PLANT MATERIALS PROGRAM

ASSISTING SMALL FARMERS

Plants Meeting the Challenge
of
Small Farmers

Jimmy Carter Plant Materials Center
Americus, Georgia

NRCS Natural Resources Conservation Service

March 2006

Plant Materials Program

This report, *Assisting Small Farmers in Alabama, Georgia, and South Carolina,* was prepared by the USDA-NRCS Plant Materials Program – Jimmy Carter Plant Materials Center. The report provides highlights of the continuing efforts made by plant materials program to assist small farmers in the service area.

Assisting Small Farmers
in
Alabama, Georgia
and South Carolina

Cover: (L-R) Mack Evans, landowner, James Tillman, State Conservationist and Steve Cleland, District Conservationist

Photo Above: L-R) Amos Jones, Landowner and Donald Surrency, Plant Materials Specialist

Plants Meeting the Challenge of Small Farmers









James E. Tillman, Sr.
State Conservationist
Chair of the State Conservationists' Plant Materials Advisory Committee

The Natural Resources Conservation Service (NRCS) provides voluntary Technical Assistance to farmers and ranchers in planning and implementing conservation systems to conserve their soil, water and other natural resources. These conservation systems frequently call for the use of specialized vegetation. NRCS developed the specialized vegetation to conserve and protect natural resources through the National Plant Materials Program (PMC's)

I applaud the Jimmy Carter Plant Materials Center's quick responses to critical and priority resource concerns and providing educational opportunities through the Small Farm Initiative. The Center has multiple projects underway to develop new plant technology relating to native warm season grasses, silvopasture and alternative crops for small farmers and to address the 2002 Farm Bill. In 2003 and 2004 six new native warm season grasses were officially released by this center for the Southeast that can benefit small farmers.

These grasses are native to Alabama, Georgia and South Carolina. 'Highlander' eastern Gamagrass, an example was released in 2003. It is a native plant of the southeast, and it can produce more biomass than any commercially available eastern gamagrass, non-native forage grasses grown in the southeast. Special native warm season grass field plantings were established in strategic regions of the state to educate small farmers about the latest technology developed by the Jimmy Carter Plant Materials Center on the selection, establishment and management of new forage. Again I applaud the Jimmy Carter Plant Materials Center for its efforts in providing informational opportunities to small farmers and ranchers.

James E. Tillman, Sr.

James Ford
State Conservationist
Tennessee

It is my pleasure to comment on the important role of the Plant Materials Program. It is an 'un-sung hero' within the Natural Resources Conservation Service. Plant Materials Centers are vital to what we do, and one of the reasons for that is because of the relationships that PMCs initiate and develop with small farmers.

Plant Materials Centers are sometimes not recognized as an effective tool for stimulating or promoting conservation to some of our customers. The objective of the program is to provide native plant technology that can help solve natural resource problems. I have discovered during my career that small limited resource farmers are like any other farmers—they are looking for the best ways to protect the land while also making a profit. PMC's help them do this, and because of that, PMC's are often the first introduction farmers have to NRCS.

Through its good work, Plant Materials stands as an important outreach tool to the small farmer. Native plants can be the cornerstone—along with the implementation of proven conservation practices—for inviting greater and more diverse participation in this Golden Age of Conservation. The way in which the plant materials program is set up is conducive to small farming.

The Plant Materials Program and small farmers have a lot in common: for instance, establishing and evaluating plants at PMCs requires patience. Similarly, small farmers, in most instances, are very patient and willing to see results over a period of time. Just as plant material managers are willing to share their successes, small farmers also share their success stories in a neighbor to neighbor fashion.

Helping one another out, working together toward a common end, and a willingness to hear how others have been successful are all traits shared by PMCs and the small farmers they reach so effectively.

Field demonstrations, plantings, and trials are conducted by plant materials specialists to promote a new or improved plant release and the technology required to establish and manage the new release. Plant material field demonstrations can positively impact the small farmers/limited resource program by providing new plant technology and improved plant varieties that will ultimately improve production, control soil erosion, and the quality of life. The plant materials centers can provide the seed and plants and new information to demonstrate the use of plants as a valuable tool for establishing Best Management Practices (BMP's), such as, vegetative buffers, grass waterways, field border, gully and streambank stabilization, conservation tillage, filterstrips, native warm season grasses for forage and wildlife habitat improvement and provide a sustainable farm program.

Small farms have unique ecosystems. The ecosystems are very rare because they are often unchanged for over 50 years. They contain small fields and hedgerows with native and natural vegetation that protect lakes and streams and provide habitat for wildlife. Small farmers usually apply less fertilizers and pesticides on their crops, resulting in improved water quality and healthier ecosystems, both on and off site. Small farms are a unique and steadily diminishing resource in most agricultural watersheds.

