

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

Viticulture and Small Fruit Research - Global Food Security and Hunger

**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				25%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants				25%
205	Plant Management Systems				50%
	<b>Total</b>				100%

**V(C). Planned Program (Inputs)**

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	1.0	0.0	6.0
Actual	0.0	0.0	0.0	6.0

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	0	224572
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	224572
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	1513763

**V(D). Planned Program (Activity)**

1. Brief description of the Activity

The Center for Viticulture and Small Fruit Research conducts a wide range of research projects to address industry needs and concerns, and provides service to help stakeholders in the industry. The Center also conducts research in blackberries and evaluates non-traditional small fruits for North Florida. The faculty is involved in statewide extension and outreach activities as well as in teaching and training graduate and undergraduate students. Research was conducted in the following areas:

- Development of new and improved grape cultivars for Florida.
- Screening for fruit rot, downy mildew and crown gall diseases in muscadine grapes
- Evaluation of germplasm for disease resistance in Florida hybrid bunch grapes.
- Identification of best management practices for Florida grapes and small fruits.
- Identification of important viticulture genetic markers.
- Identification of proteins and metabolites relating to disease tolerance and important physiological functions of grapes.
  - Identification of constraints in sugar metabolism in muscadine grapes
  - Evaluation of differential gene expression to determine disease tolerance in muscadine and Florida hybrid bunch grapes.
    - Evaluation of the effects of water stress/drought on biochemical and molecular changes in grapes.
    - Evaluation of triploids and tetraploids for development of seedless muscadine grapes.
    - Development of disease and virus free explants of muscadine and bunch grapes for the clean vine project.
      - Development of new value-added products from grapes and small fruits.
      - Evaluation of non-traditional small fruits, blackberries and raspberries for North Florida.
      - Evaluated chestnuts for North Florida.

Extension and outreach activities included:

- Student training, community service and youth development.
- Seminars and workshops for grape growers and general public.
- Grape Growers Field Day and Grape Harvest Festival
- Technical advice and services to grape growers, processors and small farmers.

## **2. Brief description of the target audience**

The primary stakeholders and target audience were:

- Grape growers and processors in Florida and neighboring states.
- Grape nurseries
- Small minority farmers and chestnut growers in Florida and neighboring states.
- Graduate and undergraduate students working in viticulture and small fruit.

The secondary stakeholders and target audience are:

- Hobbyists and homeowners with grapes and small fruits
- Home winemakers.

Florida nurseries.

## **V(E). Planned Program (Outputs)**

### **1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	350	200	100	100
<b>Actual</b>	2000	2000	200	300

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 1  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	6	
<b>Actual</b>	5	13	18

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Research and Extension publications; Grant proposals submitted and funded; Dissemination of results to stakeholders; Training of graduate and undergraduate students. Increasing the number of grape growers in Florida over the 2010 base long term measure  
 Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Hybrid seedlings from breeding program

Year	Target	Actual
2010	{No Data Entered}	7199

**Output #3**

**Output Measure**

- Advanced hybrid selections of seedlings

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	{No Data Entered}	17

**Output #4**

**Output Measure**

- Genetic markers evaluated and genes identified.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	{No Data Entered}	6

**Output #5**

**Output Measure**

- Workshops, seminars and conferences.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	{No Data Entered}	8

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	1. Continued industry growth - increased in new vineyards and wine production in the state 2. Greater interest in Florida grapes and small fruits: more visits from the general public, high school students and local farmers to the Center. 3. Faculty productivity: increased in research publication and professional presentations at national and international meetings. 4. New muscadine and bunch grape cultivars. 5. New gene discovery. 6. Graduate students training: students will undertake more challenging research projects and will be better prepared for advanced degree training.
2	Public and stakeholder participation at workshops, field days, seminars and grape harvest festival.

## **Outcome #1**

### **1. Outcome Measures**

1. Continued industry growth - increased in new vineyards and wine production in the state 2. Greater interest in Florida grapes and small fruits: more visits from the general public, high school students and local farmers to the Center. 3. Faculty productivity: increased in research publication and professional presentations at national and international meetings. 4. New muscadine and bunch grape cultivars. 5. New gene discovery. 6. Graduate students training: students will undertake more challenging research projects and will be better prepared for advanced degree training.

Not Reporting on this Outcome Measure

## **Outcome #2**

### **1. Outcome Measures**

Public and stakeholder participation at workshops, field days, seminars and grape harvest festival.

### **2. Associated Institution Types**

- 1890 Research

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	{No Data Entered}	2500

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Small farmers, Florida grape growers and processors are directly impacted by FAMU's viticulture and small fruit program. The Center's research is geared towards addressing industry/stakeholders need. Increased vineyard acreage has helped wineries to increase wine production.

#### **What has been done**

New knowledge on vineyard, value-added products, and small fruit management are being shared with stakeholders which has helped to increase productivity and farm income through extension and outreach activities. New gene discoveries are facilitating the breeding program at the Center.

### **Results**

Greater public awareness of Florida grapes, wines and non traditional small fruits.

Increased sale of Florida wines.

Increased faculty productivity in research output and grant procurement.

Greater graduate student interest in viticulture and small fruit research.

FAMU as the leader in warm climate grape (muscadine and Florida bunch hybrid) research.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
201	Plant Genome, Genetics, and Genetic Mechanisms
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems

## **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

### **Brief Explanation**

The current regulations require that the sale of Florida wines be conducted through a licensed distributor. This requirement restricts the ability of Florida wineries, particularly the small wineries, to market their wines directly to consumers except on-premise sales. Small wineries are often unable to pay for the services of distributors. Sale of Florida wines through the internet is also restricted and appears to have a negative impact on small wineries.

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

### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)

## **Evaluation Results**

The evaluation results indicated that the program is achieving satisfactory progress with regards to its plan of work. The faculty were productive in terms of publishing their research in reputable journals and participation in scientific meetings. They were also successful in procuring external grants from various agencies to further support their research.

**Key Items of Evaluation**

None.