

# Jimmy Carter Plant Materials Center Americus, Georgia

## PLANT SHEET

### Indiangrass

(*Sorghastrum nutans*)

*Special Edition: For Farm Bill Implementation*

**Description:** Indiangrass is a native rhizomatous, perennial warm season grass. It attains heights of 3 to 7 feet. Leaves are flat, narrow (at the base), often with hairy leaf blades. Leaves range from 10 to 24 inches long. It is relished by livestock and provides high quality forage when green. The seed head is a panicle of 6 to 12 inches in length with golden bronze to yellow seed.



**Americus Indiangrass**

**Conservation Uses:** Grazing Land  
Wildlife habitat improvement  
Critical area stabilization  
Biofuel/Alternative Fuels  
Streambank Stabilization  
Nutrient Reclamation  
Filter Strip  
Conservation Buffers  
Urban Conservation  
2002 Farm Bill Implementation  
US Forest Service  
Native Plant Initiative

# ESTABLISHMENT OF NATIVE WARM SEASON GRASSES

Native warm season grasses need special attention given during purchasing, planting and management of established stands. The following features make native warm-season grass planting different from other traditional plantings:

- Planting rates for warm season grasses are based on pure live seed (PLS) lb/acre and **NOT** bulk lb/acre.
- All warm-season grasses require a firm seedbed for best establishment.
- Traditional seeding equipment works well for switchgrass and eastern gamagrass, but fluffy-seeded species such as big bluestem; little bluestem and indiagrass require special equipment and/or techniques for successful seedings.



**‘Americus’ Indiagrass (*Sorghastrum nutans*)  
at Jimmy Carter PMC released in 2002.**

### **PURCHASING SEED**

It is best to purchase certified seed of varieties adapted to the region of planting. Certified seed is guaranteed to be true to a variety, and use of certified seed may lead to a more reliable planting. It is best to order different species and varieties separately instead of pre-mixed because seeding and management specification will differ between species.

Warm season grass species should be purchased on a pure live seed (PLS) basis. Do not confuse 12 lb PLS/acre with 12 bulk lb/acre. Failure to recognize PLS when purchasing seed and figuring seeding rates may yield unexpected results.

### **TIME OF SEEDING**

Warm season grasses are best established during March through May. Early planting is critical even though warm season grasses do not germinate until soil temperatures are above 50 to 55 degrees F. Avoid planting after June 1 because moisture and weed competition may delay stand establishment.

Early establishment allows seedlings to develop good root systems before summer drought and greatly increases the ability of the grasses to compete with weeds. Irrigation (if available) should be applied when soil conditions are very dry to enhance seed germination and stand establishment.

Seeding into warm soil in late spring can be helpful in controlling weeds. The first flush of weeds is allowed to germinate and then is killed by final tillage or contact herbicide just prior to planting. Ideally, this practice would result in the shortest period of bare ground and would get grass seedlings up as quickly as possible to compete with other weeds.

### **SEEDBED FERTILITY**

Warm season native grasses can be productive on low fertility soils, but fertilization will increase plant vigor. Soil test the field prior to planting or cultivating. The pH should be adjusted to around 6.0 if needed. Incorporate lime in the fall to allow it time to adjust pH before planting in the spring. Fertility should be up to medium levels for phosphorous (P), and potassium (K). Incorporate P and K into the soil at planting time. Do not apply nitrogen (N) at or before planting time. Nitrogen and phosphorous have been shown to increase productivity. However, nitrogen promotes weed growth, as well. Unless weed competition is low, N should be excluded the first year until a stand becomes established. The only exception for N application is planting critical sites, such as log decks, log roads, skid trails and other impoverished soils.

In addition to the above guidelines, follow the fertilizer and lime recommendation in your state. Consult your Field Office Technical Guide (FOTG) for more specific information based on site and soils.