Donald "Don" Surrency
Plant Materials Specialist
Georgia, Alabama and South Carolina

My role as the Plant Materials Specialist (PMS) for Georgia, Alabama and South Carolina is to transfer plant technology developed by the NRCS-Plant Materials Centers (PMCs). USDA-Agricultural Research Service, Land Grant Universities, and other research institutions to the NRCS field service centers/soil conservation district, cooperating growers and nurseries, and to partnering local, state, and federal agencies.

I am responsible for transferring plant technology to the customer in many ways, including project site visits, written technical reports and planting guides, oral presentations, coordinating of professional development courses, workshops, field trips, and production of audiovisuals, such as videos and power point presentations. In addition, plant materials technology that is developed at the plant materials center is transferred to other states in the region.

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PLANT MATERIALS CENTER STAFF

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Jimmy Carter Plant Materials Center
Americus, GA

L-R Malcome Kirkland, Asst. Manager
Mike Owsley, Manager
Larry Vanzant, Bio-technician

PLANT MATERIALS PROGRAM

Reinvention of the Plant Materials program to meet today and tomorrow resource problem is necessary to be more customer responsive and customer focused. The challenge of providing timely and effective state-of-the-art plant science technology to the field office is the primary responsibility of the plant materials program. The program is responsible for developing improved plants and to transfer plant technology information. Plant Materials Centers and specialists provide a vital link in meeting Natural Resource Conservation Service (NRCS) and Conservation Districts expanding role in solving natural resource issues.

The USDA-NRCS is implementing a 'Small Farm Initiative' to specifically address small and limited resource farmer issues, and the best method to deliver the technical, financial and plant technology assistance that is needed for their survival and sustainability. The NRCS Plant Materials Program stands ready to join forces with other partners to provide the plant technology needed to address natural resource problems associated with small and limited resource farmers.

The USDA-NRCS Plant Materials Program exists to meet customer needs for cost effective solutions that address natural resource problems. The Jimmy Carter Materials Center is conducting high priority studies and developing the plant technology to expand the potential and use of native perennial warm season forage grasses, as a low-input, environmentally sustainable grazing systems.

Plant Materials Program Assists Small Farms

Farm demonstrations exist to meet customer needs for cost effective solutions that address natural resource problems. Plant material field demonstrations can positively impact the small farmer/limited resource program by providing new plant technology. Improved plant varieties will ultimately improve production, control soil erosion, and improve the quality of life. These demonstrations have given small farmers the opportunity to see first-hand the value of plant technology and how it can improve their farming system.

Native warm season grasses have the potential of producing forage for small farmers in the southeast with less commercial nitrogen (N) fertilizer in a low input system.

Native warm season grasses are a beneficial alternative to fescue pastures. Native warm-season grasses such as indiangrass, switchgrass, eastern gamagrass, and big and little bluestem are more productive and more palatable than most cool season grasses. In addition, they require little or no fertilizer and are more drought tolerant.

Many of the cool season grasses typically used in pastures provide no benefit to wildlife. Native warm season grasses provide excellent nesting cover for quail, rabbits and songbirds when managed properly. Little bluestem and switchgrass will provide good nesting cover for quail.

The demonstration farms are expected to show the potential of warm-season native grasses as an alternative source of forage in the southeast. They also show how the use of cool-season legumes interseeded into warm-season grasses will increase total forage biomass production, and be efficient, inexpensive, and a nonpolluting source of nitrogen for succeeding grasses.

The demonstrations will provide the small farmer with site specific information on the management of native grasses for production of good quality pastures and hay in a sustainable, low-input system.

Eastern gamagrass, a warm season grass, can support a herd of cattle when used with an efficient rotational grazing system.

JEROME JONES – HARLEM, GA
WILLOW OAKS FARM

Leon Brooks, (L) district conservationist and H. Jerome Jones, (R) landowner, Willow Oaks Farm

H. Jerome Jones, landowner, is using plant materials from the Jimmy Carter Plant Materials Center to improve wildlife habitat and to control soil erosion on critical slopes adjacent to the newly constructed duck pond. Native grasses such as switchgrass, indiangrass, little bluestem in additional to other non-native species will be planted to enhance quail habitat. 'Dove' Proso millet, sunflower, 'Atlantic' coastal panicgrass will be planted for dove. Food plots and conservation buffers are also planned. The assembly of plant materials for this project involved not only the Jimmy Carter PMC in Americus, but also Brooksville (FL) and Cape May (NJ) Plant Materials Centers.

JEROME JONES- HARLEM, GA
WILLOW OAKS FARM

DOVE FIELD
Donald Surrency, plant materials specialist discusses plant materials plan with H. Jerome Jones, landowner. Dove field has been planted with 'Dove Proso' Millet and 'Atlantic' Coastal Panicgrass.

