



March 2004

Wildlife Management in Macon County

by Shannon Weaver, Assistant State Conservationist for Field Operations, USDA-NRCS, Auburn, AL

Jane Kourkoulis owns two tracts of land in Macon County near Warrior Stand. The primary objective for both tracts is quail and turkey management, with timber production as another. Jane's brother, Andy Hornsby, manages the land with the help of forestry consultants. Mr. Hornsby sought NRCS technical assistance to develop a conservation plan to meet the landowner's objectives. The conservation plan

emphasized wildlife management. NRCS explained the focus of wildlife management as conservation rather than preservation. Conservation means wise use of the resources available. NRCS identified several practices that would help the landowner meet her identified goals. Suggested practices included site preparation (kudzu was a major problem), Longleaf pine planting, and wildlife

habitat upland management. In strategic locations, openings, hedgerows, and strip-disking were planned. Prescribed burning was also planned as an important component in the management of this land for wildlife habitat. NRCS explained to Ms. Kourkoulis the benefits of the Wildlife Habitat Incentives Program (WHIP). WHIP is a voluntary program that encourages creation of high quality wildlife habitats that support wildlife populations. Ms. Kourkoulis applied for financial assistance through the WHIP program in 1998. Funds were limited and her application was not funded. She applied again in 1999, and was approved for funding. Longleaf pine trees were planted in 2000, but because of drought, the trees died. They were re-planted in 2002.



Land manager Andy Hornsby; NRCS employee Zona Beaty; Gene Cook, a member of the Bob Cat Flats Quail Club; and Stan Stewart, wildlife biologist with Alabama Game and Fish Division; talk about the conservation plan for the land.

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Calendar of Events

- March 23-24** - Alabama Soil Survey Conference, Tuscaloosa, AL
- March 24** - State Committee Meeting/ Executive Planning Committee Meeting, Montgomery, AL
- March 24** - One-day Grazing School, Tennessee Valley Experiment Station, Belle Mina, AL
- March 25** - One-day Grazing School, Ashville, AL
- May 24-28** - ARC-GIS Training, Auburn University, AL
- June 4** - Alabama Chapter of Soil and Water Conservation Society Annual Meeting, Grand National, Opelika, AL
- June 7-9** - 26th Annual Conservation Tillage Conference for Sustainable Agriculture, Raleigh, NC

For more information, contact the NRCS State Office at 334-887-4535.

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Riparian Forest Buffers are *Working* in Lauderdale County

By Russell Harper, District Conservationist, USDA-NRCS

The Cypress Creek Buffer Initiative in Lauderdale County is a prime example of the effectiveness of interagency partnerships working for the good of the people and the natural resources of Alabama. The Cypress Creek watershed is 54 percent agricultural and includes extensive beef production. The City of Florence relies on Cypress Creek for one of its two main sources of water. Livestock with access to Cypress Creek upstream of the city utility's intake contribute to high raw fecal coliform levels in the water supply, particularly during drought.

In an attempt to protect this vital water source for Florence, riparian forest buffers are being used.

The riparian forest buffer is defined as an area of trees and/or shrubs located adjacent to streams, lakes, ponds, and wetlands.

The purpose of a riparian buffer is to reduce excess amounts of sediment, nutrients, pesticides, and other materials in surface runoff and to reduce nutrients and other pollutants in shallow subsurface water flow.

How Riparian Buffers Work

1. Provide contact time for the buffering process to occur.

Riparian forest buffers are divided into three zones to allow contact time for the buffering process to occur. Zone 1 is an undisturbed forest where maturing trees provide a stable ecosystem adjacent to the water's edge and help maintain lower water temperature vital to fish habitat. Zone 2 is a managed forest that begins at the edge of Zone 1 and provides contact time for buffering process to occur. Zone 3, a runoff control zone planted to grass, is only necessary when severe erosion problems occur. If necessary,

Zone 3 begins at the edge of Zone 2 and extends horizontally in the direction of the water flow. These three zones reduce or buffer the stream energies during high flows or floods.

