

2012 Oregon State University Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

This 2012 Report of Accomplishments re-enforces our ongoing commitment to the vision, values and goals of the Oregon State University Extension Service. The report reflects the continual improvement process of responding to the needs and issues facing Oregon communities and people. The report is also consistent with Oregon State University's strategic plan that identifies three areas of excellence . . . Healthy People, Healthy Planet, Healthy Economy.

The 2012-16 Plan of Work was a major re-write from previous plans and represents a change in philosophy about reporting as well. The new Plan of Work focuses on the five high-priority areas defined by NIFA as OSU Extension planned programs but does not represent the full breadth and depth of programs conducted by OSU Extension. The 2012 Report of Accomplishments speaks only to approximately 50% of the 2012 programs developed, delivered and evaluated as well as reports only 50% of the total \$13,870,641 utilized for program delivery . . . however, the report accounts for 85% of the actual formula dollars allocated plus the matching funds. The remaining 15% (\$1,452,816) of formula dollars and matching funds, in addition to other funding sources, were invested in supporting Oregon's nationally renowned 4-H youth development program, which reaches one in five K-12 youth within the state.

This Report of Accomplishments reflects a decrease in OSU Extension faculty, with 174.5 employed during 2012. This represents 46.1 fewer FTE, or a 21% decrease, than when the recession began in 2008. Meanwhile the overall Extension budget is approximately 30% smaller today than it was in 2008. We've managed through these difficult times by tightening our belts, using attrition as a management tool, and downsizing Extension's administrative footprint. To date, we've kept all whose performance has been fully satisfactory and who wish to continue working for OSU Extension employed, serving the state from corner to corner and reaching more than 2 million Oregonians. These numbers include contacts made in group educational events or via phone, interactive video, mail, e-mail, newsletters, site or office visits. They do not include web hits or mass media. We are able to continue this high level of outreach thanks to over 14,000 volunteers who contributed 1.7 million hours during the past.

You will note that in four of the five planned programs, the actual amount of FTE expended was less than what was projected. This is in keeping with the downsizing of the organization and the output measures and outcome measures mirror the downsizing. The exception was Reducing Child Obesity, a multi-component, complex issue that is compounded by childhood hunger within Oregon. Because of the growing number of children at risk for obesity, additional resources were devoted to this planned program. We will continue this focus in 2013.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	187.0	0.0	0.0	0.0
Actual	174.5	0.0	0.0	0.0

II. Merit Review Process

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

- Internal University Panel
- Expert Peer Review

2. Brief Explanation

The 2012 report of accomplishments is the result of experts within the four colleges with active Extension programs working closely with the Extension program leaders to identify the unique intellectual contribution Oregon State University can make to the identified state priorities and to determine how OSU Extension can operationalize the University's knowledge for community outreach, engagement and adoption. The annual plan of work was reviewed internally by the OSU Provost and the four Deans leading Extension programs within their colleges. Extension faculty members file their individual and team reports of accomplishment which are then reviewed by Extension program leaders, department heads and regional administrators for quality and impact.

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

Brief explanation.

Input was solicited through a statewide advisory network that directly advises the Vice Provost for Outreach and Engagement and Director of Extension. This 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 meets twice annually for two days. Additionally, the committee is connected with the Vice Provost and Director's office via email, conference calls and webinars throughout the year. The Extension Citizen's Advisory Network (ECAN) provides advice regarding future trends and priorities, current and emerging issues, program emphasis and direction, organization and relationships, and funding partnerships. ECAN members also serve as the primary liaison with people in their community, including local government and key Extension

constituencies, to seek and coordinate advice regarding current and future direction for OSU Extension Service program emphasis.

Every county in the state maintains an advisory structure. These include both general broad-based advisory systems and those that are more specific to programming areas. These advisory groups generally meet 4-12 times per year to actively review programming and to provide input to county faculty and Extension leadership.

Each academic college with Extension programming maintains advisory structures at the college and departmental level. These inform Extension programming within each of these units.

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, Organizational Transformation faculty panel, Extension Demographer, Visioning Project and Strategic Planning)

Brief explanation.

Many mechanisms are used to identify individuals, groups and organizations that are Extension stakeholders. Some specific efforts are cited below:

- We conduct internet searches to identify organizations with stakes in various programs.
- We confer with partnering organizations to identify and engage appropriate stakeholders.
- We confer with existing advisors about other groups and individuals that should provide input.
- We actively solicit internal input about appropriate stakeholders to add to advisory structures or to survey about need and effectiveness of Extension programming.
- We utilize 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 processes.

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

1. Methods for collecting Stakeholder Input

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

Brief explanation.

In 2006, Extension added a full-time demographer to the faculty in order to access, interpret and respond to Oregon's changing demographics more effectively. In 2007 we collaborated with WSU and their Center for Bridging the Digital Divide in a visioning project that helped define the possibilities for OSU in the year 2017. This project, a series of in-depth interviews with key stakeholders, yielded both formative and summative data for planning purposes. In 2009-2010 a faculty panel for organizational transformation was charged to develop a holistic framework to engage stakeholders in identifying and exploring issues and needs facing Oregon communities and people. From data collected a menu of opportunities were developed and shaped the Plan of Work for 2012-2016.

3. A statement of how the input will be considered

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

Brief explanation.

Stakeholder input is widely used to set priorities at all levels of the organization. This influences budgetary outlays for various programs and subsequently affects the program delivery. Stakeholders serve on all faculty search committees and thus directly affect hiring decisions. The process of involving stakeholders in the hiring process works well, with stakeholders feeling a greater commitment to helping new hires be successful in the Extension assignments. Stakeholders who have a vested interest in the program and/or community are the most effective.

Each Extension program area is expected to develop an annual program plan of work that requires a description of how stakeholder input was gathered and used to determine the priority work areas and their associated program outcomes.

