

**Program #10**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.2	0.0	0.0	0.0
<b>Actual</b>	4.3	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
65416	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
65416	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
372368	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

76  
 •4-H Clubs •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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1000	1000	12000	12000
2008	763	945	12990	10141

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	2	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3000	3200

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	300	80

**Output #3**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	18	0

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O No.	OUTCOME NAME
1	Number of youth achieving academic success as measured through standardized test scores and other existing data sources.
2	Number of youth gaining knowledge and life skills through participation in 4-H outreach programs.



**Outcome #1****1. Outcome Measures**

Number of youth achieving academic success as measured through standardized test scores and other existing data sources.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2008	200	150

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

According to the most recent U.S. Census data, Washington County has the largest Latino population in Oregon. Latinos comprise 11.2% of the county's population, but do not share in the local economic prosperity. Many Mexicans, recently immigrated, tend to work in low-wage agricultural, retail and service occupations, not the high-tech industries that have boosted county incomes in recent years. Half of these households earn less than \$25,000 per year and larger-than-average family size contributes to a growing number of Latino youth living in poverty. The high school completion rate in Oregon is 71% for all students and 50% for Latino students.

**What has been done**

The 4-H Tech Wizards program was designed to reduce the high dropout rate of Latino students, using technology as the 'hook' to engage student interest in an afterschool educational experience. The target population of the project is low-income Latino youth in grades 7-12 who are at risk of dropping out of school due to academic failure or other risk factors. The mix of activities supporting the program focused on providing access to various technologies, developing basic math and science skills through applied learning, and introducing participants to career opportunities. A community mentor was identified and assigned to each participating youth.

**Results**

The participants' GPA when starting the 4-H Tech Wizards program was sorted into three discrete categories (under 2.00, from 2.00 to 2.99, and from 3.00 to 4.00). Using an analysis of variance with covariates, it was determined the degree of GPA changes occurring as an individual student progresses through the program is directly related to the student's starting GPA. The result was statistically significant at the .004 level. A regression analysis using pre-Tech Wizards GPA vs. GPA gain during Tech Wizards indicated that:

The largest GPA gains tended to occur for students who started with a GPA around 1.50, the students considered most academically at risk of school dropout.

The middle group of students, starting with GPAs of 2.00 to 2.99, had GPA gains and losses that were about equal and canceled out any overall effect.

Students with GPAs of 3.00 to 4.00 appeared to experience a ceiling effect and some grade instability when they started at (or reached) a GPA of about 3.25.

GPA changes are not the only indicators of academic achievement and program impact. For the Tech Wizards program the most significant measure of academic achievement is remaining in school and graduating. About 95% of the Tech Wizards in grades 9-11 are on track to complete their current grade level and advance to the next level. About 95% of Tech Wizards in grade 12 are on track for high school graduation. This compares to a graduation rate of about 50% for Latino students statewide.

**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
2008	1000	618

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Research points to the success of service-learning in leading to improved student retention of academic learning and skills; increased student motivation; decreased dropout rate; and students who feel more positive about the relevance of school in their lives and view school as a more favorable environment. This is particularly true for Latino youth.

**What has been done**

Service learning is an integral part of the 4-H Tech Wizards program, a bilingual afterschol/summer program designed for low income Latino youth at risk to drop out of school. Throughout the year, Tech Wizards participated in service learning activities that provide opportunities to be exposed to various technology-related jobs and careers and to apply technology to a variety of real world situations. About 85% of Tech Wizards have completed 15 hours of service learning in 2008.

**Results**

A 2007-08 evaluation focused on service learning benefits as perceived by 4-H Tech Wizard youth. Data were collected in a facilitator-led group exercise designed to elicit reflection and comment from youth after they were involved in service learning activities. Central to the design is a feedback form that lists 15 benefits of service learning that have been identified in the literature and/or are related to program goals. After some facilitated warm-up activities introducing the topic, participants individually filled out the feedback form, which then served as the basis for a group conversation. Findings included:

90% of the Tech Wizards ranked the following 5 benefit statements as 'mostly' or 'very true': I enjoyed working with my friends; I felt good when I helped people; I provided a positive role model for younger people; I got some good experience for my resume; I learned more about working with people.

85% or more Tech Wizards ranked the following 6 benefit statements as 'mostly true' or 'very true': I enjoyed interacting with others in my community; I developed more self confidence; I provided adults with a positive image of young people; I felt like I was doing something important; I felt appreciated by the people I helped; I felt more a part of my community.

From 70% to 85% of the Tech Wizards ranked the following 4 benefit statements as 'mostly true' or 'very true': I enjoyed sharing my knowledge with others; I helped make a difference in my community; I learned more about my community; I learned by teaching others.