2. Sequesters nutrients, organic matter, pesticides, sediment, and other pollutants.

The most important role of vegetation is uptake and long-term storage of nutrients in woody material. Periodic harvesting is necessary in Zone 2 to remove nutrients sequestered in tree stems and branches and to maintain nutrient uptake through vigorous tree growth.

3. Provide sediment filtering and nutrient uptake.

Riparian forest buffers of sufficient width intercept sediment, nutrients, pesticides, and other materials in surface runoff and reduce nutrients and other pollutants in shallow subsurface water flow. Sediment is probably the most common and most easily recognized of the nonpoint source pollutants filtered by the buffer. Also by dispersing flood waters and slowing down flowing water, riparian buffers permits sediment to be deposited in a natural way that, over time, allows alluvial valleys and flood plains to develop.

4. Provide space to convert concentrated flow to uniform flow.

A third zone is established if periodic and excessive water flows, erosion, and sediment from upslope fields or tracts are anticipated. Zone 3 generally consists of herbaceous plants and grasses, and, if needed, a diversion or a terrace.

According to a nine-year study by the Agricultural Research Service in Tifton, GA., riparian buffers retained or removed 60 percent of the nitrogen and 65 percent of the phosphorus that entered it from an adjacent site.

When establishing a riparian forest buffer under the Conservation Reserve Program (CRP), specific zone polices guide the minimum width and maximum width of each zone.

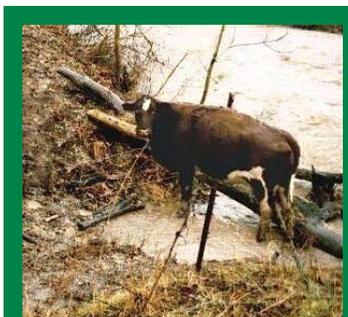
For more information on riparian forest buffers check out the following web sites:

<http://www.unl.edu/nac/riparian.html>

http://www.na.fs.fed.us/spfo/pubs/n_resource_buffer/cover.htm

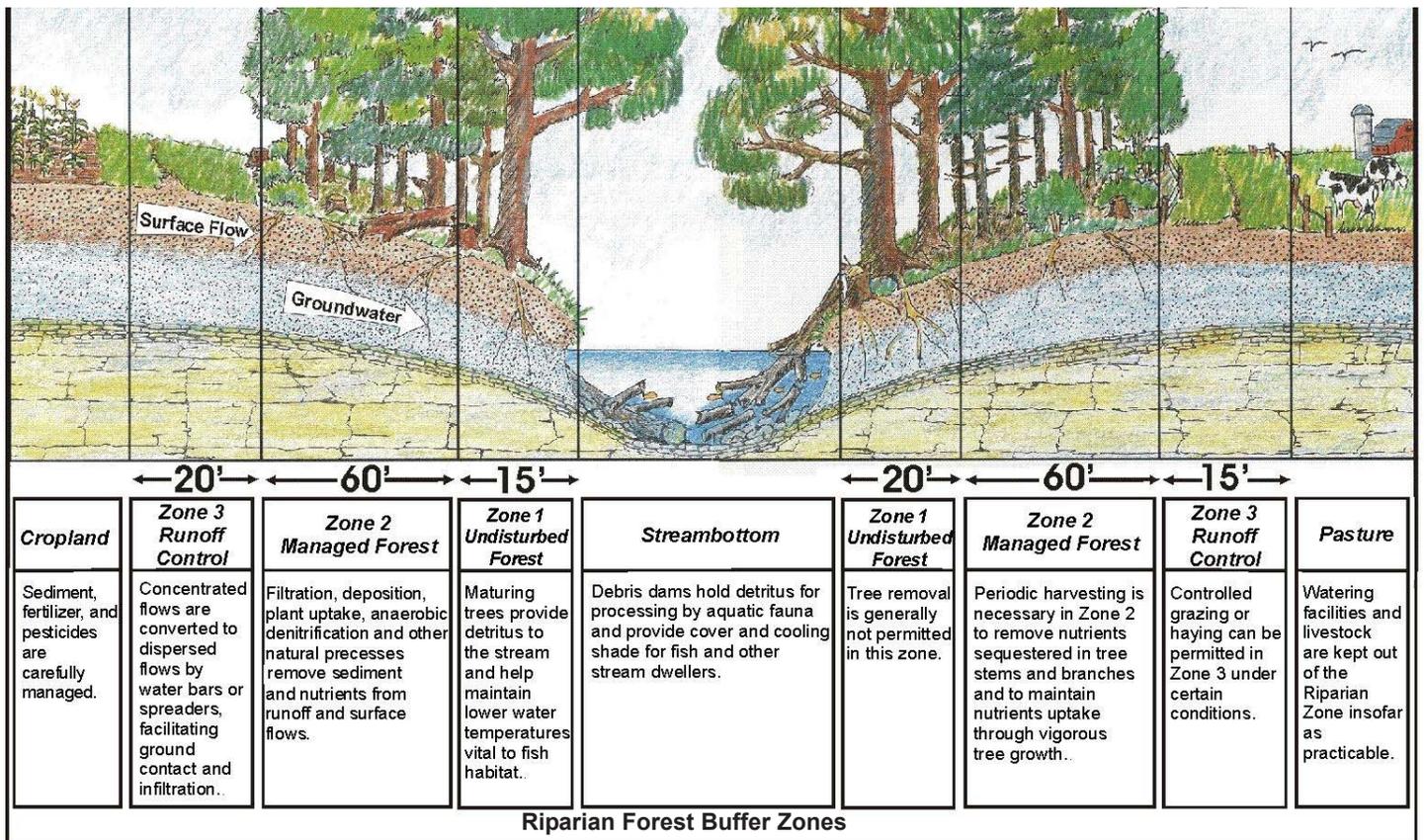


Riparian forest buffer planted on bottom fields protect water quality.



Fences will exclude livestock from Cypress Creek.

(Graphic of zones on page 3)



(continued from page 1)

Many other practices were installed in 2002, including fire lanes, strip-disking, and prescribed burning.

Ms. Kourkoulis bought a second tract of non-merchantable timber, initially as an investment. After the trees were cut for salvage, she began to plan for wildlife management. Again, NRCS developed a conservation plan on the second tract of land, with the landowner's objectives in mind. Two hundred acres are managed for quail habitat. Half of this acreage has undergone site preparation and planted in Longleaf pine.

The other half of this

acreage is managed with strip-disking, fire, and partridge pea plantings. Ms. Kourkoulis again received assistance through WHIP to assist her in implementing these practices.

Jeff Thurmond, NRCS Wildlife Biologist, says, "Most wildlife species have the potential to dramatically increase their population. However, this growth usually is limited by one or more habitat factors, such as food or cover. The WHIP program helps the landowner create an environment that supplies everything wildlife needs: food and cover in the correct

spatial arrangement. When these habitat factors are in good supply, they ensure healthy individual animals, as well as a healthy overall population."

According to Ms. Kourkoulis, "With the

technical assistance provided by NRCS and the financial assistance of the WHIP program, my land and the wildlife on it are now thriving and supporting a small quail hunting group."



Engineering Software

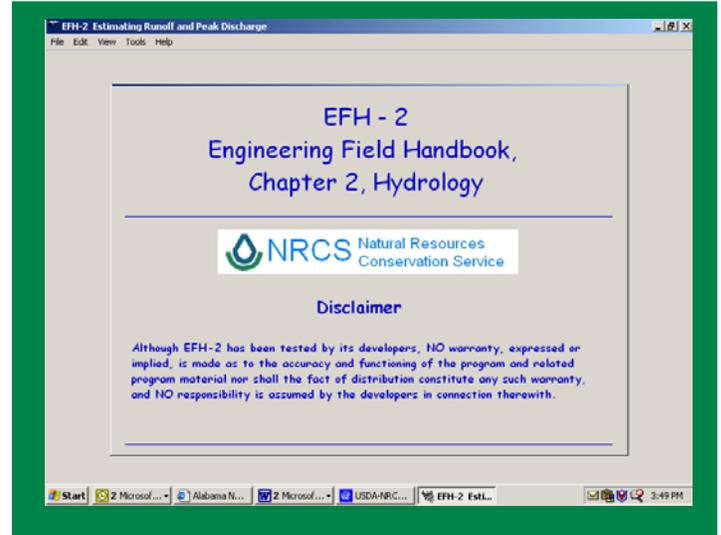
by Perry Oakes, State Conservation Engineer, USDA-NRCS, Auburn, AL

