

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Commercial and Consumer Horticulture

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%		0%	
111	Conservation and Efficient Use of Water	15%		25%	
202	Plant Genetic Resources	5%		20%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	5%		0%	
204	Plant Product Quality and Utility (Preharvest)	10%		25%	
205	Plant Management Systems	25%		25%	
216	Integrated Pest Management Systems	20%		0%	
511	New and Improved Non-Food Products and Processes	0%		5%	
805	Community Institutions and Social Services	5%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	7.9	0.0	1.3	0.0
Actual Paid	8.7	0.0	1.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
277894	0	46797	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
277894	0	46797	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
313359	0	391835	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Horticulture team members reported 27,527 direct educational contacts and 1,050,031 indirect contacts made through Extension programs. Team members published 10 peer reviewed UI Extension publications and participated in projects supported by \$493,802 in grant funds.

Beginning Master Gardener classes were delivered serving 19 Idaho counties in 2014. Five counties delivered shorter, more accessible series' of classes for consumers as an alternative to the rigorous Master Gardener programs. Advanced Master Gardener classes and projects were delivered in eight counties. Idaho faculty organized a number of multi-county gardening symposia and continued to host a regional Master Gardener conference attracting participants from Wyoming, Utah, and Montana, as well as Idaho.

Outreach for commercial producers included collaborations with the Idaho Nursery and Landscape Association to provide instruction at the HortExpo, the Idaho Green Collar College, The Turf, Tree and Landscape Conference, the Kootenai Valley Nursery Growers Conference, the Certified Nursery Professional course, a numerous workshops for fruit, several IPM workshops for commercial growers, a golf course xeriscaping project, and through collaborations with local nursery retailers, including on-site training.

Supervised Master Gardeners and Advanced Master Gardeners delivered more than 100 presentations for local gardening groups and interested publics, served hundreds of residents who sought assistance in our plant clinics, and contributed to dozens of community projects including school gardens and community gardens, community beautification and parks and recreation projects, and water conservation and FireWise demonstrations. Extension professionals also contributed to the founding of a dozen new community gardens, including a garden on the Shoshone-Bannock Reservation that supports 16 active family garden plots. In one county alone, Master Gardeners contributed more than 1,500 hours of community service, much of that in association with community gardens that combined to contribute more than 60,000 pounds of produce to low income residents in 2014.

Media outreach is conducted through regular contributions to seven local newspapers, local TV and radio interviews, through targeted newsletters and trade publications, and through a blog and Facebook and Twitter accounts. The Idaho Landscapes and Gardens Website remains relevant for thousands of users through ongoing updating, content management, and new contributions. Specialized information for consumers is published by UI Extension faculty including three illustrated guides for entomology, managing insects, and pesticide training.

2. Brief description of the target audience

Target Audience - Master Gardener Education Project:

Wide perspective: all Idaho citizens who are consumers of horticultural information and products. The program is designed to develop volunteers capable of providing education that will have an impact on resources management and quality of life within counties and communities statewide.

Narrow perspective: potential Master Gardeners, meaning any Idaho citizen with interest in horticulture and a desire for service. Beginning Master Gardeners are required to participate in 30 to 70 hours of basic training in horticultural topics that include botany, basic soils, plant development, fertility, irrigation, plant problem diagnosis, pest control, etc., followed by 30-70 hours of volunteer service to the public. Advanced Master Gardeners become volunteer instructors and are expected answer horticultural questions from the general public, assist in organizing workshops, conferences, and other education opportunities, develop public demonstration projects, and assist communities with plant-based improvement projects.

Target Audience - Consumer Horticulture Education Project:

The target audience for this project includes most citizens of Idaho, specifically anyone who consumes horticultural information or products. This broad audience seeks opportunities to learn sustainable horticultural principles from numerous sources, including web sites, publications, popular press articles, presentations, workshops, conferences, demonstrations, short courses, Master Gardener Volunteers and other teaching forums. Organized groups from this target audience, including community public works departments, garden clubs, civic groups, public libraries, church groups, and other interested organizations will often sponsor educational events.