DUCK POND
Critical areas around pond such as, edges, roads, steep banks, etc. will be planted to native warm season grasses developed by the plant materials program.

Surrency reviews plant materials (seed) allocations with Mr. Jones that will be used for critical area stabilization and wildlife habitat improvement.

Ervin Hart, SCT for the NRCS Augusta Service Center reviews conservation plan. The plan provides the latest plant technology developed by the plant materials program as it pertains to planting guides, and sources of plant materials.

RETHA LOGAN- SNELLVILLE, GA

Donald Surrency (R) plant materials specialist explains plant materials planting plan to Retha Logan (L).

Retha Logan, a small urban farmer in DeKalb County has a small herd of Alpacas. Alpacas are non traditional animals that are rare in Georgia. Alpacas, originally from the Andean mountains, are captivating, mystical creatures that seem to sooth one's soul with their beauty. Alpacas are the rarest of all domestic livestock, and their fiber is used to create valuable, durable, alpaca products that can be worn on the body or displayed in the home. Their soft, crimpy fleece is taken once a year with no harm to the alpaca. The fiber is processed into valuable retail products, ranging from socks to coats and teddy bears to rugs. It is documented that the hypoallergenic fiber never wears out or stains, is lightweight and incredibly warm. The fiber is warmer, lighter and stronger than wool. Alpaca farming allows one to experience a more relaxed lifestyle. This type of farming is perfect for Retha because she is self employed as a computer contractor. They can be raised on small acreage, such as, the 5.5 acres Retha has developed.

RETHA LOGAN – SNELLVILLE, GA

Even though Retha grew up on a livestock (cattle) farm in West Georgia near LaGrange, Georgia, she needed professional help such as forages for grazing, animal health, fencing, watering system, and resource concerns, such as, water quality.

She contacted the USDA-Natural Resources Conservation Service (NRCS) office in Lawrenceville and requested assistance to address the water quality concern and information on fencing and water system.

Ray Rozier and Jeremy Means of NRCS explained the programs provided under the 2002 Farm Bill and encouraged her to apply for assistance in the Environmental Quality Incentive Program (EQIP). She met the program requirements and was approved. She received technical assistance to complete the conservation plan which identified the practices needed to address the resource concerns and the fencing needed to build the paddocks for the rotational grazing system, watering system and to plant adapted forages for grazing. The EQIP program also provided cost-share assistance (50%) to offset the cost of applying the practices.

To address the forage concerns for the grazing areas, the NRCS field office representative requested assistance from Donald Surrency, plant materials specialist, for recommendations. He provided plant information for grazing and stabilization. In addition, the plant materials program will provide seed to establish a demonstration planting of native grasses for grazing. He also provided commercial sources of endophyte free fescue.

RETHA LOGAN – SNELLVILLE, GA

Alpaca Herd

Alpacas are the rarest of all domestic livestock.
Retha's favorite alpaca.

RETHA LOGAN – SNELLVILLE, GA

Alpaca can be grown on small acreage. The paddocks are about ¼ acre in size. The paddocks are rotated. The problem is too much shade for most adapted forages.

Donald Surrency, plant materials specialist checks switchgrass seed provided by the Jimmy Carter Plant Materials Program.

RETHA LOGAN- SNELLVILLE, GA

Retha shows some hats that were made from Alpaca fiber. The fiber is warmer, lighter and stronger than wool.

Alpacas are the rarest of all domestic livestock, and their fiber is used to create valuable, durable, alpaca products that can be worn on the body or displayed in the home. Their soft, crimpy fleece is taken once a year with no harm to the alpaca.

The fiber is processed into valuable retail products, ranging from socks to coats and teddy bears to rugs. It is documented that the hypoallergenic fiber never wears out or stains, is lightweight and incredibly warm.

OKEETEE PLANTATION - RIDGELAND, SC

OKEETEE PLANTATION - RIDGELAND, SC

REV. CARL A. GLENN & JOHN GLENN FARM – CHESTER, SC

Planted Native Grasses

Switchgrass, Kleingrass planted in 05

Switchgrass planted in 05

BILL FREEMAN FARM- NASHVILLE, NC

Planting in old cotton stubble in May 04 with Truax drill

BILL FREEMAN FARM- NASHVILLE, NC

Big bluestem in fluffy seed box

Switchgrass

BILL FREEMAN FARM- NASHVILLE, NC

Indiangrass

Big Bluestem and Switchgrass

BILL FREEMAN FARM- NASHVILLE, NC

Switchgrass

Big Bluestem one year later – May 05

BILL FREEMAN FARM- NASHVILLE, NC

Truax Drill and Donahoe Trailer combination. Makes for ease of transport as well as loading and unloading.