Brief Explanation of what you learned from your Stakeholders

Stakeholders encouraged us to build on existing strengths and expertise that have earned OSU Extension national stature. Stakeholders rated OSU Extension high in response to the rapidly changing needs of society within an increasingly competitive education and information environment by creating and providing access to innovation and relevant research, program, intellectual resources and information that meet a broad range of individual, organizational and societal needs. Through the use of existing and emerging technologies, OSU Extension should provide learners with access to education where, when and how learners want. For many stakeholders there is a greater need for blending of university missions (learning, discovery and engagement) than funding streams often allow. Three new (or revised) program priorities emerged as future directions for Extension: economic prosperity, supporting jobs and the economy through expanded work with natural resources and the workforce; the food system including the many dimensions of food safety and security; and increasing access to credit and noncredit programs with the OSU brand.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
3699577	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	2973169	0	0	0
Actual Matching	2973169	0	0	0
Actual All Other	642454	0	0	0
Total Actual Expended	6588792	0	0	0

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

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Climate Change
2	Food Safety
3	Global Food Security and Hunger
4	Reducing Childhood Obesity
5	Sustainable Energy

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Climate Change

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	5%			
102	Soil, Plant, Water, Nutrient Relationships	5%			
103	Management of Saline and Sodic Soils and Salinity	3%			
112	Watershed Protection and Management	5%			
121	Management of Range Resources	5%			
122	Management and Control of Forest and Range Fires	5%			
123	Management and Sustainability of Forest Resources	5%			
136	Conservation of Biological Diversity	5%			
201	Plant Genome, Genetics, and Genetic Mechanisms	5%			
212	Pathogens and Nematodes Affecting Plants	5%			
215	Biological Control of Pests Affecting Plants	5%			
302	Nutrient Utilization in Animals	4%			
303	Genetic Improvement of Animals	5%			
311	Animal Diseases	4%			
604	Marketing and Distribution Practices	4%			
605	Natural Resource and Environmental Economics	5%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	5%			
723	Hazards to Human Health and Safety	5%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	5%			
902	Administration of Projects and Programs	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual Paid Professional	9.3	0.0	0.0	0.0
Actual Volunteer	347.0	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
327735	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
327735	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
83427	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Our approach to climate change outreach will involve both traditional and non-traditional methods. We will integrate climate change content into our existing educational programs, and address climate-related impacts such as drought and adverse storm damage response. This "stealth" approach to climate change education is less likely to turn off potentially hostile audiences and has worked well in other states. We will also develop and deliver educational programs, based on current research, that shows mitigation strategies and adaptations that can be accomplished now. For example, our forest geneticists are now developing revised seed zone maps that account for changing climate. This can assist forest owners and managers who are making planting decisions today for forests that will grow for over 50 years, and are likely to be under the effects of a different climate 50 years from now.

Other activities will include volunteer-based programs such as Climate Masters and Master Naturalists, workshops and seminars, consultations and facilitations, web-based instructional programs, web sites, stand alone and web-based videos, publications of all types, mass media, and social networking.

2. Brief description of the target audience

Audiences for the Oregon Extension Service are quite diverse. They include the agricultural sector, including farmers and ranchers, as well as small farms. This includes vineyards, orchards, row crops, animal livestock, nurseries, Christmas trees, and a host of others. Oregon is the second largest forested

state in the nation. Timber production is a large industry and forest owners and managers constitute a large client group. Along the Coast the fishing and tourism industries represent the main economic engines, with the possibility of ocean energy coming on line in the near future. Policy makers such as county commissioners and judges, elected officials, and state and federal agency personnel represent another important client group. Finally, family and youth, communities, and individual homeowners and citizens are reached everyday through various educational programs.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	76027	11295	1674	1255

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	7	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes

Year	Actual
2012	139

Output #2

Output Measure

- Number of workshops

Year	Actual
2012	93

Output #3

Output Measure

- Number of demonstrations

Year	Actual
2012	19

Output #4

Output Measure

- Number of recurring newsletters published

Year	Actual
2012	9

Output #5

Output Measure

- Number of web sites maintained

Year	Actual
2012	10

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of participants who increase their knowledge of management practices and understanding of climate variability and change.
2	Percentage of participants in educational programs who improve mitigation strategies for climate, such as reducing greenhouse gas emissions and increasing carbon sequestration in agricultural production and natural resource management systems.
3	Percentage of clients who employ climate adaptation strategies or incorporate climate-based management practices.

Outcome #1

1. Outcome Measures

Percentage of participants who increase their knowledge of management practices and understanding of climate variability and change.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	47

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Current research estimates a 37 percent chance in the next 50 years of a Cascadia subduction zone earthquake and tsunamis in our area. The zone stretches from Vancouver Island to northern California and can produce "megathrust" earthquakes with a magnitude of 9.0 or greater. In addition to earthquake damage in western Oregon, the coast would be hit by tsunamis that kill many more people.

What has been done

Extension Sea Grant brought together hundreds of residents, businesses and officials of coastal communities to learn about the nature, likelihood, and impact of a tsunami on coastal residents, visitors, and infrastructure. Education and engagement included tours of OSU tsunami wave-research facilities; tsunami workshops; a preparedness DVD; the publication "Three Things You Need to Know about Tsunamis," and outreach through local radio and newspapers.

Results

Extension Sea Grant faculty assisted officials in 6 of 7 coastal counties to incorporate their new understanding of tsunami hazards into their public safety and planning policies such as updated evacuation plans and identification of assembly areas.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity
112	Watershed Protection and Management

121	Management of Range Resources
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
136	Conservation of Biological Diversity
201	Plant Genome, Genetics, and Genetic Mechanisms
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
311	Animal Diseases
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
723	Hazards to Human Health and Safety
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
902	Administration of Projects and Programs

Outcome #2

1. Outcome Measures

Percentage of participants in educational programs who improve mitigation strategies for climate, such as reducing greenhouse gas emissions and increasing carbon sequestration in agricultural production and natural resource management systems.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Percentage of clients who employ climate adaptation strategies or incorporate climate-based management practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	61

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Understanding climate change and its potential impacts is critical to maintaining productive and healthy forestlands into the future. Family forest owners' understanding and perceptions of climate change is wide-ranging, and is complicated by mistrust in source information, lack of certainty, and anxiety regarding potential regulatory impacts. Extension is regarded by many forest owners as a source of less-biased information and is poised to engage family forest owners on the topic of climate change, potential impacts to forests, and adaptation strategies.