Target Audience - Green Industry Education Project:

The audience consists of all owners, managers, and employees of green industry companies. The audience takes an active role in recommending curriculum, organizing teaching opportunities, and working to become competent horticulturists.

Underserved Audiences

Current underserved groups, include Hispanic, native American, and immigrant populations.

Service to the hispanic communities is hindered by language issues. Spanish-language gardening workshops are being offered in some parts of the state. Team members provide pesticide training to green industry workers in English and Spanish.

The Treasure Valley region of Idaho has become a significant refugee resettlement location, providing a new home to refugees from Asia, Eastern Europe and Africa. Educators and Master Gardeners are partnering with refugee agencies to train these new citizens for success in limited-space commercial and home food production, community gardening projects and green industry jobs.

Pilot programs are being developed to provide Master Gardener and Consumer Horticulture education for the Shoshone-Bannock tribes in southeastern Idaho and the Nez Perce tribe in northern Idaho. If successful, these programs will be expanded by the participating county faculty.

3. How was eXtension used?

no organized use of eXtension is known, but faculty would have used the resources for reference and/or to direct clientele to resources.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	24172	1386322	3355	13709

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

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	6	14	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Advanced MG Workshops/Tours: faculty contribution to Advanced MG Training (Does not include beginning MGs). O: Number of faculty presentations at Advanced MG training events.

Year	Actual
2014	139

Output #2

Output Measure

- Beginning MG Courses Organized/Supervised: Number of MG courses (not classes within a course) organized/supervised by educators. O: Number of whole courses delivered during the past year.

Year	Actual
2014	18

Output #3

Output Measure

- Consumer Education-Public Outreach Pubs/Products: Number of faculty-authored press and Extension media products developed for consumers. Includes magazine articles, newspaper columns, newsletters or newsletter articles, radio or television spots. I: The number of products developed/published during the past year.

Year	Actual
2014	193

Output #4

Output Measure

- Consumer Education-Websites: Statewide and county websites (faculty-authored) containing current, relevant consumer-based horticultural information. O: The number of actual websites developed or actively improved during the year.

Year	Actual
2014	11

Output #5

Output Measure

- Consumer Education-Workshops, Seminars, Demonstrations, Field Days: Faculty contributions to consumer-based education events (exclude MG classes, reported elsewhere). I: Number of specific faculty presentations at Extension consumer education events.

Year	Actual
2014	231

Output #6

Output Measure

- Green Industry Education-Workshops, Seminars, Clinics: Faculty presentations associated with green industry educational events. O: Number green industry education events and presentations.

Year	Actual
2014	38

Output #7

Output Measure

- Master Gardener-Volunteer Hours: Total number of hours contributed by all volunteers over the past year.

Year	Actual
2014	12268

Output #8

Output Measure

- Green Industry Education-Websites: Number of statewide or county web sites with green industry-targeted content developed or actively improved during the year. O: The number of current, relevant, active sites.

Year	Actual
2014	5

Output #9

Output Measure

- Direct Contacts with Stakeholders Made by Certified MGs: . Number of direct contacts during the past year by volunteers.

Year	Actual
2014	19274

Output #10

Output Measure

- Faculty presentations to Beginning MG classes: Number of presentations.

Year	Actual
2014	170

Output #11

Output Measure

- Master Gardener-Volunteer-Authored Pubs/Products: Number of products developed during the past year by supervised MGs or other volunteers (exclude those with faculty authors): bulletins, fact sheets, web content, PowerPoint, media productions for radio or television.

Year	Actual
2014	240

Output #12

Output Measure

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

Year	Actual
-------------	---------------

2014 200

Output #13

Output Measure

- Consumer Education-Scholarly Pubs/Products: Number of research-based, peer-reviewed scholarly products published by team faculty. Examples: journal papers, bulletins, CISs, or peer-reviewed web content or video productions.