## **SEEDBED PREPARATION**

Native warm season grasses are best established by creating a tilled, firm seedbed. It is best to remove all vegetative cover through the use of approved herbicides or extensive tillage. Seedbeds should be adequately plowed, disked and packed prior to planting. A cultipacker works well for firming the seedbed. If a prepared hard seedbed is rained on before planting, harrow and cultipack again before planting.

## **EQUIPMENT USED FOR SEEDING**

Ideally seed will be drilled into a prepared seedbed. Switchgrass may be planted with a conventional drill because it has a hard, smooth seed coat. Conventional drills equipped to seed alfalfa work well. Eastern gamagrass seed is about the size of corn seed and is best planted with a corn planter. Big and little bluestem and indiangrass seed have appendages with fine hair and will not pass through conventional equipment unless they can be ordered as "debearded" or brushed seed. Debearded seed may pass through a conventional drill, though it may still be best to use a special drill designed for fluffy seed. Seed drills advertised as "native grass drills", such as a Tye or Truax drill, have special boxes equipped with picker wheels and augers which help prevent seed from sticking together and move the seed to the drilling mechanism. Many native seed drills have multiple boxes, which allow for the sowing of both switchgrass and fluffy seeded species at the same time. Switchgrass, indiangrass, and big and little bluestem should be seeded at 1/4 to 1/2 inch deep. In sandy soils be especially careful not to bury seed too deep! Eastern gamagrass is usually seeded at 1 1/2 inches deep. Planting native grasses with conservation tillage equipment is not recommended at this time.

If a seed drill is not available, seed may be broadcast over a site. Broadcast fluffy seed (bluestem and indiangrass) with a drop spreader or cyclone spreader and then drag to lightly cover seed. If you are using a cyclone spreader, try mixing seed with inert matter such as kitty litter or sawdust for better spreading. Successful broadcast seeding can be achieved by increasing seeding rate and by rolling or cultipacking before and after seeding. When planting a small area (1/4-acre) in droughty conditions, an optional step to enhance the stand would involve lightly mulching the seeded area.

## **SEEDING RATES**

Warm season grasses species vary in their growth characteristics. This makes it more difficult to manage mixtures for pasture or hay use, so only one species should be seeded per field. In areas planted for wildlife and erosion control the management of mixtures is not as critical. Information is being developed on the use and adaptability on establishing native grasses in mixtures.



## Recommended Varieties of Indiangrass for Use in Georgia

### Indiangrass

'Lometa'	Preferred variety for the southeast. Good seedling vigor and superior forage production given normal rainfall. Survival and production is better than 'Rumsey' and 'Cheyenne' at the Jimmy Carter Plant Materials Center. Recommended for forage, buffers, wildlife plantings and critical areas.
'Rumsey'	Survival and production not as good as 'Lometa'. Not recommended as a pure stand but in a mixture with other native grasses for forage. Can be planted in mixtures for wildlife plantings.
'Cheyenne'	Not a certified variety, although noncertified seed is available. The performance in most of the southeast is not as good as 'Lometa' or 'Rumsey'. Recommended use is in mixed stands for wildlife plantings on drought sites. Not recommended for forage.
'Oto'	Not well adapted in most of the southeast. Can be used for wildlife plantings in a mixture with other native grasses. Not recommended for forage. Origin: Nebraska.
Americus	This experimental accession was released in 2002 by the Jimmy Carter Plant Materials Center. It is a native of the southeast. It has a wide range of adaptation. It out performed 'Lometa' on many sites and competes well with 'Pensacola' bahiagrass in drought conditions. It is recommended in pure stands. Conservation uses include: forage, buffers, wildlife, urban landscapes and critical areas. It will be the only indiangrass variety that is native to the southeast.

## 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 grasses planted for wildlife should be planted with a drill. When planting bluestems or indiagrass, a drill with a specialized seed box containing “picker wheels” is necessary or the fluffy seed of these grasses will 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 can be used to plant eastern gamagrass.

## About this publication

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All photos are courtesy of USDA NRCS unless otherwise noted.

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