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From Students to Beach Restoration Specialists

By Mary Anne Gonter

The following is a follow-up of an article published in the March 2002 edition of PMC Impact

The Pine Island Beach in Hernando County Florida is a popular beach area for the local residents to go and have some fun in the sun. The county park managers were having trouble keeping sand off the parking lot area. They contacted the Plant Materials Center (PMC) for some assistance. It just so happened that the PMC was involved in a project with Springstead High School TOPPS Students (Technology Orientated Performance Program Students). In March of 2002, PMC personnel began teaching the TOPPS students how to grow coastal dune plants from cuttings. Plants grown were *Panicum amarum*, *Helianthus debilis*, and *Spartina patens*. Once they had grown them, the students were ready to get them in the ground. The school principal arranged for these students to be bused to the park; and they were then able to plant the parking lot areas (below).



Brooksville Plant Materials Center – Partnerships at Work!

By Mimi Williams

Two of our partners, the Florida Department of Environmental Protection (DEP), Bureau of Mining and Mineral Regulation and Mosaic, LLC, of Florida, recently asked us to find a more cost effective way of incorporating woody plant materials important for wildlife habitat on mined land. For the phosphate industry alone, it is estimated that between 5,000 to 6,000 acres of land need to be restored annually. The introduction of woody species into the landscape using bare-root or containerized materials is one of the more expensive components of phosphate mineland reclamation.

To address this request, we recently began the first phase of a major three-year study to evaluate direct planting of woody whips for mineland restoration in Florida. Whips are 3 foot or so long cuttings from trees or shrubs that are between ¾ to 1 ½ inch diameter. Direct planting of dormant woody whips is a soil bioengineering technique widely used for stream bank erosion control in the Midwest and Western US. Soil bioengineering uses live plant materials to provide slope and stream bank stabilization, landscape restoration, and wildlife habitat.



This gave the PMC staff and the students a chance to show off their hard work. So now they had become coastal dune restoration specialists for this small section of local beach. The students have graduated since then but their project lives on. We just wanted to share some photos of before and after (above, right). The after photos were taken April 4, 2008. These PMC coastal releases are actually doing what they were designed to do – they have been capturing sand.

Not all woody species will root from woody whips. Research in other areas of the country has shown that the poplar, willow, and dogwood genera all have species that can root easily from dormant woody cuttings, although the success rate can vary with species or even selection within species. Even though much is known about northeastern and western species that are suited for whip planting, little is known about tropical and subtropical species, such as fetterbush, Simpson's stopper, and possumhaw, which are common to Florida.

Another issue with subtropical conditions is that true dormancy in our climate may extend for only a very short period during the year or be non-existent. Species that can root from growing season cuttings, during the summer rainy season, would offer an additional and possibly better planting window. The objective of this study is to determine the effects of dormant vs. growing season planting and landscape position relative to water table on the rooting ability and survival of selected native Florida trees and shrubs.

In addition to DEP and Mosaic, we are also partnering with the Roselake PMC in East Lansing, Michigan to determine the rooting ability of these species under controlled conditions in the greenhouse. The first dormant season planting was made in January of this year on three restored mineland sites in Polk and Hardee County. By thirty days after planting, differences in the survival of the whips were already obvious. Elderberry, Carolina willow, and swamp dogwood were some of the species with the most sprouting. Plans are to continue monitoring survival of the cuttings through 2008. The first growing season planting will be made July of this year.

Stay tuned for further results.



PMC Improvements By Janet Grabowski

The PMC received funding in fiscal year 2008 for some much needed construction activities. A new metal barn was built to house our combine and protect it from the elements (below, left). And, most crucial was the construction of a new greenhouse to replace our old fiberglass-covered one (below, right). The new greenhouse is covered with rigid plastic panels and the environmental equipment – fans, vent, heater – are completely automated.



2008 Plant Materials Available

Our newest release is **Gator Germplasm blue maidencane** (below, right). Rhizomes of Gator can be requested from FL Plant Materials Specialist, Mimi Williams at mj.williams@fl.usda.gov or (352) 338-9544.

Seeds and/or plants of the following PMC releases are also available for production purposes. These plants were selected to meet conservation needs and are recommended by USDA, NRCS for planting throughout the Florida PMC service area. Contact the PMC for additional information at (352) 796-9600.



- ◆ Floral Passion blazing star
- ◆ Miami, Stuart, and Wabasso switchgrass
- ◆ 'Flora Sun' beach sunflower
- ◆ 'Northpa' and 'Southpa' bitter panicum
- ◆ 'Sharp' and 'Flageo' marshhay cordgrass
- ◆ Morning Mist hairawn
- ◆ Citrus maidencane
- ◆ 'Florigraze' and 'Arbrook' perennial peanut
- ◆ 'Chapingo' Mexican teosinte
- ◆ Martin and St. Lucie eastern gamagrass
- ◆ Brooksville 67 and Brooksville 68 perennial peanut
- ◆ Ghost Rider purple blue-stem

Look for **Fort Cooper Germplasm splitbeard blue-stem** to be released later this year.

Look up the Brooksville, FL PMC at <http://plant-materials.nrcs.usda.gov> or <http://www.fl.nrcs.usda.gov/programs/flplantmaterials.html>

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