**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**

The benefits of service learning are interdependent, as individuals accumulate positive personal benefits they can bring more energy, commitment and experience to their service activities and other aspects of their lives. Latino 4-H Tech Wizards involved in service learning reported learning to work as a team, learning personal responsibility, learning how to ask for help, and gaining insight into different careers as benefits of service learning in addition to the 15 benefits featured in the formal evaluation.

For low income, Latino youth at risk for becoming a school dropout, involvement in 4-H Tech Wizards improved their GPA over time and increased their likelihood of completing high school.

**Key Items of Evaluation**

**Program #11**

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

4-H Afterschool

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.9	0.0	0.0	0.0
<b>Actual</b>	1.6	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
25397	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
25397	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
144566	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

•Curriculum and material development •Training for educators and afterschool staff 4-H Afterschool programs

**2. Brief description of the target audience**

Youth ages K-12 Educators and afterschool staff

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	100	100	1500	1500
2008	93	63	1150	1390

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth participating in 4-H Afterschool programs.  
*Not reporting on this Output for this Annual Report*

**Output #2**

**Output Measure**

- Number of educators and afterschool staff receiving training on 4-H afterschool curricula.  
*Not reporting on this Output for this Annual Report*

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O No.	OUTCOME NAME
1	Number of youth experiencing a reduction in unsupervised time alone as a result of participating in 4-H Afterschool programs.
2	Number of youth gaining knowledge or life skills as a result of participation in 4-H Afterschool programs.

**Outcome #1**

**1. Outcome Measures**

Number of youth experiencing a reduction in unsupervised time alone as a result of participating in 4-H Afterschool programs.

*Not reporting on this Outcome for this Annual Report*

**Outcome #2**

**1. Outcome Measures**

Number of youth gaining knowledge or life skills as a result of participation in 4-H Afterschool programs.

*Not reporting on this Outcome for this Annual Report*

**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

- Appropriations changes
- 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)

**Evaluation Results**

Youth participating in 4-H Afterschool programs reported they applied the lessons learned there to their everyday lives.

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

**Key Items of Evaluation**

**Program #12**

**V(A). Planned Program (Summary)**

**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	15%			
111	Conservation and Efficient Use of Water	15%			
112	Watershed Protection and Management	15%			
205	Plant Management Systems	15%			
216	Integrated Pest Management Systems	10%			
502	New and Improved Food Products	10%			
511	New and Improved Non-Food Products and Processes	5%			
601	Economics of Agricultural Production and Farm Management	10%			
604	Marketing and Distribution Practices	5%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	17.0	0.0	0.0	0.0
<b>Actual</b>	11.4	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
244022	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
244022	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
867635	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**

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

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	32000	100000	1000	1000
2008	27625	104978	328	300

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	38	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of Educational Classes Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	113	76

**Output #2**

**Output Measure**

- Number of Workshops Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	113	76

**Output #3**

**Output Measure**

- Number of Group Discussions

*Not reporting on this Output for this Annual Report*

**Output #4**

**Output Measure**

- Number of One-On-One Interventions

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	471	356

**Output #5**

**Output Measure**

- Number of Demonstrations

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	28	19

**Output #6**

**Output Measure**

- Number of Web Sites Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	4	4

**Output #7**

**Output Measure**

- Number of Newspaper Articles Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	38	25

**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
2008	1	1

**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 economic viability of wheat production in Oregon.

**What has been done**

Variety trials were designed to provide clientele with performance information on common and newly released wheat varieties from the public and private breeding programs in the PNW. Trial locations were selected to capture the range of environmental conditions in the wheat production areas of Oregon. Results were reported through email alerts, web publications, as well as delivered to clientele through presentations at grower meetings, crop tours and field days.

**Results**

These trials improve the grower's ability to select varieties that are best adapted to their environment and increase farm profitability. The economic impact of the variety testing program is best measured through the adoption of new higher yielding wheat varieties. On average these new wheat varieties increase yield across the state by 3 to 5 bushels per acre compared to Stephens. Since 2005, Stephens acreage in the state has been reduced by 8% (80,000 acres) because growers have adopted these newer higher yielding varieties. At current wheat prices this represents an economic increase of \$1 to 2 million across the state that is related to the research and outreach efforts of the variety trial program.

**4. Associated Knowledge Areas**

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

**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
2008	5	4

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Growers are constately looking for new crops, varieties, and management techniques that will increase farm profitability. There are some 130 organic dairies in Washington and Oregon with 35,000 certified organic dairy cows. Between 2006 and 2007, Oregon's organic milk production increased by 27%, now constituting 8% of Oregonan's milk supply. There is, as yet, very little organic hay produced locally most must be trucked into the state from as far away as Utah.