Truax Drill and Donahoe Trailer combination. Makes for ease of transport as well as loading and unloading.

Truax Drill and Donahoe Trailer combination. Makes for ease of transport as well as loading and unloading.

NATIVE AMERICANS

The USDA-NRCS Jimmy Carter Plant Materials Center at Americus, Georgia is increasing the "Trail of Tears" corn seed stock. The Center will attempt to help reintroduce this very rare and special crop to the descendants of the Cherokee People that once covered the North Georgia Mountains. The corn is being grown in a protected and irrigated area at the Plant Materials Center so that viable seed stock can be produced for future use. The special seed will provide Tribal Members and others with opportunities to feed their families with the corn. This special line of corn dates back to the 1830's. It accompanied the Eastern Cherokee Tribes known as White Eagle corn. Some of the original corn seed carried on the "Trail of Tears" survived! Some of these kernels have been producing small amounts of crops for the past 163 years! 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.

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.

Trail of Tears Corn Grown at Jimmy Carter Plant Materials Center, Americus, GA

Mike Owsley, PMC Manager and Jim Futch Tribal Representative

NATIVE AMERICANS

Trail of Tears Corn at the Jimmy Carter PMC

Yaupon Holly grown for Native American use

MACK EVANS – JAKIN, GA
Silvopasture Demonstration

Mack Evans Silvopasture in Early County, Georgia

Although some form of silvopasture management has been practiced for centuries, silvopasture as an agroforestry practice is specifically designed and managed for the production of trees, tree products, forage and livestock. Silvopasture results when forage crops are deliberately introduced or enhanced in a timber production system, or timber crops are deliberately introduced or enhanced in a forage production system. As a silvopasture, timber and pasture are managed as a single integrated system. Silvopasture combines trees with forage and livestock production. The trees are managed for high-value saw logs and at the same time provide shade and shelter for livestock and forage.

The silvopasture methodology offers diversity for Small Farmers by providing income opportunities from timber products, forages, and livestock. This field consists of pecan trees, forages, and livestock. The grazing area consists of Pensacola bahiagrass and crimson clover. From a conservation point of view, the practice not only impacts water quality by reducing soil erosion, but it addresses nutrient management and carbon sequestration, and other resource concerns.

MACK EVANS – JAKIN, GA

Benefits:

- Improves soil health by sustaining a long-term cover on the land.
- Eliminates soil erosion
- Trees planted under CRP and managed for silvopasture will result in long-term conservation benefits
- Grazing can control competition from invasive species without the use of herbicides
- Perennial deep rooted plants such as, native warm season grasses can sequester N & P
- Improves wildlife habitat
- Integrating trees, forages, and livestock creates a land management system to produce multiple products for market.
    - Timber
    - Livestock
    - Hay
    - Grazing
    - Pine straw
    - Harvest gain
    - Carbon Sequestration
    - Nutrient Management

MACK EVANS – JAKIN, GA

Planting Native Warm Season Grasses

WILLIE PAYNE – BUTLER, GA

Willie Payne in Taylor County, GA planted eastern gamagrass

Ray Jones, DC and Willie Payne discuss Eastern Gamagrass Planting in Taylor County

KENNEDY FARM – COBBTOWN, GA

The Natural Resources Conservation Service, Plant Materials Program, has worked with the Kennedy's to use plant technology to more efficiently manage their farm. The demonstration practices include rotational grazing, pasture and nutrient management, and an irrigation system. Approximately, 60 acres are established with 'Cherokee' clover, 'Georgia 5' fescue, and arrowleaf clover for cool season grazing. Another 20 acres are planted in eastern gamagrass and two acres planted with perennial peanuts. A solar-powered watering system will be used as an alternative water supply for the cattle. To demonstrate rotational grazing on their pastures, electric fencing was installed to create smaller fields, or paddocks, within larger pastures.

The Fort Valley State University assisted in these efforts providing training on by demonstrating good animal health and nutrition to small farmers by inoculating to prevent diseases, worming, using implants, and recommending supplemental feed requirements based on the (GLA) grazing land nutritional balancer.

KENNEDY FARM – COBBTOWN, GA

Small Farmers tour eastern gamagrass project at PMC.

Kennedy's from Tattnall County observes eastern gamagrass

KENNEDY FARM – COBBTOWN, GA

Alternative Forage Crop for Small Farms

Perennial Peanut – Forage – A warm season legume for hay and grazing

'Florigraze; rhizome peanut (*Arachis glabrata Benth)* is a warm-season perennial forage legume, which has the same value as hay and a grazing crop. Florigraze can be grown alone or in a mixture with perennial summer grasses.