What has been done

A 3-session live webinar series "Understanding and Communicating Climate Science" consisted of:

1. The first session explored the political and social context surrounding the climate change debate and discussed how to talk about climate science without alienating differing beliefs and values.
2. Climate Science 101 presented the basics of climate science including: the difference between climate and weather, global warming vs. climate change, the greenhouse effect, and the role of factors such as el-Niño in the global climate.
3. The final session discussed major components of climate models, how they are used, areas of uncertainty, and the most recent projections of climate for the Pacific Northwest region as well as adaptation strategies for managing forestland due to climate change.

Results

55 family forest owners participated in the 3 sessions. In a six month follow up survey, 84% indicated that they had incorporated climate-based management practices learned in the webinars.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity
112	Watershed Protection and Management
121	Management of Range Resources
122	Management and Control of Forest and Range Fires
123	Management and Sustainability of Forest Resources
136	Conservation of Biological Diversity
201	Plant Genome, Genetics, and Genetic Mechanisms
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
311	Animal Diseases
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics

712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
902	Administration of Projects and Programs

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Clientele's understanding and perceptions of climate change is wide-ranging, and is complicated by mistrust in source information, lack of certainty, and anxiety regarding potential regulatory impacts. Extension is regarded by many as a source of less-biased information and is poised to engage the public on the topic of climate change, potential impacts to our natural resources, and adaptation strategies. Effective Extension programming should embrace relevant and sound climate science and develop information and tools that are most applicable to learners' needs in the context of their decision making processes.

Maintaining trust with stakeholders is often critical to being an effective educator at the local level; therefore, some extension educators may be reluctant to address climate change because the topic has become so politicized. As a result there is some extra work necessary to help Extension educators and researchers develop programming around climate in a way that maintains or even builds on those trusting relationships. Programs built around transparency, local relevance, and assessment of risk should resonate well with the intended audience.

2012 was a building year as the faculty and staff develop their knowledge and skills to work comfortably and confidently with clientele on this important topic.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Two primary evaluation methods were used to gather impact data on Climate Change programs: 1) post-event surveys and 2) observation of actions and policy change. The post-event survey indicated that family forest owners are adapting their practices to accommodate for climate change. In 6 of 7 Oregon coastal counties, officials have taken action and changed public safety policies for extreme weather conditions.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	12%			
502	New and Improved Food Products	11%			
701	Nutrient Composition of Food	12%			
703	Nutrition Education and Behavior	8%			
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	12%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	11%			
722	Zoonotic Diseases and Parasites Affecting Humans	8%			
723	Hazards to Human Health and Safety	8%			
901	Program and Project Design, and Statistics	6%			
902	Administration of Projects and Programs	6%			
903	Communication, Education, and Information Delivery	6%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	6.2	0.0	0.0	0.0
Actual Paid Professional	5.8	0.0	0.0	0.0
Actual Volunteer	499.0	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
218287	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
218287	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
21983	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Developing and applying new technology of food processing systems
- Developing products, curriculum, resources
- Developing services
- Presenting seminars and professional talks
- Conducting workshops and training sessions
- Publishing scientific findings
- Partnering
- Providing community education classes
- Maintaining a statewide food safety hotline
- Working with and supervising volunteers to deliver high quality information and programming about food safety topics

2. Brief description of the target audience

There are diverse audiences for information this program generates. They can be classified into five general groups: (1) the general public and food consumers; (2) state and federal food regulatory agencies; (3) the research community including scientists working in government, industry, and academic sectors; (4) the commercial food processing industry and commodity groups; and (5) professional food handlers in organizations such as schools and other institutions, as well as restaurants.

3. How was eXtension used?

In 2012, Oregon's use of Ask an Expert continued to grow across the 36 counties, with 3111 questions answered in the system. Oregon ranks third in the nation for Ask an Expert activity, only a horse's nose behind 2nd busiest Colorado. Question response time remains less than 40 hours, well below the 48 hour target suggested nationally.

Over 130 Extension faculty and staff and some thirty Master Gardener volunteers are actively answering questions from both Oregon and beyond.

Ask an Expert Question of the Week--developed at OSU-- featured 49 questions in 2012, with 5,476

unique visitors, spending on average over 2 minutes of reading. These featured questions have provided yet another access point for Oregonians to locate science-based answers to issues that matter to them.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	47058	12276	1730	3990

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	6	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational classes

Year	Actual
2012	76

Output #2

Output Measure

- Number of workshops

Year	Actual
2012	18

Output #3

Output Measure

- Number of demonstrations

Year	Actual
2012	45

Output #4

Output Measure

- Number of recurring newsletter published

Year	Actual
2012	5

Output #5

Output Measure

- Number of web sites maintained

Year	Actual
2012	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of specialty food and mainstream food processors accessing and applying science based information to produce and distribute safe, nutritious, high-quality foods.
2	Number of individuals improving their practices of safe food handling, food preparation, and food preservation.

Outcome #1

1. Outcome Measures

Number of specialty food and mainstream food processors accessing and applying science based information to produce and distribute safe, nutritious, high-quality foods.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	367

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Oregon residents are able to launch new food businesses through a program called Recipe to Market, which helps local entrepreneurs become marketable to well-established companies like Tillamook Cheese. The program is part of the Oregon Open Campus initiative, which aims to meet the educational and economic needs of communities by tapping university resources.