**What has been done**

The impact of producing organic hay should be the production of a higher value product that will be more profitable for both hay producers and dairy farmers. There are 72 organic test plots in total (16 for alfalfa, 16 for orchard grass, 20 for berseem clover, and 20 for oats) collecting data on yield and associated costs of production.

**Results**

The demand for organic hay is strong and prices are generally 15% higher for organic than for conventionally produced hay of similar quality, or yeilding an additional \$1-2M increase across the state. Need far exceeds the current supply so it can be assumed that this relatively higher price will remain in place into the near future.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
601	Economics of Agricultural Production and Farm Management
205	Plant Management Systems
111	Conservation and Efficient Use of Water
216	Integrated Pest Management Systems
102	Soil, Plant, Water, Nutrient Relationships
511	New and Improved Non-Food Products and Processes
502	New and Improved Food Products
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
2008	1	2

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Dryland production systems are major contributors to the economies of many NE Oregon communities. Challenges include maintaining profitability and preserving water quality. The overall goal is to improve the economic and environmental sustainability of dryland cropping systems by employing appropriate production techniques and technologies.

**What has been done**

One rural county now benefits wheat growers by allowing application of biosolids generated in the Portland Metro area. This effort began as a pilot project on a one acre test plot managed by an OSU Extension faculty member. Under the scrutiny of DEQ, the pilot was carefully expanded over the course of three years. Today, commercial applications are available; however, county approval is required for applications and DEQ limits the total applications annually. Biosolids, a low-cost nitrogen-rich source, are applied at the full rate of nitrogen required by the wheat crop; phosphorus build up has not been identified as a problem to date. Each load of biosolids is tested; analytic reports are provided to the grower. Fields are monitored for micronutrient and other heavy metal build-up.

**Results**

Benefits:

Biosolids costs 5 cents per pound, hauled and applied. Fertilizer purchased from a dealer costs \$1.00 per pound. Hauling and application of commercial fertilizers could add an additional \$1.50 or more per pound.

Increased organic matter content of sandy soils reduced erosion and enhanced soil quality.

Increased organic matter content increased soil's water holding capacity.

Increased and stabilized soil pH.

Micronutrients, such as sulfur, boron, manganese and magnesium, provided in biosolids, eliminating the cost of additives often required.

Sites east of the Cascades permit a longer application season than lands surrounding Portland; population densities reduce incidence of odor nuisance.

**4. Associated Knowledge Areas**

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

**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
2008	5	8

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Dryland growers struggle to remain economically viable in a global market and must manage their soil and water resources to maintain soil quality, protecting against wind and water erosion.

**What has been done**

Education and applied research programs to reduce soil erosion focused on methods of improving production efficiency, soil and water management, and production practices for dryland rotation crops. Workshops, field days and conferences addressed issues of dryland cropping, direct seeding, and soil erosion reduction.

**Results**

Dryland farms in semiarid Oregon and Washington have a combined acreage of about 6 million acres. In 2008, wheat produced on these farms was about 150 million bushels with an approximate farm gate of over \$900 million. 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
111	Conservation and Efficient Use of Water
216	Integrated Pest Management Systems
112	Watershed Protection and Management
102	Soil, Plant, Water, Nutrient Relationships

**Outcome #5****1. Outcome Measures**

Percentage of Farmers Using Extension Information.

*Not reporting on this Outcome for this Annual Report*

**Outcome #6****1. Outcome Measures**

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

*Not reporting on this Outcome for this Annual Report*

**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 demand for organic hay is strong and prices are generally 15% higher for organic than for conventionally produced hay of similar quality. This represents an economic increase of \$1 to 2 million across the state.

Growers adopted practices reducing soil erosion by 2.5 tons per acre per year. The value of thei reduction, calculated at \$6.00 per ton, is \$510,000 annually.

New wheat varieties increased yield across the state by 3 to 5 bushels per acre compared to Stephens. At current wheat prices this represents an economic increase of \$1 to 2 million across the state that is related to the research and outreach efforts of the variety trial program.

