

Plant Genomics

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Plant Genomics

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				50%
202	Plant Genetic Resources				35%
204	Plant Product Quality and Utility (Preharvest)				15%
	Total				100%

V(C). Planned Program (Inputs)

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

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	5.2
Actual	0.0	0.0	0.0	4.5

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	385300
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	290568
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	225860

V(D). Planned Program (Activity)

1. Brief description of the Activity

Marker development and mapping in watermelons and peppers, using cDNA AFLPs and microarrays for gene expression across ploidy levels. Watermelon populations were evaluated from test sites at Alcorn State University and Florida A&M University. Also, a molecular diversity tree for 5 pepper species was constructed.

Tomato germplasm was evaluated for pest resistance and organoleptic traits. Molecular markers were used to track transfer of gene for Late Blight resistance. Selection for superior plant and fruit qualities continued. Genetic diversity in greenhouse and heirloom tomato varieties was assessed.

2. Brief description of the target audience

- Greenhouse industry - Horticulturists - Plant genetics researchers

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	0	0	0	0
2008	75	150	0	0

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

Patent Applications Submitted

Year Target

Plan: 2

2008: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	0	
2008	0	2	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Scientific publications and/or presentations

Year	Target	Actual
2008	10	7

V(G). State Defined Outcomes

O No.	Outcome Name
1	Increase profitability of hydroponic tomatoes (%)
2	Gene map for vegetable crops (#)

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
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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V(H). Planned Program (External Factors)

External factors which affected outcomes

Natural Disasters (drought, weather extremes, etc.)

Economy

Brief Explanation

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

1. Evaluation Studies Planned

Retrospective (post program)

Evaluation Results

This is one of the most successful programs in terms of resources coming to this program as the researchers aggressively pursue other sources of funding (e.g. NSF, NIH, Capacity Building, etc.). The program and its participants will be retained and further supported.

Key Items of Evaluation

This research is currently being monitored to find a more commercial or off-campus applications through extension service.