What has been done

Throughout the four-month Recipe to Market program, each participant builds a business plan, helps design a marketing campaign, and works one-on-one with local coaches to turn their dream into a profitable local business. The course takes place in three day-long sessions, including one full day at OSU's Food Innovation Center in Portland, where the educational emphasis is producing a safe and wholesome consumer food.

Results

In one rural, isolated coastal community, seven participants completed the first offering of Recipe to Market and three new businesses have been launched as a result. These three businesses now generate about \$1.2 million in combined annual gross income and employ up to 12 people.

4. Associated Knowledge Areas

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

- 902 Administration of Projects and Programs
- 903 Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Number of individuals improving their practices of safe food handling, food preparation, and food preservation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	233

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Oregon residents exhibit a high degree of interest in local foods, gardening and food preservation, but our experience through our community classes and the calls received through our Food Safety Hotline suggest that the practices employed are often out-dated and put users at risk of food-borne illness.

What has been done

While the Master Food Preserver training series would prepare individuals to can, pickle, dehydrate and use other preservation methods safely and effectively, not everyone can commit to the extensive volunteer requirements associated with that series. A 24- hour Food Preservation Certificate Class was developed. It covered key topics including science of food preservation, jams and jellies, drying and freezing, water bath canning, pickling, and tomato and salsa canning. The Certificate Class was offered as a cost-recovery program with participants paying \$240.

Results

A retrospective pre/post test was conducted to determine participants' levels of knowledge and skills before and after the class. Participants indicated they had increased their knowledge across all 10 categories (safety, water bath canning, pressure canning, recipes, freezing, canning fruit, preserving tomatoes and salsa, drying, jams & jellies, low acid foods). They expressed similar levels of increase in skill within these topic areas, based on their opportunities to experience them in a hands-on fashion during the series. In many cases, the numerical ratings of knowledge or skill doubled. Ratings for knowledge and skill in preserving low acid foods (which are particularly prone to food-borne illness if preserved improperly) increased by a factor of 5 or more.

Participants indicated that, as a result of the class, they had increased their food preservation activities, been more effective at canning, utilized low sugar recipes to address diabetic issues,

utilized new canning techniques, and made use of OSU's recommended recipes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

The 2012 illness and death of OSU Extension's food safety specialist had an impact on the overall program; however, many stepped forward to fill the leadership gap and the program maintained momentum, focusing on disseminating knowledge of food product development and increasing understanding about transfer, fate and effects of environmental contaminants.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Most evaluation was retrospective or post- then pre-test. Efforts were evaluated based on the stated objectives. Performance monitoring data was collected through an annual report submitted by county faculty. The statewide program evaluation utilized end-of-event assessments, follow-up assessments (12-18 months) and case study methodologies.

Key Items of Evaluation

A retrospective pre/post test was conducted to determine participants' levels of knowledge and skills before and after the Food Preservation Certificate Class. Participants indicated they had increased their knowledge across all 10 categories (safety, water bath canning, pressure canning, recipes, freezing, canning fruit, preserving tomatoes and salsa, drying, jams & jellies, low acid foods). They expressed similar levels of increase in skill within these topic areas, based on their opportunities to experience them in a hands-on

fashion during the series. In many cases, the numerical ratings of knowledge or skill doubled. Ratings for knowledge and skill in preserving low acid foods (which are particularly prone to food-borne illness if preserved improperly) increased by a factor of 5 or more. Participants indicated that, as a result of the class, they had increased their food preservation activities, been more effective at canning, utilized low sugar recipes to address diabetic issues, utilized new canning techniques, and made use of OSU's recommended recipes.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	8%			
111	Conservation and Efficient Use of Water	8%			
121	Management of Range Resources	8%			
205	Plant Management Systems	8%			
211	Insects, Mites, and Other Arthropods Affecting Plants	7%			
212	Pathogens and Nematodes Affecting Plants	8%			
213	Weeds Affecting Plants	7%			
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	7%			
215	Biological Control of Pests Affecting Plants	8%			
216	Integrated Pest Management Systems	8%			
307	Animal Management Systems	8%			
311	Animal Diseases	6%			
901	Program and Project Design, and Statistics	3%			
902	Administration of Projects and Programs	3%			
903	Communication, Education, and Information Delivery	3%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	63.0	0.0	0.0	0.0
Actual Paid Professional	58.6	0.0	0.0	0.0
Actual Volunteer	4725.0	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
2066295	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2066295	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
347498	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Organic, value-added, and technological approaches complement conventional agriculture. By utilizing contemporary tools in agronomy, animal or soil science, plant nutrition, pest management, and pesticide safety, this program will disseminate improved practices and enhance the potential use of alternative crops, reduce soil erosion, reduce the economic, social, and environmental costs of crop pests, and maintain or increase soil health. Animal systems will reduce wastes and discharges while improving productivity and management techniques.

Extension agriculture also will look at key areas of various social changes in the marketplace impacting producers, retailers and consumers. We aim to disseminate information on (1) how technology impacts the market place, with a special emphasis on rural markets in Oregon; (2) improving the well-being of consumers; and (3) development of economic linkages at every level of the supply chain for community development.

2. Brief description of the target audience

- Professional peers and scientific communities, Extension faculty, veterinarians, vaccine producers;
- State commodity commissions, grower groups, packers, crop consultants;
- Wholesale and retail suppliers to the agricultural sector, seed producers and distributors
- Natural resource industry clientele - growers, farm workers, field representatives, grower co-ops and partnerships;
 - Processors and handlers, export - import sectors;
 - County, state and federal agencies - USDA-ARS, Oregon Department of Agriculture, Natural Resources, others;
 - Conservation Service, Bureau of Indian Affairs, Confederated Tribes of the Umatilla Indian Reservation, US Forest Service; and Bureau of Land Management;
 - Policy makers, public health officials, and community leaders;
 - Teachers and students, Extension personnel and other educators;
 - Genetic companies;
 - Nutritional consultants;
 - Nonprofit conservation groups and ecologists;

- Food system participants, the general public and consumers.

