Horticulture and the Reduction of Pests and Disease Outbreaks in Plants

Horticulture and the Reduction of Pests and Disease Outbreaks in Plants

V(A). Planned Program (Summary)

1. Name of the Planned Program

Horticulture and the Reduction of Pests and Disease Outbreaks in Plants

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
103	Management of Saline and Sodic Soils and Salinity	10%		10%	
202	Plant Genetic Resources	15%		15%	
204	Plant Product Quality and Utility (Preharvest)	15%		15%	
205	Plant Management Systems	15%		15%	
211	Insects, Mites, and Other Arthropods Affecting Plants	15%		15%	
212	Pathogens and Nematodes Affecting Plants	15%		15%	
215	Biological Control of Pests Affecting Plants	15%		15%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	9.0	0.0
Actual	4.0	0.0	8.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c 68480	1890 Extension 0	Hatch 383802	Evans-Allen 0
1862 Matching 284461	1890 Matching 0	1862 Matching 459211	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

•Identify and develop species and cultivars of plants which are adapted for use in the landscapes and environment of Rhode Island and the Northeastern US.

•Develop and deliver training for green industry professionals and gardeners, emphasizing the use of plants that require less water, labor, nutrients, and pesticides.

•Expand markets for resource-conserving products.

•Reduce pest-induced damage to horticultural and forest plants, while maintaining environmental quality through reduced use of herbicides and pesticides.

•Balance the costs of developing new or improved products with future benefits expected from these products.

2. Brief description of the target audience

We have active partnerships with agricultural producers of turfgrass and ornamental plants, administered by a joint advisory committee of URI-PLS and the RI Nursery and Landscape Association (RINLA) and the New England Sod Producers Association. We have research and demonstration projects on several nurseries and we work closely with RINLA to determine research needs and to design educational programs. We have similar working relations with the RI Golf Course Superintendents Association. We also target consumers through educational outreach programs designed to promote acceptance of local products.

Producer and commodity groups: Rhode Island farmers and fishermen are historically independent, self-sufficient operators, proud of this "Yankee" tradition. Given relatively low numbers of farmers within any given commodity, there are few formal commodity groups. The RI Farm Bureau acts as an umbrella for RI agriculture with national links. We have close working relationships with the green industry through the Rhode Island Nursery and Landscape Association (RINLA), which has a large annual meeting and biannual meetings of a research and outreach executive committee. Given the size of the industry, there are numerous direct contacts between the Director, Station faculty and professionals (research and outreach) and industry representatives. RINLA has made major contributions to the University, including support for new hires (e.g., start up funds for a new horticulturalist) and the development of a formal garden demonstrating sustainable plantings (see http://riaes.cels.uri.edu/explore for a virtual tour of this garden). The principle commodity groups representing turfgrass production and management in Rhode Island are the Rhode Island Golf Course Superintendents Association (RIGCSA), the New England Sod Producers Association (NESPA), and the New England Regional Turfgrass Foundation (NERTF), although many RINLA members are also involved in turfgrass maintenance. We are working on improving relationships with these groups. We do have strong working relationships with many of the individual golf course superintendents and sod producers in the area around Kingston. Through our Winter School and GreenShare programs, we provide annual educational and re- certification programs for growers, creating an excellent forum for exchange of information from this vital stakeholder group.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	100	1000	0	0
2007	250	3000	100	500

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

Patent Applications Submitted

Year	**Target**
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	2	10	12

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Peer reviewed publications

Year	Target	Actual
2007	3	9

Output #2

Output Measure

Books and monographs

Year	Target	Actual
2007	0	1

Output #3

Output Measure

Abstracts

Year	Target	Actual
2007	5	5

Output #4

Output Measure

Conference proceedings

Year	Target	Actual
2007	1	3

Output #5

Output Measure

Technical documents, fact sheets and bulletins

Year	Target	Actual
2007	5	6

Output #6

Output Measure

Workshops

Year	Target	Actual
2007	3	4

Output #7

Output Measure

Website development and refinement

Year	Target	Actual
2007	1	3

Output #8

Output Measure

Public presentations

Year	Target	Actual
2007	4	12

Output #9

Output Measure

Student training

Year	Target	Actual
2007	5	8

Output #10

Output Measure

Development of tools and germplasm for use in breeding grasses and ornamental plants with traits important for the development of sustainable landscapes

Year	Target	Actual
2007	2	1

Horticulture and the Reduction of Pests and Disease Outbreaks in Plants

Output #11

Output Measure

Release of biological control agents benefiting traditional agriculture, landscape horticulture and the environment of southern New England

Year	Target	Actual
2007	1	2

Output #12

Output Measure

MS Theses and PhD Dissertations

Year	Target	Actual
2007	2	3

Output #13

Output Measure

Professional training

Year	Target	Actual
2007	2	2

Output #14

Output Measure

Professional/scientific presentations

Year	Target	Actual
2007	5	7

V(G). State Defined Outcomes

O No.	Outcome Name
1	Identify and improve sustainable trees, shrubs, and grasses, with an emphasis on native species (#)
2	Increase availability and local production of sustainable ornamental trees and shrubs, and turf and roadside grasses (%)
3	Better understand the biology of plants and their pests, including the identification of gene functions for select traits on select crop species (# genes identified)
4	Develop and select superior and patentable ornamental plants (#)
5	Increase use of sustainable plants and IPM practices by CE-trained green industry professionals and the gardening public (%)
6	Reduce damage caused by pests through our biological control efforts, or through environmentally sensitive pesticide applications influenced by our IPM and pesticide applicator-training programs (% reduction)
7	Reduce needs for water, nutrients, or labor for select ornamental plants and grasses (%)
8	Improve landscape quality in high-stress areas through improved management practices and development of stress-tolerant plants (% adoption of BMP)
9	Increase profit from production, resulting from more efficient marketing and reduced production costs as well as alternative uses for agricultural crops (%)

Horticulture and the Reduction of Pests and Disease Outbreaks in Plants
Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area

V(H). Planned Program (External Factors)

External factors which affected outcomes

Economy
Appropriations changes
Competing Public priorities
Competing Programmatic Challenges

Brief Explanation

A sizable Federal Appropriation was not continued in 2007.This resulted in reduction of programs and program staff for nursery and landscape outreach.Poor success in the local competitive Hatch process reduced the number of FTEs in AES.

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

1. Evaluation Studies Planned

Before-After (before and after program)
During (during program)
Comparisons between program participants (individuals,group,organizations) and non-participants
Comparison between locales where the program operates and sites without program intervention

Evaluation Results

Key Items of Evaluation