



Year 2002



Progress Report of Activities

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Brooksville, Florida Plant Materials Center

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Mission and Objectives

The mission of the Plant Materials Program is to provide timely and effective vegetative solutions for identified resource needs. Superior accessions of adapted plants are developed, tested and released to commercial growers. Technical assistance is then provided in regards to production and management methodologies. Plant materials and state-of-the-art plant science technology are promoted to assist in conservation of natural resources and meeting the objectives of environmental programs. The use of native plant materials is encouraged.

The following are the major objectives of the Brooksville Plant Materials Center (PMC):

- Improve and maintain water quality
- Control erosion on cropland and stabilize critical areas
- Improve forage on pastures and rangeland
- Improve wildlife habitat

The PMC is located 7 miles north of Brooksville on U.S. Highway 41, 15 miles inland from the Gulf of Mexico. Areas served include Florida, Puerto Rico, and the coastal areas of South Carolina, Georgia, and Alabama.

There are 43 acres under cultivation which are used for the evaluation and production of plant materials. The remaining 139 acres are native woodlands and planted pines. The PMC also has two greenhouses, an office building, seed processing building, laboratory for seed germination and tissue grinding, conference building, and open educational shelter. Wildlife, such as deer and wild turkey, is abundant

in the wooded areas and can be seen along the trails or around the edges of the fields.



PMC Office Building

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She's a Winner

Courtney Rumala, a ninth grade student at Hernando Christian Academy is working on a school science project in the PMC's greenhouse. Courtney received the following awards for her project, "The Ecological Impact of *Spodoptera frugiperda* on *Bacillus thuringensis* Zea Mays L."

- Hernando Region Certificate of Recognition
- Department of the Army Certificate of Achievement
- Office of Naval Research Naval Science Award Outstanding Science Research
- Society for In-Vitro Biology Certificate of Outstanding Achievement for Ability and Creativity in In-Vitro Biology
- Eastman Kodak Company 2003 Kodak Photographic Award for the "Best Use of Photographic Images or Digital Image Processing to Gather Data, Solve a Problem, or Clearly Explain the Essence of a Science Project"

The objective of Courtney's project is to find if genetically modified plants (*Bacillus thuringensis*) can be effective in retarding the infestation of *Spodoptera frugiperda*.

The PMC is proud to be a part of this important project.



Courtney Rumala Working on Science Project

Field Day and Tour

The PMC hosted a field day and tour on October 16, 2002. This program was designed for agency leaders, community planners, and industry decision makers who have an interest in addressing natural resource concerns with plant material solutions.

The objective was to engage attendees to interact with the presenters on how the PMC provides a vital service to landowners and local, state, and federal agencies, and to discuss program needs and opportunities.

The presentations and positive comments addressed how the Plant Materials Program has helped our customers and cooperating associates with specific needs.

Florida Nursery and Allied Trade Show (FNATS) Conference

Mary Anne Gonter, Biological Science Technician (Plants), attended the FNATS conference in Orlando, FL, September 18 – 21, 2002. Mary Anne set up and manned the PMC information booth that provides the public insight on the functions of the PMC and what the PMC has to offer.



Mary Anne Gonter Manning Information Booth

Coir Mats 'Fly' at Eglin Air Force Base

In an effort to control erosion at Eglin Air Force Base (AFB), coir (coconut fiber) mats were seeded at the PMC with *Andropogon gyrans*, *Atistida beyrichiana*, *Liatris tenuifolia*, *Panicum virgatum*, *Pityopsis graminifolia*, and *Schizachyrium scoparium*. Once the plants developed a strong root system, they were transported to Eglin AFB and placed on the critical area sites. This site will be evaluated to see how the coir mats perform in these critical areas.