**Key Items of Evaluation**



**Program #13**

**V(A). Planned Program (Summary)**

**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	10%			
112	Watershed Protection and Management	10%			
121	Management of Range Resources	20%			
205	Plant Management Systems	5%			
303	Genetic Improvement of Animals	5%			
307	Animal Management Systems	20%			
308	Improved Animal Products (Before Harvest)	5%			
311	Animal Diseases	10%			
315	Animal Welfare/Well-Being and Protection	5%			
501	New and Improved Food Processing Technologies	10%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	30.0	0.0	0.0	0.0
<b>Actual</b>	22.3	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
475258	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
475258	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1689805	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**

Ranchers, dairy producers and animal product processors Agricultural infrastructure, suppliers and service providers State and federal agencies; regulatory and incentive based programs

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	76000	100000	1000	1000
2008	53625	103782	638	582

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	73	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of Education Classes Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	282	209

**Output #2**

**Output Measure**

- Number of Workshops Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	282	203

**Output #3**

**Output Measure**

- Number of Group Discussions Planned

*Not reporting on this Output for this Annual Report*

**Output #4**

**Output Measure**

- Number of One-On-One Interventions Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1176	870

**Output #5**

**Output Measure**

- Number of Demonstrations Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	71	53

**Output #6**

**Output Measure**

- Web Sites Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3	3

**Output #7**

**Output Measure**

- Newspaper Articles Planned

*Not reporting on this Output for this Annual Report*

**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
2008	2	1

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Supplemental feed is the largest expense for most livestock producers, accounting for up to 50% of variable production costs. Teff is a good rotational crop between stands of alfalfa. It provides an excellent, palatable warm season annual grass for horses and other livestock. It will produce at lower irrigation rates than alfalfa, and can be a double crop in appropriate areas of the state. It provides an alternative warm season forage crop for Oregon growers and keeps them in the horse hay market.

**What has been done**

Applied research trials on irrigation and nitrogen at three Oregon locations yielded positive yield and production cost results. A follow up variety trial evaluated varieties and lines. Extension publications and media coverage has accelerated the acceptance of the hay as an alternative crop for livestock.

**Results**

Teff acreages has doubled each year for the past 3 years. Producers reported saving an average of \$21/head by adding Tiff to the diet of their herds. If \$21/head was saved on 1`only 10% of Oregon cattle ranches, producers would save almost \$1.35 million/year.

**4. Associated Knowledge Areas**

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

**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
2008	3	2

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Early season pasture forage for livestock grazing is lacking in Oregon, and producers must purchase harvested feed to supplement animals on sparse pasture.

**What has been done**

Applied research projects were conducted to determine whether early nitrogen (N) application to pastures would stimulate early season forage growth without loss of N to the environment. Presentations were made to producers about the findings. An Extension publication and trade magazine articles were published on the early N application works.

**Results**

Early application of N to pastures increased yield and protein content of forage early in the growing season without significant loss of N, and provided economical supplemental feed early in the growing season. Early forage was produced at a savings of \$0.03 per pound of feed when compared to harvested forage. Livestock producers pastured animals about three weeks earlier than traditionally, and saved \$16 in feed costs per cow during that period. On a resource base of 850,000 acres of cultivated or improved pastureland, adding the potential estimated benefits and deducting the increased management costs involved nets Oregon livestock producers around \$2 million/year.

**4. Associated Knowledge Areas**

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

**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**

OSU Extension improves the economic value of Oregon producers.

**Key Items of Evaluation**

**Program #14**

**V(A). Planned Program (Summary)**

**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	10%			
111	Conservation and Efficient Use of Water	10%			
112	Watershed Protection and Management	10%			
204	Plant Product Quality and Utility (Preharvest)	10%			
205	Plant Management Systems	10%			
216	Integrated Pest Management Systems	10%			
403	Waste Disposal, Recycling, and Reuse	10%			
405	Drainage and Irrigation Systems and Facilities	10%			
502	New and Improved Food Products	10%			
603	Market Economics	10%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	66.0	0.0	0.0	0.0
<b>Actual</b>	30.9	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
530669	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
530669	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1886822	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**



Crop producers in this group of crops generally produced in the high rain fall or irrigated production system in Oregon Agricultural infrastructure, suppliers and service providers State and federal agencies; regulatory and incentive based programs

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	126000	400000	1000	1000
2008	158500	222307	696	635

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	80	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

- Number of Educational Classes Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	493	232

**Output #2****Output Measure**

- Number of Workshops Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	493	233

**Output #3****Output Measure**

- Number of Group Discussions Planned

*Not reporting on this Output for this Annual Report*

**Output #4****Output Measure**

- Number of Demonstrations Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	123	58

**Output #5****Output Measure**

- Number of One-On-One Interventions Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	2052	964

**Output #6****Output Measure**

- Web Sites Maintained (Planned)

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	6	6

**Output #7****Output Measure**

- Number of Newspaper Articles Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	164	77

**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 for this Annual Report*

**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
2008	10	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

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

**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
2008	1	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

For many decades Royal Ann and Bing were nearly the only 2 cherry varieties grown in Oregon. Unfortunately, the profitability of both these cherries has declined. Due to the decline in prices of traditional varieties growers were looking for other options. New varieties can extend the harvest season and provide additional returns compared to traditional varieties.