Year	Actual
2014	11

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Master Gardener- Training Courses: The desired outcome is a measurable increase in knowledge among new Master Gardener trainees in key topics covered by the Idaho Master Gardener curriculum. Indicator: The average number of key topic areas (out of 25 in the Master Gardener certification exam) in which learners? knowledge increased.
2	Consumer Education-Information: sound horticultural information is current, research-based, and widely available to increasing numbers of Idaho consumers to inform and influence their horticultural practices. Indicator: The number of visitors to the comprehensive Idaho Landscapes and Gardens Website each year. hits.
3	Green Industry Education - Information Availability. The Green Industry workforce has access to useful research-based pest control and production information. Indicator: Combined numbers of personal contacts and hits on the green industry website.
4	A statewide Master Gardener program that operates according to state policies, ensuring cohesion, program branding and quality that delivers quality education and service to the public. Indicator: The number of Master Gardener programs statewide that operate according to written policy.
5	Green Industry Education-Certification Training: Idaho's Green industry workforce is capable to provide environmentally and economically appropriate services. Indicator: The number of participants passing the exams after Extension training.
6	Master Gardener-New Certification: The desired outcome is a pool of newly trained Master Gardener volunteers to maintain efforts in home horticulture outreach, and to donate their time and expertise to their community. Indicator: Number of new Master Gardeners certified during the past year.
7	Master Gardener-Retention of MG Volunteers: The desired outcome is a pool of returning trained, qualified, certified Master Gardener volunteers available for service within communities and counties statewide. Indicator: Number of active, certified Master Gardeners and Advanced Master Gardeners currently serving in counties.
8	The Idaho native plant research program focus is to develop and distribute new native plant products for use by the Idaho and Intermountain West nursery industries.

Outcome #1

1. Outcome Measures

Master Gardener- Training Courses: The desired outcome is a measurable increase in knowledge among new Master Gardener trainees in key topics covered by the Idaho Master Gardener curriculum. Indicator: The average number of key topic areas (out of 25 in the Master Gardener certification exam) in which learners' knowledge increased.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

One of the goals of the Idaho Master Gardener Program is to develop skilled amateur horticulturists who are encouraged to adopt sustainable landscape and garden practices and to teach and encourage others in the general public to do so.

What has been done

. Beginning Master Gardener classes were offered in 19 Idaho Counties in 2014. Master Gardeners receive training on 25 topic areas and are asked to report on their level of knowledge increase as a result of completing the course. Advanced courses are offered regionally, to provide additional training for those who can benefit.

Results

All students completing the beginning Master Gardener course are evaluated for knowledge gained across the 25 topic areas. Evaluations indicate that significant learning is taking place and, as importantly, the learners gain confidence about their knowledge and skills to adopt sustainable landscaping and gardening practices.

4. Associated Knowledge Areas

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

204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

Consumer Education-Information: sound horticultural information is current, research-based, and widely available to increasing numbers of Idaho consumers to inform and influence their horticultural practices. Indicator: The number of visitors to the comprehensive Idaho Landscapes and Gardens Website each year. hits.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	127449

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

Green Industry Education - Information Availability. The Green Industry workforce has access to useful research-based pest control and production information. Indicator: Combined numbers of personal contacts and hits on the green industry website.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

A statewide Master Gardener program that operates according to state policies, ensuring cohesion, program branding and quality that delivers quality education and service to the public. Indicator: The number of Master Gardener programs statewide that operate according to written policy.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Green Industry Education-Certification Training: Idaho's Green industry workforce is capable to provide environmentally and economically appropriate services. Indicator: The number of participants passing the exams after Extension training.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #6

1. Outcome Measures

Master Gardener-New Certification: The desired outcome is a pool of newly trained Master Gardener volunteers to maintain efforts in home horticulture outreach, and to donate their time and expertise to their community. Indicator: Number of new Master Gardeners certified during the past year.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	143

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Master Gardeners offer a valuable resource to the community by serving in plant clinics, on community beautification projects, community gardening projects, and by helping with school gardens. It is important Master Gardeners are properly and thoroughly trained. It is essential to have a continual pool of new volunteers because some are lost each year.