3. How was eXtension used?

In 2012, Oregon's use of Ask an Expert continued to grow across the 36 counties, with 3111 questions answered in the system. Oregon ranks third in the nation for Ask an Expert activity, only a horse's nose behind 2nd busiest Colorado. Question response time remains less than 40 hours, well below the 48 hour target suggested nationally.

Over 130 Extension faculty and staff and some thirty Master Gardener volunteers are actively answering questions from both Oregon and beyond.

Ask an Expert Question of the Week--developed at OSU-- featured 49 questions in 2012, with 5,476 unique visitors, spending on average over 2 minutes of reading. These featured questions have provided yet another access point for Oregonians to locate science-based answers to issues that matter to them.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	478950	124620	1175	7440

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

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	38	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes Delivered

Year	Actual
2012	586

Output #2

Output Measure

- Number of Workshops Delivered

Year	Actual
2012	176

Output #3

Output Measure

- Number of One-on-one Interventions

Year	Actual
2012	907

Output #4

Output Measure

- Number of Demonstrations

Year	Actual
2012	59

Output #5

Output Measure

- Number of Web Sites Maintained

Year	Actual
2012	12

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Crop Production Systems -- Berry, Viticulture, Tree Fruit & Nut, Vegetable, Field Crops, Nursery, IPM, Organic Production Systems: number of farmers, field reps, and others accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events to improve production efficiencies; pest management; pesticide safety, including better, linguistically appropriate information about pesticide safety; organic and conventional production practices; post-harvest quality; improved cultivars; and to remain competitive in global and local markets.
2	Small Farms: number of small-scale farmers accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events about appropriate management of nutrients and soil runoff; utilization of IPM, biological, or conventional production practices, or selection of new crops; implementation of profitable and diverse scale-appropriate production and value-added processing systems; farmers accessing markets.
3	Gardens, Turf, Landscape: number of farmers, field reps, and others accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events to improve production efficiencies; pest management; pesticide safety, including better, linguistically appropriate information about pesticide safety; organic and conventional production practices; post-harvest quality; improved cultivars; and to remain competitive in global and local markets.
4	Livestock, Rangeland and Watershed Management, Dairy: number of farmers, ranchers and land managers, accessing or applying prescribed feeding methods; practices that increase birth weights and survival of offspring; specific management techniques such as early weaning, improved herd or flock health; improved production efficiency and beef quality parameters; practices with the intent to enhance water and soil quality or practices that favor appropriate plant communities and do not allow for accelerated erosion.
5	Number of public policy makers and other interested stakeholders will be better informed about the science basis of policy options when crafting policy related to land use, production agriculture, alternative marketing channels, public and private recreational lands, rangeland and other public lands, urbanized watersheds, and other agricultural policy issues.

Outcome #1

1. Outcome Measures

Crop Production Systems -- Berry, Viticulture, Tree Fruit & Nut, Vegetable, Field Crops, Nursery, IPM, Organic Production Systems: number of farmers, field reps, and others accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events to improve production efficiencies; pest management; pesticide safety, including better, linguistically appropriate information about pesticide safety; organic and conventional production practices; post-harvest quality; improved cultivars; and to remain competitive in global and local markets.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	2341

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In 2009, Oregon's farmers sold more than \$260 million of wheat, making it the state's fourth-largest agricultural commodity. Keeping yields high and costs down continues to be the farmer's perpetual challenge.

What has been done

Oregon's farmers planted about a million acres of wheat in 2010, more than half of which was blanketed by varieties developed by Oregon State University. Its wheat breeding program has been at work for more than a century, and its researchers have developed dozens of varieties adapted to Oregon's diverse growing conditions. Fruits of their labor include Goetze, a variety well-suited for the Willamette Valley; high-yielding Tubbs and Tubbs 06; and ORCF 101 and ORCF 102, which were bred to resist a particular herbicide. ORCF 101 is the most widely planted wheat variety in Oregon, accounting for almost 20 percent of the state's wheat acreage.

Results

OSU's winter wheat varieties have increased Oregon yields by at least two bushels per acre in recent years. At \$6 per bushel, this means an additional \$10 million for Oregon wheat growers each year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Small Farms: number of small-scale farmers accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events about appropriate management of nutrients and soil runoff; utilization of IPM, biological, or conventional production practices, or selection of new crops; implementation of profitable and diverse scale-appropriate production and value-added processing systems; farmers accessing markets.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	534

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Small farming is no small thing in Oregon. In the space of a generation, farmers and food advocates in Oregon have changed the menu, the land, and the economies of communities from downtown Portland to the Rogue River.

What has been done

Extension conducts direct marketing research and delivers outreach education in support of Oregon direct farm marketing. Direct farm marketing is becoming a big part of Oregon agriculture

and small farms see bigger profits by selling direct to consumers.

Results

According to the most recent USDA Census of Agricultural, 6,274 Oregon farms sold products directly to consumers, with total sales of \$56 million. This is a 144 percent increase over the \$21 million in farm direct sales reported in the 2002 Census.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
307	Animal Management Systems
311	Animal Diseases
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Gardens, Turf, Landscape: number of farmers, field reps, and others accessing and applying information or knowledge resources originating from educational programs, publications, websites, or other events to improve production efficiencies; pest management; pesticide safety, including better, linguistically appropriate information about pesticide safety; organic and conventional production practices; post-harvest quality; improved cultivars; and to remain competitive in global and local markets.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	7093

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Master Gardener program in Jackson and Josephine Counties recruits and trains volunteers each year to assist Extension clientele with home garden questions. The challenge with this program is to increase the level of knowledge of the volunteers significantly over a relatively short period of time to enable them to effectively deal with clientele questions.

What has been done

In 2012 845 individuals from Jackson and Josephine counties enrolled in the classroom portion of training over 12-13 weeks from January to April. Additionally, participants were required to complete at least 70 educational service hours between January and October.

