V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Urban Agriculture

☑ 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	3%	0%	10%	0%
111	Conservation and Efficient Use of Water	17%	0%	15%	0%
124	Urban Forestry	2%	0%	10%	0%
202	Plant Genetic Resources	17%	0%	2%	0%
206	Basic Plant Biology	2%	0%	2%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	0%	0%	10%	0%
212	Diseases and Nematodes Affecting Plants	8%	0%	10%	0%
213	Weeds Affecting Plants	3%	0%	10%	0%
216	Integrated Pest Management Systems	8%	0%	2%	0%
404	Instrumentation and Control Systems	3%	0%	2%	0%
405	Drainage and Irrigation Systems and Facilities	3%	0%	2%	0%
601	Economics of Agricultural Production and Farm Management	5%	0%	10%	0%
602	Business Management, Finance, and Taxation	10%	0%	5%	0%
605	Natural Resource and Environmental Economics	13%	0%	2%	0%
609	Economic Theory and Methods	3%	0%	2%	0%
806	Youth Development	3%	0%	6%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	4.0	0.0

Actual Paid	2.0	0.0	4.0	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**
231863	0	425539	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
231863	0	425539	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Research was conducted. County, regional, state, and multistate meetings, trainings, and workshops were held. Field days, on-site visits, tours, and hands-on sessions took place. Diagnostic services were provided.
Research findings were shared via bulletins, newsletters, eXtension, lay-person articles, industry publications, peer-reviewed journals, scientific proceedings, state and national conferences, broadcast media, websites, and expos.
Research continued to provide better management options for foliar diseases of ornamentals.
Plant selections or plants derived from breeding programs were evaluated in the laboratory for their cold hardiness potential. Specific data was collected on the timing and rate of cold acclimation, the timing and extent of the maximum mid-winter cold hardiness attained, and the timing and rate of cold deacclimation.
Within the turfgrass disease management program an active applied research was implemented to address new or recurring turfgrass disease problems or knowledge voids. Sixteen site visits as requested by county agents and Georgia stakeholders were performed. It is not uncommon to answer 4-5 calls a day on diagnosis, control of turfgrass diseases. Other efforts included attending and delivering information to underrepresented clientele and in bilingual format. Several innovative programs were implemented. Examples include computer based trainings for industry personnel, full day workshops at the Golf Course Superintendent Association of America, Bilingual publications; safety training workshops. In 2014, twelve meetings as liaison or/and advisory expert were given to industry, commodity and government entities.
In the Significant Trees of Georgia program, 5 trees were visited and documented.
Model woody plant species were identified and chemically mutagenized populations of these plants will be developed. DNA sequence data from genes of interest was obtained. Genetic screening for induced mutations in specific genes was conducted. Plants identified with mutations in specific genes were selected for field testing and breeding. Genes of the FT/TFL1 family of peach (Prunus persica) were identified and compared with family members of other Rosaceaea species.
Fungicide efficacy trials were conducted that aided in product labeling. Two books on integrated IPM of trees and shrubs in southeastern ornamental nurseries were written and published. Fungicide efficacy table was published. Extension Plant Pathology Update, a monthly newsletter was developed and distributed to provide information on disease clinic diagnoses and current disease problems. Numerous

presentations were given to update green industry professionals on new diseases and disease management practices. Fungicide resistance screening was conducted and is on-going.

Faculty will support the Master Gardener program by training county extension agents to conduct local programs. Faculty members will work with local county extension agents to support consumer educational efforts related to urban agriculture.

2. Brief description of the target audience

The target audience for this planned program includes urban agriculture industries professionals, public policy makers and regulators, county Extension faculty, homeowners.

3. How was eXtension used?

There are currently 4 active members associated Communities of Practice related to this planned program.

The membership in eXtension has continued to grow. Overall, there are currently 291 members in Communities of Practice in 62 approved communities (Up from 150 members in 59 communities in 2012). 190 questions were answered by in-state experts.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4164	177785	2	0

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	9	3	12

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2014	72

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2014	53

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2014	57

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2014	21

Output #5

Output Measure

- Number of research trials conducted
  Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Number of disease management recommendations based on disease samples processed

Year	Actual
2014	8081

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.
2	Pre and post tests, email follow-up evaluation

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	632910

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Faculty associated with federal funds also make indirect contacts to clientele. These federally funded positions provide further impact to the community through county faculty, staff and volunteers not receiving federal funds. This county level programming results in thousands of additional direct Extension contacts.

What has been done
County faculty have presented research based information directly to clientele through presentations, workshops, on-site visits, meetings, and other trainings.

Results
Extension extended lifelong learning to the people of Georgia through unbiased, research-based education.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
124	Urban Forestry
202	Plant Genetic Resources
206	Basic Plant Biology

211	Insects, Mites, and Other Arthropods Affecting Plants
212	Diseases and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
404	Instrumentation and Control Systems
405	Drainage and Irrigation Systems and Facilities
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
605	Natural Resource and Environmental Economics
609	Economic Theory and Methods
806	Youth Development

Outcome #2

1. **Outcome Measures**

Pre and post tests, email follow-up evaluation

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Severe changes in weather patterns can change diseases dynamics therefore preventing or diverging emphasis on certain disease. Government regulations on certain fungicides can hamper the applicability of those in disease control. Public perception regarding the use of environmentally friendly chemical controls strategies as well as the potential turfgrass industry change in research and direction.
In early 2014 severe low temperature records and ice storms had a dramatic impact on turfgrass green up and increasing disease activity in warm season grasses. 2014 was also the warmest year in record inciting disease outbreaks in cool season grasses. Changes and additions of fungicides provided added both challenges and new ways to combat disease. However, the program objectives for the year were accomplished and surpassed

predictions. We have been successful in attaining a variety of extramural funds for travel and other research and extension activities.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

- Isolated studies have continued as planned.

- Evaluation studies were conducted by comparing the laboratory estimates of the cold hardiness of woody ornamentals to their actual performance in the field. Results are promising.

- The results and activities of the program provided 42 new outlets of information and research findings published in several venues. The latest information and research results on turfgrass disease have been disseminated at 29 international, national, state and local meeting and conferences. Additionally, under this program new and/or improved turfgrass disease control strategies have been developed. Research and extension expertise and advise from this program are commonly sought by industry, stakeholders and government entities. This program has secure substantial extramural funding to perform and expand activities.

- Members of the FT/TFL1 family were identified in the peach genome database. These genes were compared with family members from other Rosaceae species. Results indicated that peach could serve as a model for genes regulating flowering.

- Ornamental plant producers and landscapers remain interested in new product chemistry, identification of new diseases, and improved disease management practices.

Key Items of Evaluation

Post workshop evaluations indicated an overall increase in knowledge and satisfaction with the programs.
New plant genes were identified.
Information disseminated on the local, state, national, and international levels was well received.