Most of the older NRCS engineering software does not work smoothly in the newer Microsoft Windows environment of today's computers. Efforts have been underway to modernize some of these tools for field office use.

Two such programs recreated as Windows-based tools have recently been approved for use. These engineering programs are EFH2 (Engineering Field Handbook Chapter 2) and Hydraulics Formulas.

EFH2 is a program designed to calculate peak discharge and runoff volumes using NRCS runoff curve numbers (RCN) procedure. Peak discharge is often used as the basis for designs

of most engineering practices. The program has several built-in limitations which keep the user from inadvertently using the program wrong. One such limitation is that the drainage area can have no more than 10 percent urban area (TR-55 procedures must be used in these cases). Rainfall amounts for the seven major storm events (1-yr to 100-yr) are automatically pulled into the program according to the county entered. EFH2 also provides some tools that are handy. A "HGS" button has been added in the RCN routine to help the user determine the hydrologic group for the soil by using a drop-down box of all the soils

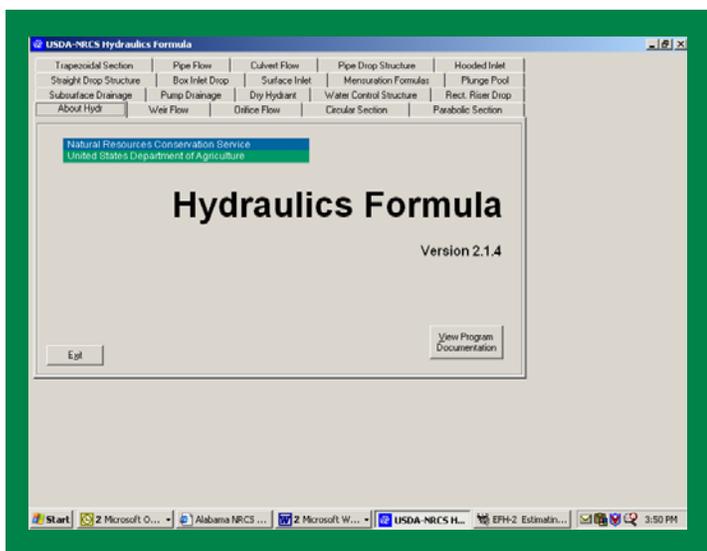


in the state. A slope calculator button has also been added to help the user determine the average watershed slope for the drainage area. By entering the length of the contours in the basin, the contour interval, and drainage area, the average watershed slope is calculated.

Hydraulics Formulas were originally developed for the computer by USDA-NRCS in Ohio as part of the Ohio Engineering Programs, developed by Clint Liezert. This program was adapted to run in Windows environment by a contractor under agreement with USDA-NRCS in Illinois. The program has now been adopted as national

NRCS software. This program contains solutions to the hydraulic equations that are frequently encountered on soil and water conservation activities. All of these solutions are presented in a graphical form that more readily displays the inputs and solutions. Printed reports are available from all of the hydraulic solutions that will satisfy most documentation requirements.

These programs are approved for use on CCE computers by downloading from the CCE site and having the IT staff install the software. Some other programs to look for in the near future include WINPOND, SURVEY MAP, and AGPIPE.



