

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Commercial and Consumer Horticulture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
124	Urban Forestry	6%		10%	
202	Plant Genetic Resources	9%		10%	
204	Plant Product Quality and Utility (Preharvest)	10%		15%	
205	Plant Management Systems	50%		35%	
502	New and Improved Food Products	6%		20%	
901	Program and Project Design, and Statistics	4%		5%	
903	Communication, Education, and Information Delivery	15%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	14.0	0.0	3.0	0.0
Actual	18.0	0.0	3.2	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
250000	0	135285	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
250000	0	135285	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2300158	0	865792	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

*Conduct research to evaluate cultivars of traditional and nontraditional horticultural crops and ornamental plants. *Conduct research into crop cultural systems, particularly the feasibility of horticultural crops in rotation with agronomic crops. *Conduct research to develop "seed to market" production systems for high-value alternative horticultural crops like cilantro and herbs. *Conduct research to develop sustainable and/or organic production systems for commercial horticultural crops. *Provide demonstrations and education and disseminate information to support Oklahoma's commercial horticulture industry, with emphasis on electronic resources. *Survey Oklahoma Consumers (Gardeners) to assess the needs and wants of the gardening public *Upgrade the web-based delivery *Review and revise annually or as needed Fact sheets and other publications. *Educational programs are conducted based on public interest and County Educator requests. *Participate and support eXtension Consumer Horticulture/Master Gardener Community of Practice *Conduct Master Gardener/Junior Master Gardener Training *Conduct pesticide training and education *Assist in Youth at Risk - Obesity/School Gardens

2. Brief description of the target audience

Horticultural crop producers, commodity groups, food processors, landscape professionals, input suppliers such as seed and chemical companies, peer scientists, extension specialists and county professionals, horticultural dealers and merchants, greenhouses, Master Gardeners, home owners, communities, and youth.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	15000	1200000	3000	0
Actual	117100	12100000	9081	0

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

Patent Applications Submitted

Year: 2010
 Plan: 0
 Actual: 2

Patents listed

PVP - 2 burmudagrass cultivars for turf

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	5	5	
Actual	16	9	25

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- New Master Gardeners trained

Year	Target	Actual
2010	100	302

Output #2

Output Measure

- Manuscripts submitted for consideration of publication in peer-reviewed journals

Year	Target	Actual
2010	3	15

Output #3

Output Measure

- Number of Extension publications completed - fact sheets, newsletters, trial reports, web-based materials

Year	Target	Actual
2010	6	52

Output #4

Output Measure

- Number of statewide "Oklahoma Gardening" shows produced

Year	Target	Actual
2010	40	36

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of horticultural crop producers newly certified as organic
2	Number of volunteer hours provided to community horticulture programs statewide
3	Number of home gardeners experiencing increased awareness and knowledge about environmental issues and IPM principles

Outcome #1

1. Outcome Measures

Number of horticultural crop producers newly certified as organic

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	3	14

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Spinach anthracnose is an emerging disease on 3,000 acres of spinach grown in Oklahoma. Currently registered fungicides are not effective due to potential resistance development in the fungus.

What has been done

Field trials were conducted in the spring and fall evaluating the efficacy of fungicides and biological control products for disease management.

Results

Two fungicides were identified that provide disease control. One is an experimental fungicide under development and the other is registered on other crops, but not spinach. The IR4 project (Pest Management Solutions for Specialty Crops and Minor Uses) has submitted a label for use of the latter product on spinach anthracnose using the Oklahoma data.

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
502	New and Improved Food Products

Outcome #2

1. Outcome Measures

Number of volunteer hours provided to community horticulture programs statewide

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	20000	105420

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Rapid urban growth in many areas of the United States coupled with increased interest in the environment and home gardening have prompted an ever-increasing number of garden and landscape inquiries. Along with this interest, comes a multitude of gardening questions needing individual explanation and too few Extension staff members to answer each question. Many of these questions are seasonal in nature and are relatively easy to answer assuming that one has horticulture training.

What has been done

Oklahoma Master Gardeners are trained, supervised and recruited to: 1) improve overall efficiency in providing one-on-one service to the non-commercial horticulture clientele in the county, 2) provide group learning and teaching activities for non-commercial clientele, 3) allow agents to develop proactive Extension programs, and 4) form a group of Extension volunteers to support additional consumer horticulture efforts.

Trainees participate in a 10 - 13 week course receiving between 40 - 56 hours of course work on subjects including: basic plant science, vegetables, fruits, nuts, ornamentals, lawns, diagnosing pest problems, soils, and other related topics. Upon completion of the training period, satisfactorily passing an exam on materials and topics covered, and donating between 40 - 56 hours of volunteer time to the Horticulture program, the trainees are certified and awarded the title of Oklahoma Master Gardener.

Examples of Master Gardener Volunteer activities include: staffing plant clinics to answer phone and walk-in questions, manning educational exhibits, maintaining demonstration gardens, community beautification projects, serving as 4-H hort leaders and judges, speaking at club/civic meetings, teaching horticulture activities at nursing homes, etc., assisting in horticulture mailings, newsletters, etc., and appearing on TV and radio.

Results

The service from the Master Gardener volunteer program has proven to be a highly popular means of extending the knowledge of the Oklahoma State University Cooperative Extension Service to the residents of Oklahoma. The Oklahoma Master Gardener Program now has 29 counties participating in the program as of January 2011. The following data was provided by 24 of the 29 counties. Approximately 302 new Master Gardeners were trained during the 2010 training season. Close to 1,207 active Master Gardeners volunteered their time, contributing approximately 103,515 volunteer hours resulting in over 4,520,826 educational interventions with Oklahomans and as many as 1,200+ educational and community programs and activities being conducted in their communities in 2010. This translates to over \$1,764,930 in service that was donated by volunteers (wage rate of \$17.05/hour was used, which includes a 12% estimate of fringe benefits. This hourly rate is the assigned wage for nonagricultural workers in 2008 for the state of Oklahoma as published in The Independent Sector, an organization that serves as a national forum to encourage giving, volunteering and not-for-profit initiative? http://www.independentsector.org/programs/research/volunteer_time.html)

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
205	Plant Management Systems
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Number of home gardeners experiencing increased awareness and knowledge about environmental issues and IPM principles

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	23000	4853905

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
124	Urban Forestry
205	Plant Management Systems
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
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

During the winter of 2009, a hailstorm that damaged greenhouse roofs affected some studies. New greenhouse coverings made further research possible during 2010. Limited formula funding is reducing the ability to conduct applied research that meets local needs. Fuel costs are impacting budgets (teaching, research, extension).

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

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}