**What has been done**

Variety trials were planted to evaluate varieties and selections, assessing numerous key quality parameters including size, firmness, storability and rain cracking potential. Extension publications provided growers with a comprehensive summary of the variety characteristics. A number of tours and one-on-one consultations also helped growers access trial findings for decision making.

**Results**

Sweet cherry growers earn \$.08 to \$.81 per pound increases in fresh market prices by introducing improved varieties. Estimated total returns increased by over \$7.2 million annually. Improved sweet cherry rootstocks provide earlier fruiting and disease resistance and allow growers to respond more rapidly to market demand, doubling the harvest season over the past 15 years, providing greater employment stability to industry workers and contributing to the profitability of processing facilities.

**4. Associated Knowledge Areas**

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

**Outcome #4**

**1. Outcome Measures**

Economic Value of New Crops Planted (Million \$)  
*Not reporting on this Outcome for this Annual Report*

**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
2008	6	5

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The most serious hazelnut problem is Eastern Filbert Blight (EFB), a fungus that continued to spread since it was first reported in 1973, until it now affects two-thirds of the Oregon industry. Current OSU IPM recommendations include preventive fungicide sprays in the spring, scouting for and cutting out blight infections, and replacement of the most susceptible varieties when possible. The long-term approach is developing EFB-immune varieties.

**What has been done**

Sampling schemes and action thresholds were refined for the 4 main hazelnut pests: the filbertworm, the filber aphid, the filbert leafroller, and the obliquebanded leafroller. A classical biological approach was used when AliNiaze imported the filbert aphid parasitoid (*Troxys palidus*) from Europe to Willamette Valley orchards.

**Results**

Grower survey results showed the amount of pesticides applied for aphid control declining by 94%. Similarly, registration of synthetic pyrethroids for filbertworm control, plus pheromone trapping, reduced the amount of active ingredient applied by 92%. While similar success was experienced with leafroller control, research continues to work on developing an even softer program, using insect growth regulators on filbertworm and leafroller.

**4. Associated Knowledge Areas**

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

**Outcome #6**

**1. Outcome Measures**

Sales Value (Million \$) of New Value Added Products

*Not reporting on this Outcome for this Annual Report*

**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
2008	10	10

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Dwarfing rootstocks for cherries have many advantages including smaller tree size, easier management and harvest, and faster return on investment. However, they also are prone to causing the tree to overset, producing small poor quality fruit that cannot be exported, reducing grower return.

**What has been done**

Directed at growers and pruners and delivered in both in English and Spanish, a series of classes with field tour were taught on how to prune properly. An number of mini-tours and one-on-one trainings were also conducted to help growers learn the new techniques. Two articles on how to properly prune trees on dwarfing rootstocks to enhance fruit quality were published in popular grower journals.

**Results**

A larger sized cherry can make anywhere from \$0.10 to \$0.20 per pound difference in the return that a grower receives. In 2008 Wasco County growers produced 3,800,000 pounds of fresh cherries. Assuming 40% of these cherries were produced on dwarfing rootstocks growers conservatively received an extra \$152,000 (at \$0.10/pound) in additional revenue due to the larger size fruit.

**4. Associated Knowledge Areas**

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

**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**

Sweet cherry growers earn \$.08 to \$.81 per pound increases in fresh market prices by introducing improved varieties. Estimated total returns increased by over \$7.2 million annually.

Hazelnut grower survey results showed the amount of pesticides applied for aphid control declining by 94%. Similarly, registration of synthetic pyrethroids for filbertworm control, plus pheromone trapping, reduced the amount of active ingredient applied by 92%.

A larger sized cherry can make anywhere from \$0.10 to \$0.20 per pound difference in the return that a grower receives. Approximately 40% of cherries grown in Wasco County in 2008 were produced on dwarfing rootstocks, which yeild larger fruit when pruned properly. Growers conservatively received an extra \$152,000 (at \$0.10/pound) in additional revenue due to the fruit size.