A 20-acre field of perennial peanut was planted this year on the Kennedy Farm. It will improve the farm's hay quality, will be grazed by goats, beef cattle, and horses. The peanuts are a source of plant materials, which will expand his acreage capacities so the owner can sell to other producers.

Planting Perennial Peanut Sprigs – Kennedy Farm –Tattnall Co., GA

KENNEDY FARM – COBBTOWN, GA

Developing Sporting Leases for Small Farms

On most small farms small fields with hedgerows, native vegetation, and hardwoods stands that have been undisturbed for several decades. These areas make ideal wildlife habitat and provide the opportunity for small farms to obtain supplemental income from wildlife hunting agreements.

KENNEDY FARM – COBBTOWN, GA

Cover Crops for Small Farms

Cover crops play an integral role to improve soil fertility and winter grazing on small farms.

Cherokee Clover & rye planted as a cover crop for winter grazing

Planting cover crops at the Kennedy Farm (Tattnall County, GA) into existing warm season pastures, such as, bahiagrass to extend grazing program with no-till drill. Amclo arrowleaf clover developed and released at the Jimmy Carter Plant Materials Center is a good cover cool season legume for winter grazing on small farms.

KENNEDY FARM – COBBTOWN, GA

Partnering with Jimmy Carter Plant Materials Center

Kennedy's cattle grazing eastern gamagrass rotational grazing project at PMC.

KENNEDY FARM – COBBTOWN, GA

During the last weekend of November of each year the Kennedy's sponsor a two-day trail ride along the Ogeechee River. The riders consist of family and friends. Last year about 500 people participated in the event, which people from as far away as California, Washington, D.C., and New York.

TOM AIKEN – BARNESVILLE, GA

Christmas trees and other orchard crops are traditionally planted with little or no thought given to soil erosion and weed control. It is essential that weed growth around young seedlings be controlled to prevent deformity of lower limbs and to eliminate competition for water and nutrients. This is usually done by mowing and through the use of herbicides which is expensive, time consuming, leads to soil erosion, and could possibly be harmful to the environment.

Producers need economically and environmentally sound recommendations on cover crops that will reduce soil erosion, undesirable weed growth and the use of herbicides while not having a negative impact on growth and/or yield. Therefore, this study on Piedmont soils of Lamar Co., Georgia will determine effective ground covers to control erosion, inhibit undesirable weed growth, reduce the use of herbicide and to promote the growth of Christmas trees and other orchard type crops.

Most of the cultivars and selections of this study are well documented for ground cover, conservation tillage, forage production, and other uses. However, their potential

as a cover crop for Christmas tree orchards in Piedmont Georgia is relatively unknown. This study will attempt to determine the most effective ground covers for these situations.

TOM AIKEN – BARNESVILLE, GA

TREATMENTS:

COOL-SEASON COVER CROPS

1. Cherokee Red Clover
2. AU Robin Crimson Clover
3. Button Clover
4. AU-Sunrise Crimson Clover
5. GA-5 or GA-Jesup Fescue
6. Subterranean Clover
7. Virginia Wildrye
8. Ladino Clover

WARM-SEASON COVER CROPS

1. Brunswickgrass – Crimson Clover or Red Clover Overseeded in the Fall of 2000
2. Tropic Lalo Paspalum
3. Kobe Lespedeza
4. Buffalograss
5. Perennial Peanuts
6. Marshhay Cordgrass

MATERIALS & METHODS: The trial began with the planting of various cover crops in one and two year old Christmas tree plantations. Both summer and winter cover crops were planted. Legume and non-legume crops were used.

- Crops were replicated three times with control plots showing what is currently being done.
- Soil types were identified.
- Growth measurements were taken on trees in the plots.
- Weather records were kept.

TOM AIKEN – BARNESVILLE, GA

RESULTS: Cherokee Red Clover (Trifolium pratense) persisted, provided good ground cover during the cool season and the stand lasted later into the spring.

Brunswickgrass (Paspalum nicorae) provided good cover during the warm season. It can tolerate close mowing in Christmas tree production areas.

Crimson Clover (Trifolium incarnatum) provided good cover during the cool season period. The stand did not persist as long as Cherokee Red Clover during the late Spring.

IMPACTS:

1. Reduce soil erosion
2. Reduce sedimentation in lakes and streams
3. Improve water quality
4. Improve air quality
5. Improve soil moisture
6. Reduce the use of herbicide
7. Saves energy/fuel because of reduction in mowing frequency
8. Cover crops reduces ground water contamination

TOM AIKEN – BARNESVILLE, GA

Evaluating Cover Crop Planting for Erosion Control for Christmas Tree Production Fields.

Crimson Clover cover crop planting for Leyland Cypress Christmas Tree Production.

