

# PLANT MATERIALS BRIEFS

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The latest news on plant materials is published by the USDA-Jimmy Carter Plant Materials Center, 295 Morris Drive, Americus, Georgia, Tel: 921-924-4499, Fax: 912-924-9913, Email: [mike.owsley@gaamericus2.fsc.usda.gov](mailto:mike.owsley@gaamericus2.fsc.usda.gov)

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## Sunn Hemp – A Potential Cover Crop

In 1983, the Hoolehua Hawaii Plant Materials Center and the University of Hawaii jointly released 'Tropic Sun' sunn hemp. Unlike other species in the *Crotalaria* family, 'Tropic Sun' was not found to be toxic to livestock. It is a fast growing annual legume that can produce over 5000 pounds of biomass and over 100 pounds of nitrogen per acre, in a matter of 8 to 13 weeks. It is also resistant to root-knot nematodes. In Florida, cotton did dramatically better on fields with a sunn hemp cover crop, versus the fields that has been treated with fungicides and nematicides. That's good news to producers who are looking for a way to control nematodes after methyl bromide is pulled from the market.

The problem researchers have often encountered with sunn hemp in the continental US is seed production. Seed production in the Hawaiian climate is 1500-2000 pounds per acre. Hawaii still

remains the chief source of seed for the US. When used as a cover crop, it is recommended seed be broadcast at 30 to 50 pounds per acre. With seed costs currently being over \$2 a pound, growers who want to use sunn hemp are looking for a more economical seed source. When planted at the Brooksville PMC, in Brooksville, Florida 'Tropic Sun' rarely produced seed. However, research plots in Homestead, Florida did produce good quantities of seed. 'Tropic Sun' will not produce seed at the Jimmy Carter PMC in Americus, Georgia.

Clarence Maura, PMC manager at Brooksville, believes sunn hemp has real potential for use in the south, if an economic seed source can be developed in the southern US. He is spearheading a project at the Brooksville PMC to determine at what locations sunn hemp seed can be produced in Florida. Sixteen sites are to be selected throughout Florida, to see how location, planting date and local pollinators influence seed production.

## **Northpa Stands up to Hurricane Floyd**

For the past two years, The Army Corp of Engineers has been working to revegetate a 25-mile stretch of dunes along Myrtle Beach, South Carolina. Three species were primarily used for these plantings – sea oats, coastal panicgrass and ‘Northpa’ bitter panicum. Reportedly, ‘Northpa’ had established very well, and is even beginning to crowd out the coastal panicgrass.

In September of 1999, Hurricane Floyd passed directly over these plantings. Tommy Socha, Project Director, reported that both the 1998 and the 1999 plantings worked well to keep the dunes from eroding. Two things did cause erosion to the dunes. Areas where the vegetation was destroyed by foot traffic were washed out. Some dunes were actually washed out from behind, from large volumes of run-off water coming from the highrise buildings and parking lots along the beach, and being channeled through foot paths. Tommy has been extremely pleased with ‘Northpa’s performance, and plans to use it for new coastal dune plantings in the future.

In an effort to make plant materials information more readily available to our customers and to keep up with the computer technology and the information highway with internet capability a homepage is being developed for the Jimmy Carter Plant Materials Center (PMC) located in Americus, Georgia. The PMC Homepage will provide plant technology on current projects, history, strategic plan, native plants, riparian areas,

conservation buffers, constructed wetlands, streambank stabilization, cover crops, plant releases information and commercial sources of plant materials. Other information include: outreach activities, annual reports, PMC staff, PMC state conservation, plant materials technical and advisory committee meeting, plant materials specialist report, tech notes, meeting notices, information, agenda and minutes.

The homepage will have linkages to all the states that are served by the center. The states are: Alabama, Georgia, South Carolina, North Carolina, Tennessee and North Florida. It will be linked also to the National Plant Materials Center located in Beltsville, Maryland. The Beltsville PMC will also maintain the system. The homepage should be active in February 2000.

## **Increase of Native Plants for the US Forest Service**

In the fall of 1998 and 1999, the Jimmy Carter Plant Materials Center received seed collections of native plant species from the USFS in South Carolina for increase. Seeds generated from this increase will be used to revegetate bare or disturbed areas of USFS land in South Carolina.

The first step in the project after seed collection was seed cleaning and processing. Therefore in the fall of 1998 and 1999 the PMC cleaned and processed all the native species collections. These seed were subsequently distributed to USFS officials.

Since little is known about the establishment of these native species, the PMC and the USFS decided to plant 1/2 of the seeds in the fall and the other 1/2 in the spring. Seeds planted in the fall are stratified naturally while the ones planted in the spring receive artificial stratification.

The spring planted seeds were soaked in water for 24 hours. They were then removed, drained and immediately placed into a plant cooler for five weeks at 40 degrees F. Seeds were also sprayed twice with a fungicide to prevent molding. They were removed from the cooler and planted by hand in 36" rows to a well prepared seedbed. All seeds were planted at approximately 1/4" to 1/8" depth and irrigated for optimal germination conditions.

Results from the PMC indicated better germination and establishment from the spring planted seeds. The fall planting was slow to germinate and winter weeds quickly overwhelmed the natives.

The PMC will conduct a new spring increase planting in spring 2000. Seed collected from this increase will be processed and delivered to South Carolina for revegetation projects on USFS lands.

### **Regional Conservationist (Charles Adams) Visits PMC**

Charles Adams was impressed with the operation and project at the Jimmy Carter Plant Materials Center. Highlights of the plant materials center operation was presented and discussed by Donald Surrency, plant materials team leader. A tour of PMC projects and facilities was the highlight of the visit. He was thoroughly impressed with

the current studies on native grasses, especially the eastern gamagrass and switchgrass rotational grazing demonstration.

Charles wanted the PMC to implement a three state native warm season grass demonstration as a special outreach initiative for small farmers. He also suggested that the PMC should sponsor a native warm season grass workshop in 2000 for small farmers. In addition, to provide PM linkages with the new regional structure he recommended that Donald Surrency serve on several committees such as the regional technology coordinating committee, he will also take the lead to include plant materials objectives and action items in the strategic plan.

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