What has been done

Beginning Master Gardener classes were offered in 19 Idaho Counties in 2014. Two counties sometimes combine classes in order to achieve critical mass of learners necessary to justify the classes, and also be able to produce new volunteers in counties where they are needed.

Results

One-hundred forty-three program participants (approximately half of the total participants) completed their Master Gardener certification in 2014, requiring completion of a required commitment for community service.

4. Associated Knowledge Areas

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

203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems
805	Community Institutions and Social Services

Outcome #7

1. Outcome Measures

Master Gardener-Retention of MG Volunteers: The desired outcome is a pool of returning trained, qualified, certified Master Gardener volunteers available for service within communities and counties statewide. Indicator: Number of active, certified Master Gardeners and Advanced Master Gardeners currently serving in counties.

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

The Idaho native plant research program focus is to develop and distribute new native plant products for use by the Idaho and Intermountain West nursery industries.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Idaho native plant research program focuses on enhancing the profitability and marketing of native plants, thereby making a larger palette of high quality plants available to consumers. By increasing public awareness of native plants increases the ability and willingness to landscape using water-conserving designs. The single greatest impact will be water conservation for the arid West and conservation of other resources through use of sustainable landscaping practices.

What has been done

Research activities involve native plant domestication using unique and effective methods developed specifically for this purpose: collection from wild populations, field establishment, evaluation, selection and improvement using bulk selection. In July of 2014, a concentrated effort was made to access dwarf forms of Penstemon species for evaluation and commercialization.

Results

A week-long collection expedition was completed, comprising visits to 9 Idaho, Oregon, Nevada, and Utah mountain ranges. Target sites were exposed, harsh ridges at elevations above 9,000 feet. A total of 66 new collections, both of Penstemons and associated species, were collected as cuttings and established in the greenhouse.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
511	New and Improved Non-Food Products and Processes

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)

Brief Explanation

drought tends to increase consumer demand for water-conservation information

V(I). Planned Program (Evaluation Studies)

Evaluation Results

We completed the second part of our Statewide Master Gardener Evaluation project, by surveying Master Gardener Program Coordinators about the type of projects with public value that Master Gardener Volunteers are currently engaged in statewide. This gave us a significant snapshot of our statewide efforts and will be combined with individual MG and public response data in communicating the impact of Master Gardener Programs to key funders, administrators and stakeholders.

Key Items of Evaluation

Outreach performed by Canyon County Master Gardener volunteers focused in the areas of civic beautification, public education, community gardening and youth enrichment, they changed lives for the better in our region.

One volunteer started a pollinator display garden at the Deer Flat National Wildlife Refuge. The Refuge is visited by thousands of adults and children every year, who will now have the opportunity to learn about the often overlooked value of insect wildlife in the environment.

Our volunteers who started Trinity Community Gardens Inc., a 501c3 non-profit, taught over 10 classes this year on their low input, accessible style of high-yield vegetable gardening, along with running an impressive system of gardening and gleaning efforts that put over 60,000 pounds of food into local emergency food provider's pantries. Just this week, they self-published their first book, in both English and Spanish, which will be distributed and sold this winter and spring to help even more people learn to grow more the "Trinity Way."

We had four incredibly talented and dedicated Master Gardener School Garden Mentors serving this year in the Treasure Valley, helping local elementary schools realize their dreams of having a productive, sustainable, edible outdoor classroom.

Our volunteers also staffed free public health plant clinics in our office, three days a week for six straight months, identifying insects, plant diseases, disorders, and providing research based, tested advice on how to solve them. Over 500 clientele were directly served in this way.