**Key Items of Evaluation**



**Program #15**

**V(A). Planned Program (Summary)**

**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	50%			
704	Nutrition and Hunger in the Population	25%			
724	Healthy Lifestyle	25%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	16.5	0.0	0.0	0.0
<b>Actual</b>	9.3	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
295704	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
295704	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
503792	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Stakeholder input will be acquired from numerous of 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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	11000	85000	95000	5500
2008	10345	234383	278804	8090

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	16	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Educational Events and Workshops to be Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	300	171

**Output #2**

**Output Measure**

- Demonstrations to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	330	188

**Output #3**

**Output Measure**

- Newsletters to be Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	100	57

**Output #4**

**Output Measure**

- Web Sites to be Developed/Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3	3

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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
2008	60	78

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Shopping practices are related to dietary quality. Lower-income women with children are significantly less likely to use the nutrition label when buying food than higher-income women with children (Morton et al. 1997). Households with strict budgets are found to be significantly less likely to make a complete list before going shopping, to shop around for bargains, to use coupons, or to stock up on sale items than households with a non-strict budget.

**What has been done**

The goal of the nutrition education program is to increase the likelihood that food stamp recipients and those eligible make healthy and safe food choices within a limited budget and choose physically active lifestyles. Participants learn practical skills in healthy eating, feeding families on a limited budget, food safety, food preparation and other topics that reflect the most recent dietary guidelines. The program uses science-based, behaviorally-focused interventions that emphasize a set of key outcomes. Goal: persons eligible for the food stamp program will: 1) consume a diet that promotes good health, and 2) balance the food they eat with physical activity by following the most current Dietary Guidelines for Americans and My Pyramid recommendations.

**Results**

Dietary Quality: outcomes (behavior change, pre-post survey).

Adults participating in a series of nutrition education classes report practicing the following more often:

61% follow My Pyramid advise to plan and prepare family meals

55% use 'nutrition facts' on food labels to make food choices

78% of adult participants showed improvement in one or more nutrition practices (plans meals, makes healthy food choices, reads nutrition labels, prepares foods without adding salt).

**4. Associated Knowledge Areas**

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

**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
2008	70	68

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Shopping practices are related to dietary quality. Lower-income women with children are significantly less likely to use the nutrition label when buying food than higher-income women with children (Morton et al. 1997). Households with strict budgets are found to be significantly less likely to make a complete list before going shopping, to shop around for bargains, to use coupons, or to stock up on sale items than households with a non-strict budget.

**What has been done**

The goal of the nutrition education program is to increase the likelihood that food stamp recipients and those eligible make healthy and safe food choices within a limited budget and choose physically active lifestyles. Participants learn practical skills in healthy eating, feeding families on a limited budget, food safety, food preparation and other topics that reflect the most recent dietary guidelines. The program uses science-based, behaviorally-focused interventions that emphasize a set of key outcomes. Goal: persons eligible for the food stamp program will: 1) manage their food resources; 2) use thrifty shopping practices to purchase nutritious foods; and 3) plan, buy and prepare affordable meals and snacks.

**Results**

Food Resource Management: Outcomes (behavior change , pre-post survey.

Adults participating in a series of nutrition education classes report practicing the following behaviors more often:

35% compare prices before buying food

45% plan meals ahead of time

47% shop using a grocery list

24% think about healthy food choices when planning meals

Clustered results from the survey checklist: 68% of adult participants showed improvement in one or more food resource management practices (see above) because of the knowledge and skills gained the nutrition education classes.

**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
2008	60	63

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The incidence of foodborne illness in Oregon remains a concern of the Oregon Department of Human Services, 2007. *Campylobacter* continues to cause the most cases of reportable foodborne illness (CDC, 2007). The incidence of *Campylobacteriosis* was higher in Oregon than the FoodNet average in 2006. Oregon is not meeting national health objectives for the incidence of *Campylobacter* and *Salmonella*. *Listeriosis* has one of the highest fatality rates. In 2006, there were 13 cases of *Listeriosis* in Oregon.

**What has been done**

The goal of the nutrition education program is to increase the likelihood that food stamp recipients and those eligible make healthy and safe food choices within a limited budget and choose physically active lifestyles. Participants learn practical skills in healthy eating, feeding families on a limited budget, food safety, food preparation and other topics that reflect the most recent dietary guidelines. The program uses science-based, behaviorally-focused interventions that emphasize a set of key outcomes. Goal: persons eligible for the food stamp program will safely handle, prepare and store food.

**Results**

Food Safety: outcomes (behavior change, pre-post survey)  
 Adults participating in a series of nutrition classes practice the following more often:  
 49% do not allow meat and dairy foods to sit out for more than 2 hours  
 51% do not thaw frozen foods at room temperature  
 24% cook ground meat or meat loaf until it is no longer pink

Clustered results from the adult survey checklist: 63% of adult participants showed improvement in one or more of the food safety practices listed above.