Grazing Systems

by Zona Beaty, USDA-NRCS, Resource Conservationist, Auburn, Alabama

Phil Pelham owns and operates a cow/calf operation in Bullock County, Alabama, on a little more than 500 acres of his farm.

Several years ago, Phil decided he needed to improve his farm and herd and turned to Natural Resources Conservation Service (NRCS) for assistance.

He had heard of the Environmental Quality Incentives Program (EQIP). Roger Hornsby, Soil Conservation Technician and

I assisted Phil with his application for the cost-share program. After meeting with Phil on the farm and conducting a complete inventory of his natural resources, several problems were identified. First, there was a need to break up larger pastures into smaller ones to facilitate a rotational grazing program. That in turn created a need for more water sources. The last problem identified was a need for better forages.

Next, a discussion of alternatives took place. Phil decided he first needed to establish ponds in four pastures

that were to be created from larger ones. Next, fencing was to be installed to create the new pastures and to prevent cattle from grazing pastures that were to be established to new forages. And, lastly, several pastures were to be established to improve forage quality, some for summer grazing and some for winter grazing.

“Establishing watering facilities in each new pasture allows for better control of grazing and prevents overgrazing.”

The forages recommended by NRCS and chosen by Phil included Tifton 9 Bahiagrass and endophyte-free fescue mixed with clover.

Soon after being chosen for an EQIP contract, Phil started to work. Four dug-out ponds were constructed in the fall of 1999. Some of the fencing was also installed and two pastures were established to fescue and clover. The ponds filled with water over the winter, but the pasture grass survival rates were low. The

next spring, the summer pastures were established to Tifton 9 bahiagrass and the balance of the fencing was completed. In the fall of 2000, the two fescue and clover pastures were replanted and this time survival rates were acceptable even in the middle of a drought.

When asked whether the improvements were beneficial to him, Phil replied, “Establishing watering facilities in each new pasture allows for better control of grazing and prevents overgrazing. I get more yield from my forages. A side benefit I have noticed is my cattle are easier to handle. They have learned to go from

one pasture to another on a schedule.”

Phil also commented on the fact that the improvements allow for more haying and grazing options. “Fencing off pastures initially allowed me to isolate pastures for renovation, but now I can isolate pastures so I can overseed for winter grazing or harvest for hay.”

Overall, Phil Pelham is very satisfied with the improvements he has been able to make with both technical assistance and cost-share assistance from NRCS.

Anyone interested in technical assistance or more information on cost-share programs, contact the local NRCS office.



Phil Pelham works with his 2 year-old bull.

Soil Data Mart

By Charles Love, State Soil Scientist, MLRA, Auburn, AL

NRCS has just implemented the Soil Data Mart (SDM) which will serve as the “one-stop-shopping” or single distribution point of official soil survey data for the nation, whether it is to the eFOTG, SSURGO, Customer Service Toolkit, Technical Service Providers, or the general public. The SDM is designed as a web based application and will supply tabular data such as soil properties and interpretations as well as digitized spatial data (suitable for GIS and Customer Service Toolkit).

The advantages of this data mart include:

- Provides a single distribution point to internal and external customers.
- Ensures the same vintage of Official Soil Survey Data is used for SSURGO, eFOTG, Customer Service Toolkit, and other models.
- Provides multiple download formats (Microsoft Access® 97, 2000, or 2002) for tabular data, multiple geographic projections and formats for spatial data.
- Allows client (a District Conservationist for example) to “subscribe” to a data set. This client will then be notified when that data set is replaced by an update.
- Provides a framework for future additions such as manuscripts, picture database, online spatial queries, etc.
- Allows clients to generate a variety of reports online without a data download or any special

software - A web browser is all that’s required (*tabular data only*).

All SSURGO spatial data and corresponding tabular data bases for Alabama will be transferred to the Data Mart over the next year. Future releases or updates of tabular and spatial data will be posted to the Data Mart site as they become available. We plan to develop a table or map for the MO-15 Soil Survey home page which will show availability of soil survey county data sets posted to the SDM. The national SSURGO site no longer functions. If you have accessed Alabama data through this site or the SSURGO FTP site in the past, remember that *these* will no longer *function*.