Results

The initial survey of the volunteers following the training shows statistically significant increases in knowledge and understanding in all areas surveyed. This includes understanding of soil properties, fertilizer use, entomology, integrated pest management, pesticide use and safety, disease management, plant problem diagnosis, and plant physiology. The follow-up survey revealed that survey participants had changed significant areas of their gardening practices, including increasing recycling of organic matter, reading fertilizer labels to ensure correct use, reading pesticide labels carefully to ensure correct use, changing sanitation practices in the garden to reduce disease, ensuring the cause of a plant problem before utilizing some sort of control, implementing integrated pest management principles and monitoring water use more carefully. In addition, Master Gardeners donated over 135,770 documented pounds of fresh produce, harvested from Master Gardener-managed community and demonstration gardens in the two-county region, to local food banks and food pantries.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs

Outcome #4

1. Outcome Measures

Livestock, Rangeland and Watershed Management, Dairy: number of farmers, ranchers and land managers, accessing or applying prescribed feeding methods; practices that increase birth weights and survival of offspring; specific management techniques such as early weaning, improved herd or flock health; improved production efficiency and beef quality parameters; practices with the intent to enhance water and soil quality or practices that favor appropriate plant communities and do not allow for accelerated erosion.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1085

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The state's dairy industry contributes more than \$1 billion to Oregon's economy each year thanks to its approximately 350 dairy farms and 120,000 dairy cows. Establishment of an artisan cheese industry gives dairy producers the opportunity to earn greater returns for specialty products they make on their farms

What has been done

Extension educators provide training for all levels of artisan cheese makers, including assistance with improvements in product quality, shelf-life, and safety. Extension specialists consult closely with individual cheese makers to solve specific challenges, and serve as technical advisors for the Oregon Dept. of Agriculture's Food Safety Division

Results

Extension food technology educators helped launch and sustain the development of an Oregon artisan cheese industry that has grown from just two operations in 1999 to 21 artisan cheese producing outlets today. In 2012 Oregon artisan cheese producers earned \$16 million in farm gate sales for their products. Oregon's artisan cheese is experiencing the same growth achieved by Oregon's wine industry.

4. Associated Knowledge Areas

KA Code Knowledge Area

102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
121	Management of Range Resources
205	Plant Management Systems
213	Weeds Affecting Plants
307	Animal Management Systems
311	Animal Diseases
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

Outcome #5

1. Outcome Measures

Number of public policy makers and other interested stakeholders will be better informed about the science basis of policy options when crafting policy related to land use, production agriculture, alternative marketing channels, public and private recreational lands, rangeland and other public lands, urbanized watersheds, and other agricultural policy issues.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

This planned program of Global Food Security and Hunger remains a robust and active area for OSU Extension; however, it was hit the hardest during the economic down turn. A disproportionate number of long-tenured faculty members worked in this area and many retired in past 12 months. As we manage reduced resources, attrition plays a key role in balancing the budget and that means there are gaps in Extension's ability to address global food security and hunger. During this past year, efforts focused primarily on helping producers to be productive and environmentally sound. Little time was devoted to assisting policymakers and community stakeholders to be better informed about agricultural policy issues; however, results from current work on rangeland issues related to wolves and grouse will be valuable science-based information for policy makers as they craft future policies on land use, public and private recreational lands, and grazing access.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Industry trends and data on production practices were monitored; input and equipment were tracked as an indicator of adoption of some practices; case study measurements of soil and water quality provided an indication of progress; producer surveys also provided an indication of adoption

Key Items of Evaluation

- OSU's winter wheat varieties have increased Oregon yields by at least two bushels per acre in recent years. At \$6 per bushel, this means an additional \$10 million for Oregon wheat growers each year.
- According to the most recent USDA Census of Agricultural, 6,274 Oregon farms sold products directly to consumers, with total sales of \$56 million. Thanks in part to Extension direct marketing research and outreach education this is a 144 percent increase over the \$21 million in farm direct sales reported in the 2002 Census.
- Extension food technology educators helped launch and sustain the development of an Oregon artisan cheese industry that has grown from just two operations in 1999 to 21 artisan cheese producing outlets today. In 2012 Oregon artisan cheese producers earned \$16 million in farm gate sales for their products.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Reducing Childhood Obesity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	30%			
704	Nutrition and Hunger in the Population	10%			
724	Healthy Lifestyle	10%			
802	Human Development and Family Well-Being	5%			
806	Youth Development	20%			
901	Program and Project Design, and Statistics	10%			
902	Administration of Projects and Programs	5%			
903	Communication, Education, and Information Delivery	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	5.7	0.0	0.0	0.0
Actual Volunteer	464.0	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
202914	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
202914	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
99308	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Evidence-based educational programs and activities that are directed at parents, children, professionals, partner agencies, and other audiences. These efforts will address the stated goals (see section V-D-2) in creative, innovative, and effective ways.
- Research on new strategies through which Extension can address issues affecting childhood obesity.
- Develop or select new 4-H foods curricula that focus on the youth learning to prepare healthy, local foods.
- Develop a curriculum designed to help older youth become local advocates for healthy eating and physical activity in their communities. The curriculum will help young people learn how to conduct community assessments and lead community change efforts that focus on education, system building, and policy development.

2. Brief description of the target audience

- Children, youth, and families across Oregon
- Youth professionals
- Agency personnel who work with children and families

3. How was eXtension used?

In 2012, Oregon's use of Ask an Expert continued to grow across the 36 counties, with 3111 questions answered in the system. Oregon ranks third in the nation for Ask an Expert activity, only a horse's nose behind 2nd busiest Colorado. Question response time remains less than 40 hours, well below the 48 hour target suggested nationally.

Over 130 Extension faculty and staff and some thirty Master Gardener volunteers are actively answering questions from both Oregon and beyond.