Evaluating Brunswickgrass as a warm season cover crop.

Crimson clover cover crop for erosion control.

AMOS JONES – MADISON, GA

Mr. Donald Surrency, Plant Materials Specialist of the Plant Materials Center, visited with Mr. Amos Jones on his farm in Morgan County to plant 'Iuka' Eastern Gamagrass.

Mr. Jones was so impressed after hearing results of studies of the heat tolerance and weight gain within the state that he inquired about planting a Native warm season grass. After several conversations with Mr. Jones, the Field Office contacted Donald Surrency to arrange for Mr. Jones to purchase some seed. Don informed Mr. Jones that he could provide the seed for use in a demonstration plot for the Small Farmer Initiative Program. Around 24 pounds of 'Iuka' Eastern Gamagrass seed was donated from the Jimmy Carter Plant Materials Center. The seed was planted with a John Deere Corn Planter (B8-24X), and placement was approximately 1 inch deep with 4 seeds per linear foot per row. The recommended rate was 10 pounds of seed per acre.

Mr. Jones fenced off a 1.5 acre field before planting the 'Iuka' Eastern Gamagrass to exclude his beef cattle herd while establishing the grass. Once the stand has established, the first grazing will be lightly grazed, and next season full grazing will take place. Mr. Jones stated, "I will plant additional acres of 'Iuka' Eastern Gamagrass in the near future if all goes well with the grazing."

(L-R) Amos Jones of Morgan County and Donald Surrency prepare seed hopper for planting of 'Iuka' Eastern Gamagrass.

Mr. Jones plants eastern gamagrass.

SMALL FARMER INITIATIVE – ALABAMA

Using Native Grasses for Cut Flower Arrangements – Andrew Williams

Rob Dickey – Jones Urban Farms Representative observes/evaluates harvest stage of Sunflower plant

Ms. Ham - Tuskegee University (Alabama Representative observes and evaluates site of Cosmos Flowers growing in conjunction with vegetative crops (inventive/creative method of double cropping.

SMALL FARMER INITIATIVE – ALABAMA

Mr. Bill Finely – (left hand corner) discusses the production of flowers provided by local small farmers to customer at Urban market.

Students participate in Urban/Rural Floral Production Training Session.

Local high school student observes starter tomato and flower plants at high school green house.

DAVID PIKE, SR. – LAKE PARK, GA
Lowndes County

L-R Hal Simpson, District Conservationist, David Pike, Sr., landowner; Donald Surrency, plant materials specialist observes Alamo switchgrass planting. 'Alamo' switchgrass planted May 30, 2005 for grazing land/pasture. The germination was very good, vigor and growth in 3 months.

In 2003 David Pike, Sr. contacted Donald Surrency about native warm season grasses. He wanted to know just about everything, such as, planting recommendations, adapted varieties, management requirement, where to obtain seed, etc. etc. He had downloaded information on native grasses from the Jimmy Carter PMC website. He visited the Jimmy Carter Plant Materials Center to observe native grass studies and to get more information. He also attended the Annual Native Grass Field Day in an attempt to gain all of the information currently available on native grasses.

In 2003, he agreed to participate in a native grass field planting/demonstration on his farm. A complete recipe/planting information was provided by the plant materials specialist. In addition, native grass seed was provided for the field demonstration. He planted Alamo switchgrass for wildlife habitat improvement. The planting was a great success. In 2005, he talked about using other native grasses in a mix for forage/grazing and critical area stabilization on a site next to his pond. The planting consisted of Alamo and Cave-in-rock switchgrass. It was also successful.

David Pike, Sr. – Lake Park, GA
Lowndes County

In 2005, he requested additional information on prescribed burning native grasses, and wildlife habitat improvement areas; again, he attended the annual prescribed burning demonstration at the Jimmy Carter Plant Materials Center.

The prescribed burn was also successful and other native vegetation, such as, partridge pea, broom sedge, sumac, blackberry patches, native lespedeza, wild grape, hypericum, indiangrass, wax myrtle, just to name a few. He also planted Dove Proso millet a released variety developed by the Jimmy Carter Plant Materials Center. Dove Proso was planted in food plots.

In 2006, David plans to begin rotational grazing the switchgrass and plant other native grasses such as, eastern gamagrass for turkey. A great plant materials native grass success story and another satisfied customer.

David Pike, Sr. – Lake Park, GA
Lowndes County

David Pike, Sr. planted 'Alamo' switchgrass at the rate of 1.5 pound/acre in 2004 for wildlife habitat improvement. (Quail)

Prescribed burning and the elimination of undesirable shrubs competition is creating a good mix of natives to volunteer as understory vegetation in the longleaf pine stand.

