

1.3 Viable and Sustainable Production Practices -- Plant

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V(A). Planned Program (Summary)

1. Name of the Planned Program

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V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

| KA Code | Knowledge Area | %1862 Extension | %1890 Extension | %1862 Research | %1890 Research |
|---------|---|-----------------|-----------------|----------------|----------------|
| 201 | Plant Genome, Genetics, and Genetic Mechanisms | 6% | | 6% | |
| 202 | Plant Genetic Resources | 3% | | 3% | |
| 203 | Plant Biological Efficiency and Abiotic Stresses Affecting Plants | 11% | | 11% | |
| 204 | Plant Product Quality and Utility (Preharvest) | 7% | | 7% | |
| 205 | Plant Management Systems | 11% | | 11% | |
| 206 | Basic Plant Biology | 1% | | 1% | |
| 211 | Insects, Mites, and Other Arthropods Affecting Plants | 15% | | 15% | |
| 212 | Pathogens and Nematodes Affecting Plants | 26% | | 26% | |
| 215 | Biological Control of Pests Affecting Plants | 8% | | 8% | |
| 216 | Integrated Pest Management Systems | 12% | | 12% | |
| | 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 | 7.8 | 0.0 | 60.0 | 0.0 |
| Actual | 48.8 | 0.0 | 110.7 | 0.0 |

2. Institution Name: Cornell University

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

| Extension | | Research | |
|-------------------------------|----------------|---------------------------|----------------|
| Smith-Lever 3b & 3c 214301 | 1890 Extension | Hatch 1095415 | Evans-Allen |
| | 0 | | 0 |
| 1862 Matching 214301 | 1890 Matching | 1862 Matching 1095415 | 1890 Matching |
| | 0 | | 0 |
| 1862 All Other 2309463 | 1890 All Other | 1862 All Other 4419316 | 1890 All Other |
| | 0 | | 0 |

2. Institution Name: NY State Agricultural Experiment Station

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

| Extension | | Research | |
|-------------------------------------|----------------------------|----------------------------------|----------------------------|
| Smith-Lever 3b & 3c 0 | 1890 Extension 0 | Hatch 728379 | Evans-Allen 0 |
| 1862 Matching 0 | 1890 Matching 0 | 1862 Matching 728379 | 1890 Matching 0 |
| 1862 All Other 0 | 1890 All Other 0 | 1862 All Other 9442113 | 1890 All Other 0 |

V(D). Planned Program (Activity)

1. Brief description of the Activity

This is a comprehensive, statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

2. Brief description of the target audience

Key audiences served, directly and indirectly include: established producers; new and young producers, consultants and service providers, input suppliers, governmental agencies, and local and state agricultural leaders.

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 | 4500 | 15000 | 0 | 0 |
| 2007 | 31381 | 694269 | 1008 | 492 |

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

Patent Applications Submitted

| Year | Target |
|--------------|---------------|
| Plan: | 60 |
| 2007: | 14 |

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Patents listed

A Bioherbicide from Festuca SPP
Beta-mannanase from Coffee Berry Borer,
Hypothenemus Hampei, and Uses Thereof
Dehydrin Genes and Promoters from Coffee
HrpN Interactors and Uses Thereof
Method for Increasing Resistance of Monocot Plants
Against Abiotic Stresses, TPS Plant Gene Constructs,
and Transformants
Methods for Providing Optimal Light-CO2 Combinations
for Plant Production
Oleosin Genes and Promoters from Coffee
Rc, Brown Pericarp and Seed Coat
Surgically Implanted Micro-platforms and Microsystems in
Arthropods and Methods Based Thereon
Use of NAP Gene to Manipulate Leaf Senescence in
Plants
Apple Rootstock CG202
Apple Rootstock NYCG4202
COROT NOIR NY70.0809.10 Red Wine Grape
NY1829 Strawberry 'L'Amour'

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| | Extension | Research | Total |
|-------------|-----------|----------|-------|
| Plan | | | |
| 2007 | 0 | 0 | 777 |

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

non-credit instructional activities directed to this program.