Coir Mats at Eglin AFB

Native Wildflower Project With the Florida Department of Transportation (DOT)

The Florida DOT wanted to use ecotypes of native wildflowers for a beautification project and to reduce mowing. However, there are very few sources of wildflowers on the commercial market. Dr. Jeff Norcini of the University of FL, IFAS, has been working under a grant from the DOT to develop seed sources and asked the Brooksville PMC to assist in increasing the seed quantities for commercial growers.

Seed of yellowtop (*Flaveria linearis*) was collected from south, central and north Florida locations and brought to the PMC. Seed was planted in the greenhouse in cone trays. Once the plants were 6 inches in height, they were then transplanted into

production fields for seed increase. South and north ecotypes of yellowtop have displayed a completely different growth habit.

An accession of blackeyed susan (*Rudbeckia hirta*) is also being increased in a similar manner. Specialized vacuum harvesters are being developed to collect the seed. Since blackeyed susan is a biennial and yellowtop is a perennial, seed increase fields are expected to be productive for 2 or more years.



Wildflowers at DOT Roadside

They're Helping Us Again—Technology Oriented Performance Program (TOPP) Students

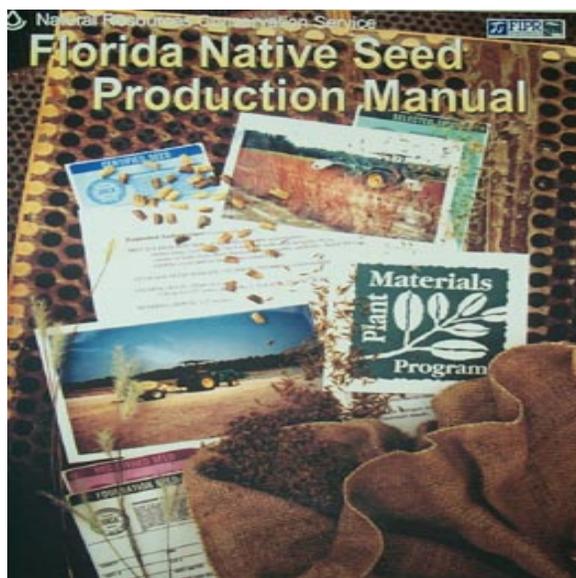
The Springstead High School's TOPP students, which is a "last chance" program designed to help at-risk students earn a high school diploma, are again working together with PMC in a hands-on program of propagating *Spartina patens*, *Panicum amarum*, and native sunflowers. Mary Anne Gonter, Biological Science Technician (Plants), is teaching students to propagate and care for these native species in the Soil Conservation Projects. Ms. Gonter visits the greenhouse several times a year, bringing plants from the PMC. Clarence Maura, PMC Manager, lectures the students on the immediate environmental needs for soil conservation.



TOPP Students Working on Project

It's Yours for the Asking—Florida Native Seed Production Manual

The Manual contains comprehensive information about growing Florida native species for seed, including state-of-the-art planting and production technology. Planting and collection equipment currently on the market is discussed, along with detailed information about seed conditioning equipment. To obtain an electronic copy of this document, visit the web site at <http://plant-materials.nrcs.usda.gov/flpmc>. To request a hard copy, call the PMC at (352) 796-9600.



Cover of Florida Native Seed Production Manual

Future Release

The blazing star, handsome (*Liatris elegans* [Walt.] Michx.) will be released this year. This hardy perennial herb has one to several long upright spikes 3 feet tall or taller, arising from a tuber (woody corm). Stems that have been damaged or grazed may produce multiple spikes. Leaves are alternate, gradually decreasing in length from the base of the stem upward. Many lavender or purple colored flowers are produced on the spikes in the fall. It is adapted to extremely coarse droughty soils similar to long leaf pine or turkey oak sandhills. These plants are grazed by deer, and the flowers are favored by butterflies and bees.



**Blazing Star, Handsome
Liatris elegans (Walt.) Michx.**

**To learn more about these or other PMC activities request the 2002 Annual Technical Report or visit our website:
Plant-Materials.nrcs.usda.gov**