

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

**Program # 3**

**1. Name of the Planned Program**

Commercial and Consumer Horticulture

Reporting on this Program

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%		0%	
111	Conservation and Efficient Use of Water	10%		25%	
202	Plant Genetic Resources	8%		25%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	5%		0%	
204	Plant Product Quality and Utility (Preharvest)	10%		25%	
205	Plant Management Systems	25%		25%	
216	Integrated Pest Management Systems	25%		0%	
805	Community Institutions, Health, and Social Services	2%		0%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	9.2	0.0	1.5	0.0
Actual Paid Professional	9.2	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	1.3	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
291705	0	41274	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
291705	0	41274	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
423186	0	627062	0

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

**1. Brief description of the Activity**

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

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

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

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

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

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

garden clubs, civic groups, public libraries, church groups, and other interested organizations will assist by sponsoring educational gatherings.

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

**3. How was eXtension used?**

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

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

**1. Standard output measures**

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	13598	1329428	1305	8359

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

**Patent Applications Submitted**

Year: 2012

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2012	Extension	Research	Total
<b>Actual</b>	1	14	15

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

**Output Target**

**Output #1**

**Output Measure**

- Advanced Master Gardener Training Workshop/Tours.

Year	Actual
2012	123

**Output #2**

**Output Measure**

- Beginning Master Gardener Courses.

<b>Year</b>	<b>Actual</b>
2012	17

**Output #3**

**Output Measure**

- Consumer Horticulture Education Media Publications/Programs.

<b>Year</b>	<b>Actual</b>
2012	106

**Output #4**

**Output Measure**

- Consumer Horticulture Education Personal Contacts/Visits.

<b>Year</b>	<b>Actual</b>
2012	21285

**Output #5**

**Output Measure**

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

**Output #6**

**Output Measure**

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

**Output #7**

**Output Measure**

- Green Industry Education Workshops/Seminars/Clinics.

<b>Year</b>	<b>Actual</b>
2012	62

**Output #8**

**Output Measure**

- Master Gardener Volunteer Activities (in Hours).

<b>Year</b>	<b>Actual</b>
2012	12466

**Output #9**

**Output Measure**

- Green Industry Web Site Maintenance and Improvement

<b>Year</b>	<b>Actual</b>
2012	241

**Output #10**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	245

**Output #11**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	10315

**Output #12**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	241

**Output #13**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	168

**Output #14**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	251

**Output #15**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	137

**Output #16**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	236

**Output #17**

**Output Measure**

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

<b>Year</b>	<b>Actual</b>
2012	7

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

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

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

## **Outcome #1**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

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

## **Outcome #2**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

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

### **Outcome #3**

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

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

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

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

**What has been done**  
{No Data Entered}

**Results**  
{No Data Entered}

#### **4. Associated Knowledge Areas**

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

## **Outcome #4**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

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

## **Outcome #5**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
805	Community Institutions, Health, and Social Services

## **Outcome #6**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	0

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

#### **Issue (Who cares and Why)**

{No Data Entered}

#### **What has been done**

{No Data Entered}

#### **Results**

{No Data Entered}

### **4. Associated Knowledge Areas**

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

## **Outcome #7**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Research

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	1

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

#### **Issue (Who cares and Why)**

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

#### **What has been done**

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

#### **Results**

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

#### 4. Associated Knowledge Areas

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

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

##### External factors which affected outcomes

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

##### Brief Explanation

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

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

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

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

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

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

Idaho Victory Garden graduates are making a difference:

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

## **Key Items of Evaluation**