**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
2008	50	45

**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**

Extension staff and trained volunteers engaged adults and youth in nutrition and physical activity education through series of classes and single events. Behavior change survey checklists were conducted with adult participants first at one of the early classes in a series and then again towards the end of the series.

**Results**

45% of adults participating in a series of classes reported an increase of at least 30 minutes of physical activity per day among their children.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

78% of adult participants showed 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)

Adults completing a series of nutrition lessons and pre-post 24 hour diet recalls indicated the following: 98.5% showed a positive change in at least one of the food groups; 7.2% showed a positive change in physical activity

68% of adult participants showed improvement in one or more food resource management practices ( plans meals , compares prices or uses grocery list )

45% of adults participating in a series of classes reported an increase of at least 30 minutes of physical activity per day among their children.

63% of adult participants showed improvement in one or more of food safety practices ( i.e. thawing and refrigeration of perishable foods)

**Key Items of Evaluation**

**Program #16**

**V(A). Planned Program (Summary)**

**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%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	2.9	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
91109	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
91109	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
155222	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1250	0	0	0
2008	1188	0	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	5	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Educational Events, Workshops, and Demonstrations to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	60	57

**Output #2**

**Output Measure**

- Public Service Announcements to be Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	5	4

**Output #3**

**Output Measure**

- Newsletters to be Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	12	11

**Output #4**

**Output Measure**

- TV and Media Programs to be Delivered

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3	3

**Output #5**

**Output Measure**

- Web Sites to be Developed and Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1	1

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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
2008	60	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 often the phrase used to portray the increasing presence of aging adults in Oregon. National data indicates nearly 80% of people over age 65 have one chronic health condition and over 50% have two or more.

**What has been done**

A collaboration of individuals and organizations in southern Oregon (public and private, university and community) developed a system of disease self-management instruction using the evidence-based Stanford University approaches, 'Living a Healthy Life with Chronic Conditions.' During 2008, this project provided instruction to over 300 adults and trained more than three dozen new volunteer program leaders to deliver the classes. At any given time there are 5-8 workshops going conducted.

**Results**

Participants in the 6-week series of workshops documented improvements in self-efficacy (3.7 to 4.4 on a 5-point scale) and changes in health-related self-management behaviors, including increased use of pain management approaches taught in the class and increased physical activity/exercise.

**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.

*Not reporting on this Outcome for this Annual Report*

**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
2008	40	64

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Disability and frailty are primary concerns of many older women. The loss of muscle mass combined with chronic disease symptoms can limit their ability to perform daily activities, seriously compromising their independence. Staying physically active is one of the most important things for maintaining a healthy senior life. Research demonstrated that strength training will increase strength, muscle mass and bone density in middle-aged and older women. Strengthening exercises also reduce the risk for numerous chronic diseases such as diabetes, heart disease, osteoporosis and arthritis.

**What has been done**

The Strong Wome Program, developed by Dr.Miriam Nelson at Tufts University, has been implemented by OSU Extension. A volunteer corp of Strong Women program leaders were trained and certified to lead the strength trairing classes in their communities. In 2008 over 482 women participated in one of 29 programs offered in seven Oregon counties, with the majority of the women in the 60-70 age range Participants responding (n=112) to a survey averaged 3 session per week over a 36 week period.

**Results**

Participants responded that as a result of the program they felt healthier, physically stronger and had more energy. Participants indicated a positive change in their sleep patterns, less painful joints and an increased activiity level due to the program. They also reported improved balance and flexibility, and experienced increased feelings of well-being and self-esteem.

**4. Associated Knowledge Areas**

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

Healthy Aging program emphasis is currently focused on the senior populations.Work with care providers will be a focus in the 2010 plan of work.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

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

**Evaluation Results**

Living a Healthy Life with Chronic Conditions helps participants improve their health-promoting behaviors and their health status, including pain management and physical activity.

Strong Women, a strength training program for middle-aged and older women, has resulted in measured increases in strength, flexibility and balance, as well as improved well-being and self-esteem.

**Key Items of Evaluation**

**Program #17**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	1.4	0.0	0.0	0.0
<b>Actual</b>	1.6	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
49550	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
49550	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
84419	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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	210	0	0	0
2008	239	0	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	3	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Educational Events and workshops to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	25	29

**Output #2**

**Output Measure**

- Newsletters to be Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	6	7

**Output #3**

**Output Measure**

- website

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	{No Data Entered}	1

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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
2008	75	85

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Latino families experience financial inequities in daily life, and an important one is lack of access to quality financial information and advice.