Ask an Expert Question of the Week--developed at OSU-- featured 49 questions in 2012, with 5,476 unique visitors, spending on average over 2 minutes of reading. These featured questions have provided yet another access point for Oregonians to locate science-based answers to issues that matter to them.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	9319	2423	37278	9690

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Educational Events and Workshops to be Delivered

Year	Actual
2012	91

Output #2

Output Measure

- Newsletters to be Published

Year	Actual
2012	6

Output #3

Output Measure

- Web Sites to be Developed/Maintained

Year	Actual
2012	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Children practice healthy eating as defined by the current U.S. Dietary Guidelines for Americans. (Percentage of target audience indicating positive change in measured outcome.)
2	Children engage in healthy levels of physical activity as defined by national physical activity guidelines. (Percent of target audience indicating positive change in measured outcome.)
3	Increases in positive levels of Knowledge, Attitude, Skill and Aspiration (KASA) outcomes (as per Bennett & Rockwell, 1995) related to goals of reducing obesity. (Percent of target audience indicating positive change in measured outcomes.)

Outcome #1

1. Outcome Measures

Children practice healthy eating as defined by the current U.S. Dietary Guidelines for Americans. (Percentage of target audience indicating positive change in measured outcome.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	64

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Childhood obesity is a national epidemic and has increased significantly in recent decades, and the problem is significant in Oregon as well. Research has demonstrated that childhood obesity is linked to numerous factors including low availability and high cost of healthy foods, low levels of physical activity, extensive advertising of high-calorie, high-fat foods, and lack of awareness on the part of families about multiple aspects of a healthy diet.

What has been done

Programming with limited resource families consisted of a series of four (2 hour) classes offered during July and September 2012. Lessons included: Plan, Shop, and Save/Get Moving; Vary Your Veggies/Focus on Fruit; Make Half Your Grains Whole; Build Strong Bones. Each lesson was supported by hands-on food preparation/tasting and multiple opportunities to gain/practice skills in food budgeting, meal planning, label reading, recipe modification, and food safety. 5th and 6th graders who participated in the classes with adult family members completed a 4-point scale behavioral checklist administered as a pre- and post-test, as well as a pre- and post-survey measuring knowledge gained.

Results

77% of 911 youth in 46 groups increased knowledge of nutrition. The participating youth also reported significant improvements in the frequency of practices in the following behaviors:

- *Watched portion size to avoid eating too much (+15)
- *Chose fat-free or low fat dairy/milk products (+8)
- *Ate breakfast (+10)
- *Ate at least 2 kind of fruits each day (+9)

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Children engage in healthy levels of physical activity as defined by national physical activity guidelines. (Percent of target audience indicating positive change in measured outcome.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Childhood obesity is a national epidemic and has increased significantly in recent decades, and the problem is significant in Oregon as well. Research has demonstrated that childhood obesity is linked to numerous factors including low availability and high cost of healthy foods, low levels of physical activity, extensive advertising of high-calorie, high-fat foods, and lack of awareness on the part of families about multiple aspects of a healthy diet.

What has been done

Programming with limited resource families consisted of a series of four (2 hour) classes offered during July and September 2012. Lessons included: Plan, Shop, and Save/Get Moving; Vary Your Veggies/Focus on Fruit; Make Half Your Grains Whole; Build Strong Bones. Each lesson was supported by hands-on food preparation/tasting and multiple opportunities to gain/practice skills in food budgeting, meal planning, label reading, recipe modification, and food safety. 5th and 6th graders who participated in the classes with adult family members completed a 4-point scale behavioral checklist administered as a pre- and post-test as well as a pre- and post-survey measuring knowledge gained.

Results

The participating youth reported significant improvements in the frequency of practices in the following behaviors:

*46% Are physically active for at least 30 minutes a day (n=238);

*35% Are physically active for at least 60 minutes a day (n=238)

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

Increases in positive levels of Knowledge, Attitude, Skill and Aspiration (KASA) outcomes (as per Bennett & Rockwell, 1995) related to goals of reducing obesity. (Percent of target audience indicating positive change in measured outcomes.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

People of Hispanic origin comprise 11.2 percent of Oregon's 3.8 million population and Hispanics are the state's fastest growing minority. Nutrition education is critically important to this predominately immigrant population because of the disproportionate number of individuals suffering from diet-related chronic conditions such as diabetes.

What has been done

With cooperation of many local partners in the Portland area, Extension delivers outreach education through the "Metro Hispanic Nutrition Office", which provides nutrition and food safety education to limited-income Hispanic families living in Multnomah, Clackamas and Washington counties. The Metro Hispanic Nutrition program provided educational opportunities to over 3,000

mostly Hispanic families and individual adults and youth in 2012.

Results

Here is an example of the work: Jose (not his real name) is a 19-year-old, single Hispanic male, whose diabetes was out of control and affecting his vision. The Metro Hispanic Nutrition Office teamed up with the "La Clinica de Buena Salud", a Multnomah County Clinic located in NE Portland to provide basic nutrition education classes to diabetes patients. A Clinica Community Health Specialist referred Jose to Extension nutrition classes. Jose changed his work schedule in a local fast food restaurant to be able to make the classes a priority. Through the course of the two-month series of classes Jose lost weight, began exercising on a regular basis, and instead of eating fast food he learned how to prepare healthy meals using Extension recipes. He is now controlling his diabetes effectively.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

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

Childhood obesity is a multi-component, complex issue and all of the above indicated factors potentially affect its prevalence in Oregon. Because of the growing number of children at risk for obesity, additional resources were devoted to this planned program during the past year. We plan to continue this focus in 2013.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Annual performance monitoring data was collected from participating counties to develop aggregate measures of program participants who have gained knowledge and/or changed behavior related to diet or physical activity. Surveys were conducted based upon

OSU Institutional Review Board policies, procedures and guidelines. For quantitative data, customized on-site 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 case studies were representative of the larger population served by the programming.