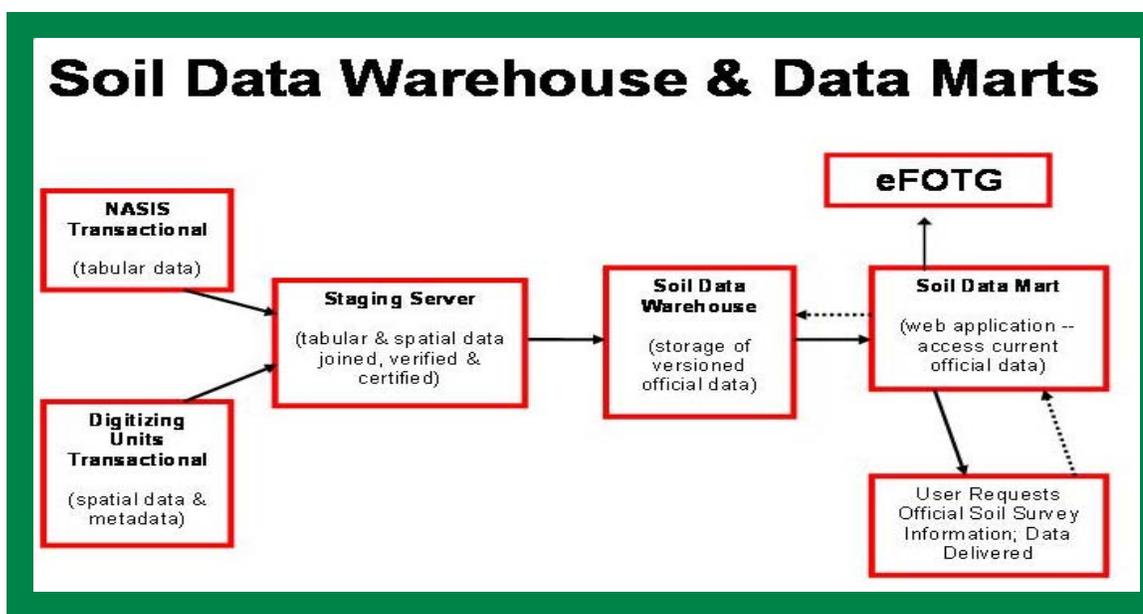
In the future, Section II (Soils information) of the eFOTG will link directly to the SDM where users will have the option to either view or download available data. Most of the soils reports currently available in Section II of the eFOTG will eventually be deleted and replaced with this link.

We plan to provide a couple of different access points to the SDM. Users can log directly into the SDM home page at <http://soildatamart.nrcs.usda.gov>. This link allows you to register/login, and choose a state and county dataset. There will also be a link from our MO-15 Soil Survey home page, and one from the eFOTG. You will be notified when these additional links are developed.

Currently, we have three counties (Limestone, Macon, and Mobile) in the compilation and digitizing SSURGO process,

and we are planning to download the remaining counties by December 31, 2004.

I urge you to try out the new SDM. If you have any questions, please contact Scott Anderson, Soil Data Quality Specialist, at (334) 887-4565 or email: scott.anderson@al.usda.gov.



Alabama Litter Distribution Project Initial Trends Report

By Bill Prince, State Environmental Engineer, NRCS, Auburn, AL

This project has been funded and applications have been received at the local district offices since March 1, 2004. The project provides for hauling poultry litter to areas of the state that have historically not used litter and promotes a long-term market for litter as fertilizer across the state. This is a report on trends observed from the first week's applications.

There were approximately 174 applications received across the state during the first week. Each preliminary application contains an estimate of the mileage range that the litter will have to be hauled one way, from the source to the receiving farm. A summary of applications and mileage ranges are:

<u>Applications</u>	<u>Mileage Range</u>
40	10-25
45	26-50
46	51-75
24	76-100
15	101-125
4	126-150

This indicates that the project is reaching a dispersed range of users. Forty applications were for 25 miles or less, indicating litter movement possibly within a county. The 91 applications from the mid-mileage ranges probably indicate litter movement

from one county to an adjacent county. The 43 applications in the mileage ranges over 75 miles indicate litter movement across multiple counties.

