



# Year 2002



# Progress Report of Activities

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Jimmy Carter Plant Materials Center

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## Who We Are

The Jimmy Carter Plant Materials Center (PMC) is a branch of the United States Department of Agriculture, Natural Resources Conservation Service. It is one of 26 plant materials centers located throughout the United States. The Center is located on the Northwest corner of Americus in Southwestern Georgia and is approximately 40 miles North of Albany. Areas served include Georgia, Alabama, South Carolina, North Carolina and parts of Tennessee and Florida.

## What We Do

It is our mission to use plant materials and state-of-the-art plant science technology to solve natural resource problems and meet the objectives of environmental programs. Our program emphasizes using native plants. We develop, test and release superior adapted plants to commercial growers along with production and management technology. Our mission addresses three major objectives:

- Native Grasses for grazing lands that support sustainable agriculture
- Native plants for water quality (riparian forests, conservation buffers, filter strips, constructed wetlands, and streambanks)
- Conservation tillage (green manure, organic gardening, carbon sequestration, and winter cover)

A brief summary of year 2002 accomplishments follows. For a complete account of all activities,

Request the 2002 Technical Report of Activities at the above address.

## Americus Indiangrass Released

Since the 1980's the PMC has worked toward the release of a new indiangrass adapted to the Southeastern U.S. This new release has been tested in North and South Georgia for forage production, forage quality, as well as grazing tolerance. 'Americus' was produced from germplasm collected in Alabama and Georgia by plant material and field office staff. Since this new release is native to the Southeast, it has all the genetic characteristics needed to thrive under Southeastern soils and climactic conditions. It has potential uses in livestock operations, urban conservation, erosion control, landscaping, wildlife habitat improvement, and plant community restoration. A large native grass seed producer is growing it for increase and sale.



**Lamar Co. S&WCD Cattle Grazing Americus**

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**Trail of Tears Corn Grown at Jimmy Carter  
PMC**



**Mike Owsley PMC Manager and Jim Futch  
Tribal Representative**

### **Trail of Tears Corn and Yaupon Holly grown for Native American Tribes**

Larry Coburn, American Indian Liaison for NRCS in Georgia, requested assistance from the PMC in growing and increasing a special corn. This special line of corn dates back to the 1830's. It accompanied the Eastern Cherokee Tribes during their long and deadly journey from Georgia to Oklahoma. The Trail of Tears corn is also known as White Eagle corn. Due to the special nature of this germplasm, extra measures were employed to aid in production. The cornfield at Americus was enclosed with electric wire to prevent predation from white-tail deer. Since this line of corn shows traits not expressed in modern corn, removal of stem suckers and smut infested ears was necessary to increase seed production. In late August 750 pounds of corn was hand picked by the PMC staff then dried and stored for the Georgia Tribes of Eastern Cherokee. They will increase the PMC seed and also process some into food items according to Mr. Coburn.

The PMC also grew yaupon holly. Native Americans have used this particular line of yaupon since the 1600's for medicinal and ceremonial use. It originated in Alabama and will be distributed to other Native American tribes in the area.

### **Silvo-Pasture Study Established at PMC**

A 20-acre section of the PMC has been dedicated to the demonstration of silvo-pasture. Georgia NRCS in cooperation with Sid Brantly, regional grazing lands specialist, and Auburn University researchers has established a study area of longleaf pine, and 'Coastal' bermuda / 'Pensacola' bahiagrass. This long-term study will evaluate and demonstrate the technique of multiple land management. Yields of forage dry matter from areas of pasture/longleaf pine and areas of pasture only are being determined. Eventually the long-term goals of the study will include tree production measurements and cattle gain data.



**Yaupon Holly grown for Native American use**

One early observation has been the difficulty of establishing longleaf pine into an existing pasture of Coastal bermudagrass and Pensacola bahiagrass. Since these grasses are very competitive, bare ground areas were created before planting and post-planting herbicides were utilized to control the grass and weed competition around the young longleaf pines. These techniques helped produce a good early stand of pines.



**Iuka Eastern Gamagrass growing in Upper Coastal- Plain of Georgia**

### **Clayton County Georgia Water Authority Study**

The Jimmy Carter PMC has assisted the Clayton Co. Water Authority in the metro-Atlanta area for the last five years. The center has worked with the Authority and the U.S. Army Corps of Engineers (ACOE) on two wetland mitigation sites in a densely populated area of Clayton Co. Georgia. Field observations have been conducted on multiple plots of Dukes Pond and Scout Lake. Yearly determination of plant species composition has been recorded from each plot in each mitigation site. Standard field botany techniques for taxa identification were employed. Voucher specimens of significant plant community components are preserved at the PMC herbarium. This data will help ACOE officials determine the wetland plant community status of these mitigation study areas.



**Plant Identification and Collection in Plots**



**Hay Bale production in Silvo-Pasture Study**

### **Fort Valley State University Agricultural Showcase and Field Day**

In September 2002 Fort Valley State University sponsored a regional Agricultural Showcase at Fort Valley Georgia. The Jimmy Carter PMC conducted presentations on native grasses including eastern gamagrass. ‘Iuka’ eastern gamagrass, a new cultivar, was emphasized because of its ability to germinate in a dry seed condition. Planting dry seed eliminates many detrimental aspects of wet seed use commonly experienced with ‘Pete’ eastern gamagrass. Iuka provides a quick establishment and high quality forage in the Fort Valley area. Several producers attending the showcase expressed interest in establishing this native grass for cattle forage in the piedmont and upper coastal-plain of Georgia.



**Plant Species Composition Data from Dukes Pond**



**NRCS and ACOE Students Identify Plants in Field Exercises**

### **Jimmy Carter PMC Helps Teach Wetland Course**

The PMC staff participated in a regional Army Corps of Engineers (ACOE) Regulatory 4 wetland delineation course. The course provided instruction to NRCS and ACOE personnel. Subject matter included wetland hydrology, vegetation, soils, and wetland determinations and wetland delineation. PMC personnel covered vegetation instruction and field botany. The concepts of hydrophytic vegetation and wetland plant adaptations were explained. These adaptations included morphological, physiological, and reproductive methods. Plant species identification and plant dominance were explained with the aid of slides and field examples. Hydrophytic vegetation determinations were taught in the classroom and in field exercises. Students took this information and made delineation determinations at various field sites in the Americus area. Each student left the course with a better awareness and understanding of wetlands and wetland delineation.

### **PMC Increases Vegetative Material for Area Nurseries**

Vegetative plant material previously released from the PMC has recently been redistributed to nurseries in the Southeast. Particular emphasis has been placed on the wildlife release called ‘Big-O’ crabapple. This native small tree is highly desired as a white-tail deer food and cover source. The new nursery contacts plan to greatly increase the marketing and availability of this excellent wildlife plant.



**Big-O Crabapple increased at PMC**

## **About this Publication**

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To learn more about these or other PMC activities request the 2002 Annual Technical Report or visit our website: [Plant-Materials.nrcs.usda.gov](http://Plant-Materials.nrcs.usda.gov) or for other assistance contact Mike Owsley at [mike.owsley@gaamericu2.fsc.usda.gov](mailto:mike.owsley@gaamericu2.fsc.usda.gov) or Don Surrency at [don.surrency@gathomson.fsc.usda.gov](mailto:don.surrency@gathomson.fsc.usda.gov) Homepage is [www.ga.nrcs.usda.gov/ga/pmc](http://www.ga.nrcs.usda.gov/ga/pmc)