**What has been done**

An existing financial literacy curriculum was modified and expanded to include culturally appropriate activities and a workbook was translated. In collaboration with local housing agencies, the new curriculum was pilot tested with two groups of Latinos, reaching 16 clients at two sites. Focus groups of participants were held to evaluate the curriculum.

**Results**

Pre and post evaluations and focus groups were used to gather data on the effectiveness of the modified curriculum. Quantitative data showed significant increases in the level of positive attitudes toward potential success in financial management. Qualitative analysis revealed important information regarding barriers for saving and overall impact of the program on participants' attitudes and behaviors. Participants emphasized the positive impact of classes on their spending and saving habits, organization and planning their finances.

**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
2008	50	57

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Average life expectancy in the U.S. is 74.1 years for men and 79.5 years for women according to the National Center for Health Statistics. Individuals have the potential of living 20 to 25 years beyond their retirement age. A longer life increases the chance of outliving income and assets, and experiencing poverty.

#### What has been done

Seniors must wisely control debt, manage credit, and be prepared to make informed financial decisions. Education and awareness helps seniors be prepared to address their important issues. A 6-week educational series addresses basic money management, how much money is needed in retirement, covering risks, maximizing dividends and reducing tax exposure in retirement, as well as quality of life.

#### Results

Cumulative evaluation results show:

Participants indicated they have increased their monthly savings by a range of \$50 to \$500 per month.

The participants averaged 7.5 months of reserve/emergency account funding (range of 3-12 months). 50% established a reserve/emergency account as a result of the class; 24% increased the amount in their reserve/emergency account.

72% of participants identified strategies to maintain their financial security, such as budgeting, tracking spending, calculating net worth, checking credit reports and adjusting asset allocation.

44% of participants adjusted their risk exposure by changing their insurance coverage, securing long term care insurance, or adding an umbrella liability policy.

38% of participants made changes in legal status by consulting a professional, preparing a power of attorney, or establishing advanced medical directives.

#### 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

Latino clientele increased their financial literacy through a program that was adapted, translated and improved to meet the needs of Spanish speaking family members.

Seniors applied newly acquired financial management practices to effectively plan for the last quarter of their life.

##### Key Items of Evaluation

**Program #18**

**V(A). Planned Program (Summary)**

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	2.8	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
57187	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
57187	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
134266	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. Dedicated 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**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	500	1500	0	0
2008	486	1841	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	9	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

- Number of Educational Classes to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	10	9

**Output #2****Output Measure**

- Number of Workshops to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	5	4

**Output #3****Output Measure**

- Number of Group Discussions to be Conducted

*Not reporting on this Output for this Annual Report*

**Output #4****Output Measure**

- Number of Demonstrations to be Conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1	1

**Output #5****Output Measure**

- Number of Newsletters to be Published

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	2	2

**Output #6****Output Measure**

- Number of Web Sites to be Developed and Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	1	1

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
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
2008	5	6

**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 quality and salmonid habitat.

**What has been done**

A wide offering of workshops and shortcourses were delivered; 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**

Landowners involved in education efforts about streambank stabilization showed an increased knowledge of erosion processes and stabilization methods. 85% noted they were better able to address erosion problems; 79% noted they intend to design and implement a 'fish friendly' stabilization project. Six weeks following the workshop 14% said they had initiated a project as a result of their participation; six months following the workshop another 25% reported they had initiated a stream stabilization project.

**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
2008	25	221

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

There is a 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 throughout our society.

**What has been done**

Working with elected officials and residents, a variety of educational programs and activities were designed and delivered for achieving more effective watershed management. These activities promoted adoption of watershed-friendly management practices. Written surveys evaluated knowledge gained, skills mastered and changes in behavior.

**Results**

95% of all participants reported acquiring new information or learning a new skill. 70% reported adopting at least one behavior change as a result of participating in the watershed management program.

**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.

*Not reporting on this Outcome for this Annual Report*

**Outcome #4****1. Outcome Measures**

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

*Not reporting on this Outcome for this Annual Report*

**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**

In the Spring 2008 Extension Sea Grant and its partners launched a new statewide, year-long public awareness, prevention and action campaign focused on invasive species, both aquatic and terrestrial. The effort has both an adult and youth component. Collection of outputs data and outcomes data is currently in process, with results available for the 2009 report of accomplishments.

**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**



Landowners involved in education efforts about streambank stabilization showed an increased knowledge of erosion processes and stabilization methods that they put to use.

Focus group generated data was the first step in the development of a public education and action campaign to promote awareness and behavior change related to invasive species. Outputs and Outcomes of the 2008-2009 program will be available during the summer of 2009.

**Key Items of Evaluation**