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 0 | 533 |

Output #2

Output Measure

non-credit instructional activity contact hours directed to this program.

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 0 | 49066 |

Output #3

Output Measure

producers/horticulture business persons completing education programs on existing and new production-management practices and techniques. (1.3.1a)

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 0 | 0 |

Output #4

Output Measure

producers/horticulture business persons completing education programs on potential environmental impacts of practices; requirements and opportunities of environmental regulations and programs; whole farm systems. (1.3.2 a)

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 0 | 0 |

Output #5

Output Measure

funded applied research projects directed to this program.

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 120 | 232 |

Output #6

Output Measure

refereed publications directed to this program

| Year | Target | Actual |
|-------------|---------------|---------------|
| 2007 | 600 | 777 |

V(G). State Defined Outcomes

| O No. | Outcome Name |
|-------|---|
| 1 | # program participants demonstrating knowledge or skill gains related to existing and new production-management practices and techniques. (1.3.1b) |
| 2 | # participants who demonstrate knowledge or skill gains related to potential environmental impacts of practices; requirements and opportunities of environmental regulations and programs; and/or whole farm systems. (1.3.2b) |
| 3 | # producers, horticulture businesses, and natural resource managers documented to have modified existing practices or technologies and/or adopted new production management practices/technologies to address current issues and improve efficiency. (1.3.1c) |
| 4 | # technical assistance providers documented to have incorporated current best management practices in their recommendations. (1.3.1e) |
| 5 | # producers, horticulture businesses, and natural resource managers documented to have assessed potential environmental impacts of their operations and developed and acted on plans to eliminate or minimize those concerns. (1.3.2c) |
| 6 | # producers, horticulture businesses, and natural resource managers who report improved ability to anticipate and respond to environmental and market variations through alternative crop or production management strategies. (1.3.1d) |
| 7 | # producers, horticulture businesses, natural resource managers documented to develop or modify and implement nutrient management/waste management plans to meet production and environmental goals and regulations. (1.3.2d) |
| 8 | # producers, horticulture businesses, and natural resource managers documented to have Improved profitability and/or vitality resulting from enhanced production management practices. (1.3.1f) |
| 9 | # producers, horticulture businesses, and natural resource managers documented to meet or exceed current environmental protection standards as a result of participating in relevant educational programs. (1.3.2e) |
| 10 | # resource managers reporting reduced environmental concerns for participating enterprises. (1.3.2f) |
| 11 | Breeding and Plant Development of Unique Geophytes |
| 12 | Breeding Vegetables for Pest and Stress Tolerance |
| 13 | Development of Crop Protection Technology for Fruit Crops - Improving Deposition, Reducing Environmental Pollution and Operator Contamination |
| 14 | Reducing Nitrogen Groundwater Contamination from Crop Production |
| 15 | Development and Field Testing Disease Resistant Tomatoes |

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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
- Public Policy changes
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Plans 1.2 and 1.3 were separated solely because the initial version of the plan of work software was limited to 10 Knowledge Areas per plan. That forced separation of what for us was a single, integrated program. We had no direct experience to draw from so many targets were nothing more than informed guesses and we did indeed miss a number. The two programs are merged in the FY08 plan.

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)
- Case Study
- Comparison between locales where the program operates and sites without program intervention

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Evaluation Results

Evaluation results are reflected in the outcome indicators and impact statements associated with each planned program and result from a broad variety of evaluation approaches appropriate to the individual programs and contexts they represent.

Key Items of Evaluation

Each of our planned programs represents broad program emphases and strategies. Absent selection criteria, individual "findings" are not useful. See impact statements associated with this planned program for representative results.

Example results from impact statements: •

New commercial ornamental plant from this research was patented -- Mauve Majesty -- a lavender lily look-alike that can last for two weeks in a vase. •

Generated disease resistant breeding lines and varieties of popular consumer vegetables, often with significantly improved flavor and yield.