Key Items of Evaluation

The participating youth reported statistically significant improvements in the frequency of practices in the following behaviors:

- *46% Are physically active for at least 30 minutes a day (n=238);
- *35% Are physically active for at least 60 minutes a day (n=238)
- *59% Watched portion size to avoid eating too much (n=911)
- *58% Chose fat-free or low fat dairy/mild products (n=911)
- *65% Ate breakfast (n=911)
- *66% Ate at least 2 kind of fruits each day (n=911)

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
125	Agroforestry	10%			
403	Waste Disposal, Recycling, and Reuse	40%			
601	Economics of Agricultural Production and Farm Management	20%			
608	Community Resource Planning and Development	20%			
902	Administration of Projects and Programs	5%			
903	Communication, Education, and Information Delivery	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	5.6	0.0	0.0	0.0
Actual Volunteer	464.0	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
157938	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
157938	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
90238	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Lead short course and training seminars for industry personnel and growers;
- Conduct basic and applied research in alternative fuel sources, energy saving techniques and recycling of green waste products;
- Engage with community and environmental organizations;
- Contribute to trade and peer reviewed journal publications.

2. Brief description of the target audience

- Forest owners and managers;
- Agricultural managers;
- Community members;
- Environmental organizations;
- Livestock growers and managers;
- Energy (and bio-energy) industry;
- Research community at large

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4650	9300	419	1256

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

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Educational Classes to be Conducted

Year	Actual
2012	37

Output #2

Output Measure

- Number of Workshops to be Conducted

Year	Actual
2012	19

Output #3

Output Measure

- Number of Group Discussions to be Conducted

Year	Actual
2012	16

Output #4

Output Measure

- Number of Demonstrations to be Conducted

Year	Actual
2012	9

Output #5

Output Measure

- Number of Newsletters to be Published

Year	Actual
2012	0

Output #6

Output Measure

- Number of Web Sites to be Developed and Maintained

Year	Actual
2012	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Agricultural producers increase their knowledge regarding the use of agricultural crops for energy production. (Percent increase of attendees to workshops, field days and demonstrations.)
2	Forest owners and managers increase their knowledge regarding the use of forest biomass as an energy source. (Percentage increase in knowledge of attendees to workshops, field days, and demonstrations.)
3	Coastal stakeholders increase their knowledge of wave energy. (Percentage increase in knowledge of attendees to workshops, field days, and demonstrations.)

Outcome #1

1. Outcome Measures

Agricultural producers increase their knowledge regarding the use of agricultural crops for energy production. (Percent increase of attendees to workshops, field days and demonstrations.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	37

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Aviation uses a lot of fuel. According to, John Talbott, director of the Western Region Sun Grant, based at Oregon State, the industry's biggest uncertainty is not ridership, but fuel prices. Of all the factors impacting fuel prices, many are unpredictable, such as Middle East politics or hurricanes in the Gulf. One way to stabilize long-term prices would be to find alternative fuel sources that can be produced renewably and domestically.

What has been done

Camelina is a particularly promising source for producing jet fuel. Because its oil is relatively high in omega-3 fatty acids and low in saturated fatty acids, camelina is considered a high-quality edible oil as well as a source for jet fuel. OSU agronomists at Klamath Basin Research and Extension Center (KBREC) have put camelina to the test and found that it can be grown with few input costs and under marginal conditions, so it has potential both as a dryland crop in Eastern Oregon and as a rotation crop with grass seed in the Willamette Valley.

Results

Although adoption of camelina is not yet a common practice among growers, workshops, field days, and demonstrations are increasing their knowledge regarding the use of this agricultural crop for energy production and its economic return to the producer. Post-event interviews indicate a growing interest in camelina with expressed interest in on-farm field trials for the 2013 growing season.

4. Associated Knowledge Areas

KA Code	Knowledge Area
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management

- 608 Community Resource Planning and Development
- 902 Administration of Projects and Programs
- 903 Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Forest owners and managers increase their knowledge regarding the use of forest biomass as an energy source. (Percentage increase in knowledge of attendees to workshops, field days, and demonstrations.)

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Coastal stakeholders increase their knowledge of wave energy. (Percentage increase in knowledge of attendees to workshops, field days, and demonstrations.)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	47

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Interest in renewable wave energy has exploded on the Oregon coast. According to the Oregon Wave Energy Trust, the long-range goal is to build sufficient wave energy capacity to generate 500 megawatts of power by 2025. The establishment of this new industry brings with it questions about impacts on offshore areas and onshore communities.

What has been done

Extension helps communities address those questions through conducting outreach and engagement activities, and through coordinating the Human Dimensions of Wave Energy research program. Both efforts bring together groups that have a stake in this new use of ocean space, and address questions like: what will wave energy generation mean to users of offshore areas (commercial and recreational fishers, surfers, etc.), and what kinds of infrastructure impacts will come to coastal communities as a result of commercial wave energy development? The goal

of Extension's efforts is to encourage community members, ocean users, energy developers and scientists to share opinions and information, which will lead to better understanding of the political and regulatory processes surrounding wave energy and its environmental, social, and economic sustainability.

Results

With Extension's help, coastal communities are better prepared for wave energy development. Ten companies are in the process of establishing wave energy generation facilities on the Oregon coast

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

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

Implementation of this plan is subject to both funding and competing topics. While we expect to continue, and perhaps broaden, our work in alternative energy, OSU Extension will make adjustments in programmatic themes and efforts on an ongoing basis. The emphasis during 2012 was primarily on food systems, with alternative energy related to biofuels just beginning to emerge as an expressed need of the clientele.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Surveys were conducted based upon OSU Institutional Review Board policies, procedures and guidelines. For quantitative data, customized on-site surveys and post-event interviews were conducted. 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 case studies were representative of the larger population served by the programming.

Key Items of Evaluation

With Extension's help, coastal communities are better prepared for wave energy

development. Ten companies are in the process of establishing wave energy generation facilities on the Oregon coast