NATIVE GRASS DRILLS

Planting with a no-till drill designed for native warm season grass seed is highly recommended. Do not drill seed any deeper than ¼ inch? In fact, as much as 30 percent of the seed should be obvious on top of the planting furrow.

Drilling – For even grass distribution and a continuous, solid stand, native warm season grass planted for haying or grazing should be planted with a drill. When drilling bluestems or indiangrass, a drill with a specialized seed box containing "picker wheels" is necessary or the fluffy seed of these grasses lodge in the seed chute. These drills often are available for use through state wildlife agencies, soil conservation districts, the Natural Resources Conservation Service and some local chapters of Quail Unlimited. Switchgrass can be planted with a conventional drill. Any drill, however, must be calibrated before planting. Eastern gamagrass is usually planted with a corn planter in rows 18-24 inches apart, but some producers like to plant rows only 12 inches apart to reduce stool size and make stems more upright so haying is easier.

NATIVE GRASS DRILLS

Manually Operated Native Grass Seeder

Seeder used to plant switchgrass in a small steep area

NATIVE GRASS Conference for Small Farmers and Universities

Sponsored by
USDA-NRCS Jimmy Carter Plant Materials Center
USDA-Risk Management Agency
Fort Valley State University, College of Agriculture, Home Economics and Allied Programs

Presenters - Exhibitors - Posters - Latest Native Grass

September 7-8, 2005

Jimmy Carter Plant Materials Center
Americus, Georgia

NRCS Natural Resources Conservation Service

SINCE 1895

Fort Valley State University
A State and Land-Grant Institution
University System of Georgia

Risk Management RMA For The 21st Century


REGISTRATION

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PLANT MATERIALS TOURS FOR SMALL FARMERS

Donald Surrency Explains Study at Wildlife Field Day

'Americus' Indiangrass, new native plant release is explained to tour participants.

PLANT MATERIALS TOURS FOR SMALL FARMERS

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PARTNERSHIPS

FORT VALLEY STATE UNIVERSITY

Mark Latimore, PhD, Professor

Dr. Mark Latimore, PhD, has been a partner with the Plant Materials Program in Georgia for many years. He has worked diligently with the plant materials specialist to evaluate coastal plants for dune stabilization. In 1990 'Flageo' marshhay cordgrass (*Spartina patens*) was jointly released by the Fort Valley State University, College of Agriculture, Home Economics and Allied Programs and the Jimmy Carter Plant Materials Center. 'Flageo' is the only plant released with an 1890 University in the Plant Materials Program.

He was involved with the grass hedge projects, cover crops for conservation tillage, plants for constructed wetlands and native warm season grasses. He was involved in the Plant Materials Small Farm Expo held at the Kennedy Farm in 2001. In 2004, Dr. Latimore obtained SARE funds to purchase native grass seed for demonstration plantings on small farms in Georgia. Through his efforts and support several publications have been cooperatively developed and printed to transfer the latest plant technology to small farmers.

Dr. Latimore serves as a facilitator during a plant materials tour.

'Iuka' Eastern Gamagrass growing on the research station at Fort Valley State University. Dr. Latimore is conducting research on nutrient uptake (N&P) potential by 'IUKA' eastern gamagrass from applied chicken litter.

PARTNERSHIPS

AUBURN UNIVERSITY

NRCS Plant Materials Partners with SARE Project

Dr. Mary Goodman with the Auburn University Department of Agronomy and Soils was awarded a Sustainable Agriculture Research and Education (SARE) grant. The project, entitled "Understanding Plant-Soil-Livestock Interactions: A Key to Enhanced Sustainability in Southern-Pine Silvopasture Systems" is designed to produce data that will help decision makers better understand the ecological interactions which are the foundation of sustainability in Southern-pine silvopasture systems.

Dr. Goodman is partnering with the Jimmy Carter Plant Materials Center and Mack Evans Farm to include native warm season grasses in silvopasture systems as an alternative for small farmers.

Research will focus on how changes over time in the plant community structure of grazed silvopasture modify soil health or the capacity of the soil to function. The duration of the project is three years, 2005-2008.

PARTNERSHIPS

AUBURN UNIVERSITY

Mack Evans, Silvo-Pasture Demonstration Project, Early County, GA (L-R) Malcome Kirkland, Asst. PMC manager; Donald Surrency, Plant Materials Specialist, Mary Goodman, PhD, Auburn University, Mack Evans, farmer.

The silvopasture system in the background consists of long leaf pine about 12 years old and understory vegetation of Pensacola bahia grass and crimson clover. The bahiagrass and crimson clover provides good quality grazing for his cattle. This concept provides an alternative system to small farmers by providing forage for hay or grazing while the trees are still growing.