The geographic distribution of applications is encouraging as well. Fifty-five applications are from the Limestone Valley and Uplands region of northwest Alabama, 19 applications are from the Appalachian Plateau region of northeast Alabama, 45 applications are from the Blackland Prairie region of central Alabama, and 55 applications are from the Coastal Plain region of southern Alabama.



The distribution of mileage ranges across the major regions of the state is very encouraging. Hopefully, all of these preliminary applications will become actual contracts for 3 years of incentive payments and will be the start of a statewide litter market to better use and protect our state's valuable agricultural and natural resources.

Conservation Plant Releases

Jimmy Carter Plant Materials Center, Americus, GA

The Jimmy Carter Plant Materials Center (PMC) is studying several native plants for forage, nutrient uptake, wildlife habitat improvement, and 2002 Farm Bill implementation.

The PMC has eight active studies involving plants native to the Southeastern U.S. Major emphasis is on establishment, growth, management, and culture of native warm season grasses. Big bluestem, switchgrass, little bluestem, indiagrass, and eastern gamagrass show great potential as cattle forage and as wildlife habitat improvement plants.

Until recently there were no native warm season grasses selected for the Southeastern U.S. However, in the summer of 2002, the Jimmy Carter Plant Materials Center in Americus, Georgia, released

'Americus' Indiagrass. Americus was selected from plant material originating in the Southeast. It is adapted to upland sites of our region for cattle forage, wildlife habitat improvement, erosion control, and plant community restoration.

For more information visit the PMC website at: <http://www.ga.nrcs.usda.gov/technical/pmc/pmc.html> or <http://Plant-Materials.nrcs.usda.gov> or contact Mike Owsley at the Jimmy Carter Plant Materials Center at 229-924-4499, email at mike.owsley@ga.usda.gov or Donald Surrency at 706-595-1339 ext. 3, email at don.surrency@ga.usda.gov

(Continued Page 8)



‘Americus’ Indiangrass

Indiangrass is a native perennial warm season forage grass. It is a tall robust grass, which produces an attractive golden panicle in the fall. USDA-NRCS Jimmy Carter Plant Materials Center recently released a new cultivar called ‘Americus’.

It is the only indiangrass variety that is native to the Southeast and has a wide range of adaptation. It has been grown primarily in pure stands. Conservation uses include: forage, buffers, wildlife, urban landscapes and critical areas.

‘Americus’ will be primarily used as livestock forage. However, this attractive native grass also shows potential as an urban landscape and restoration plant.

‘Highlander’ Eastern Gamagrass

Eastern gamagrass is a native grass that can be found from Massachusetts, west to Illinois and Nebraska, and south to the West Indies, Central America, and Brazil.

‘Highlander’ is recommended for forage production. It is best used as a hay crop; however, it can be grazed if given appropriate management (i.e. rotational grazing) to prevent damage to the plant stand. It also has potential as a perennial silage crop and as a source of biomass for bioenergy production. It can be used in many types of conservation plantings such as, buffers and vegetative barriers.



‘Kinchafoonee’ Virginia Wildrye

‘Kinchafoonee’ Virginia Wildrye, Selected Class of Natural Germplasm, is a native perennial cool season grass. It is a robust grass which produces an attractive seed head in late spring. Virginia wildrye commonly occurs in low shaded woods; however, it also does well in full sunlight. Virginia wildrye has very long persistent awns and will not pass through conventional planting equipment unless the seed is debarbed. Even after seed is debarbed the seed will require a native grass drill or broadcast spreader. Virginia wildrye is one of the few native cool season grasses useful in soil conservation work. Conservation uses can include field borders, logging roads, critical area stabilization, restoration, and cool season cover. It provides food and cover for wildlife.



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