Plant and Integrated Pest Management Systems

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Plant and Integrated Pest Management Systems

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems			25%	
211	Insects, Mites, and Other Arthropods Affecting Plants			15%	
216	Integrated Pest Management Systems			60%	
	Total			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	0.0	0.0	19.0	0.0
Actual	0.0	0.0	12.1	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
0	0	440748	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	1889266	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	182269	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The expected outputs (i.e., activities, services, events, and new crops that reach people) are designed to assist a broad, diverse group of stakeholders by primarily disseminating scientific information to these people. All activities of this planned research program will ensure that people have equality of service and access to Station facilities to receive direct assistance from scientists. The following activities are planned: (1) Station scientists will partner with stakeholders and participate in their organizations as members or officers, (2) Station scientists will conduct workshops or meetings for stakeholders, (3) experiments will be performed on stakeholders' properties as well as on Station research farms, (4) diagnostic services will be provided to stakeholders, (5) training on IPM practices and other methodologies will be provided to stakeholders, (6) staff members will disseminate written information on research findings by presenting scientific displays at agricultural fairs and giving talks and interviews to civic groups, and (7) staff members will work with the media and provide information on scientific discoveries. Public service is an important component for all output measures. For example, all state residents are allowed to enter Station facilities and request direct assistance on diagnosing insect or plant disease problems. In this approach for delivering services, about 20,000 stakeholders are expected to benefit from these activities annually. Station scientists are members or officers in dozens of stakeholder groups. This provides opportunities for stakeholder input on the research program and facilitates reporting of research results. The non-traditional stakeholders are reached at agricultural fairs when they visit and inquire about Station displays. Two open houses are scheduled annually on Station properties to allow the public to hear oral presentations on research results and to offer comments. Hundreds of talks and interviews are given to civic groups and the media to convey research results and to receive public input. Research experiments are important activities that lead to solutions to problems or information on new crops. Whenever possible, these experiments are conducted on farms or other private properties to encourage stakeholder engagement in the research. Results of these output activities lead to specific outcomes, such as reducing pesticide use, controlling insects or plant disease pathogens, the introduction of new crops, and increased farm income. Scientific publications in peer-reviewed journals or articles written for the general public reach traditional and non-traditional groups of stakeholders.

2. Brief description of the target audience

To be effective, there should be a diverse group of targeted audiences, which include under-served and under-represented stakeholders. The Connecticut Agricultural Experiment Station does not receive extension funds but, nonetheless, serves a variety of farmers who grow vegetables, fruits, nursery stock, cattle, and flowers. Station scientists coordinate with The University of Connecticut extension specialists in planning grower meetings. The broad goals of the Station's research program also include work on forestry and environmental problems. Accordingly, target audiences include landscapers, conservation officers, foresters, arborists, beekeepers, maple syrup producers, seed companies, and persons in the wood products industry. Efforts are also made to reach water company officials, horticulturalists, groundskeepers, pest control operators, pesticide manufacturers and retailers, environmental regulators, extension specialists, and municipal officials. Scientists and government officials are also important target audiences for new experimental results. This research program is designed to reach the general public, which includes non-traditional stakeholder groups. Homeowners, who have interests in agriculture and forestry, have access to laboratories and scientific results as well as equality of service. Women, members of minority organizations, and children are examples of under-represented and under-served groups, important target audiences. Efforts will be made to reach Brazilian, Hispanic, Asian American, African American, and Native American populations as well as elementary and high school students.

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	18000	15000	600	150
2007	30135	106427	7069	550

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

Patent Applications Submitted

Year	Target
Plan:	0

Plant and Integrated Pest Management Systems
2007: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	11	11

V(F). State Defined Outputs

Output Target
Output #1

Output Measure
# of research papers

Year	Target	Actual
2007	40	65

Output #2

Output Measure
# of site visits to solve problems

Year	Target	Actual
2007	200	224

Output #3

Output Measure
# of talks and interviews given to stakeholders

Year	Target	Actual
2007	350	605

Output #4

Output Measure
# of responses to stakeholders' inquiries

Year	Target	Actual
2007	1700	16229

Output #5

Output Measure
# of diagnostic tests performed

Year	Target	Actual
2007	1100	6589

V(G). State Defined Outcomes

O No.	Outcome Name
1	# of homeowners gaining knowledge on insect pests and plant pathogens
2	# of homeowners learning practices to control plant and household pests
3	# of media reporters gaining knowledge on research results
4	# of students learning agricultural skills
5	# of growers adopting IPM practices

Plant and Integrated Pest Management Systems
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

Natural Disasters (drought,weather extremes,etc.)
Economy
Appropriations changes
Public Policy changes
Competing Public priorities
Competing Programmatic Challenges
Other (Media influences)

Brief Explanation

The resignation of an IPM specialist adversely affected outcomes because the new knowledge could not be effectively transferred to more nursery managers. Consequently, the actual quantitative target outcome of 25 growers adopting IPM practices was partially met. There were no other external factors that impeded outcomes.

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

1. Evaluation Studies Planned

After Only (post program)
Retrospective (post program)
Before-After (before and after program)
During (during program)

Evaluation Results

Three planned evaluation studies were conducted during this reporting period. "After only" evaluations verified that there were knowledge changes in reporters. "During program" evaluations showed that there were knowledge changes in 493 students, whereas "before and after" program on-site evaluations and observations indicated that there were positive outcomes in the control of pests on bluegrass and arborvitae.

Key Items of Evaluation

The Science Citation Index verified that 206 published articles on plant systems, written by 23 scientists over 28 years, were cited by scientists at other institutions (total cumulative citations = 4,287). Ten accurately published news articles showed that knowledge changes had occurred in reporters. Verbal feedback from teachers verified knowledge changes in youth. On-site observations and evaluations verified success in new IPM methods.