PARTNERSHIPS

AUBURN UNIVERSITY

Truax Drill – Dr. Goodman provided the drill for native warm season grass planting on Mack Evans farm.

Mack Evans uses Truax drill to plant native warm-season grasses.

PARTNERSHIPS

TUSKEGEE UNIVERSITY

Grazing Preference of Animals

Dr. Errol Rhoden, Professor, at Tuskegee University has partnered wit the NRCS Plant Materials Program for many years. He was involved in the National Grass Hedge project in the 80's. Later he obtained a collection of plant materials to establish plant ID plots for training undergraduates and graduate students at Tuskegee University. He conducted a greenhouse study on root development of Vetiver grass in several Alabama soils.

Presently he is involved in native grasses for forage, conservation buffers and grazing preference of animals to perennial peanuts hay, eastern gamagrass and coastal Bermuda grass. He is working with the plant materials specialist (Donald Surrency) to reach small farmers in Alabama.

He is a long time member of Jimmy Carter Plant Materials Center's Technical Committee.

PARTNERSHIPS

TUSKEGEE UNIVERSITY
Errol Rhoden, PhD, Professor

Conducting Plot Work

Eastern gamagrass study conducted in greenhouse at Tuskegee University by Dr. Errol Rhoden.

Dr. Errol Rhoden, Prof., Tuskegee University, verifying seed.

PARTNERSHIPS

ALABAMA A&M UNIVERSITY
Normal, AL

'IUKA' eastern gamagrass grazing trial planted on Winfred Thomas Agricultural Research Station for sheep.

IUKA' eastern gamagrass planting information was provided by the plant materials specialist in a continued effort to assist 1890 Universities with the latest plant technology. Approximately 20 acres were planted in 2000 for research and as a field planting to gather information on adaptation and performance in the Tennessee Valley Area of Alabama. Information gathered is incorporated in NRCS field office technical guides (FOTG) for Alabama. Alabama A&M University will use the plant technology to transfer to small farmers that are interested in planting native grasses.

PARTNERSHIPS

FLORIDA A&M UNIVERSITY
Tallahassee, FL

Oghenokome.Onokpise, PhD is coordinator for Agronomy and Forestry Program/CESTA Division at Florida A&M University in Tallahassee, Florida. He is a member of the Brooksville Florida Plant Materials Center's Technical Committee for many years. He works very closely with the PMC to determine needs and priorities for Florida. He is conducting a study on using native grasses for the biological control of invasive species. One of the primary invasive plants his research is focused on is cogon grass. Future invasive species research will extend to the Jimmy Carter Plant Materials Center in Georgia.

About this publication

Authors:
USDA Natural Resources Conservation Service
Donald Surrency, Plant Materials Specialist
Jimmy Carter Plant Materials Center, Americus, GA
Charles M. Owsley, Manager, Plant Materials Center
Malcome Kirkland, Asst. Plant Materials Center Manager

We would like to thanks the following people for their review of this booklet:
Mike Owsley, Manager, Jimmy Carter PMC, Americus, GA
Mary Ann McQuinn, Public Affairs Specialist, Athens, GA
Mark Latimore, PhD, Professor, College of Agriculture, Home Economics, Allied Programs, Fort Valley State University, Fort Valley, GA

Photography:
Donald Surrency, Plant Materials Specialist, Thomson, GA
Charles M. Owsley, Manager, Jimmy Carter PMC, Americus, GA
David Findley, Grazing Land Specialist, Columbia, SC
Terry Best, District Conservationist, Nashville, NC
Ray Jones, District Conservationist, Byron, GA
Dennis Brooks, District Conservationist, Madison, GA
Ray Rozier, Soil Conservationist, McDonough, GA
Andrew Williams, Outreach Liaison, Auburn, AL
Steve Cleland, District Conservationist, Blakely, GA
Will Taylor, Area Resource Conservationist, Griffin, GA
Ervin Hart, Soil Conservation Technician, Thomson, GA
Larry Coburn, Soil Conservation Technician, Greensboro, GA
Errol Rhoden, Professor, College of Agricultural & Environmental Sciences, Tuskegee University, Tuskegee, AL

Printing by:
Fort Valley State University

WHERE TO GET HELP: For more information about plant materials, contact Donald Surrency, Plant Materials Specialist, Thomson, Georgia, 706-595-1339. E-mail don.surrency@ga.usda.gov. Mike Owsley, Jimmy Carter PMC, Americus, Georgia, 229-924-4499. E-mail mike.owsley@ga.usda.gov. or log on to the Jimmy Carter Plant Materials Center website at www.ga.nrcs.usda.gov/technical/pmc/pmc.html.

NRCS Natural Resources Conservation Service

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Sustainable Agriculture Research & Education Program

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