



Native Grasses for Wildlife Habitat

Georgia Job Sheet

(645-647)

Revised 8/21/2007

Wildlife Benefits

There are many benefits of establishing a stand of native warm season grasses. In addition to being useful as a form of conservation cover or as a forage crop, native grasses are beneficial to wildlife populations.

All species of wildlife have certain basic requirements. These include food, water, cover, space, and arrangement. Native grasses provide both cover and foods for many wildlife species, with warm season grass mixtures providing the most benefits. Properly managed fields provide nesting, protective cover, undisturbed nesting sites, insect populations for food, and open travel under a tall grass canopy.

Native grasses provide quality habitat for grassland nesting birds including bobwhite quail, eastern wild turkey, Bachman's sparrow, and many other birds. The bobwhite quail is an example of a species that will use a grass mixture habitat for shelter from predators, especially when nesting and raising young. Native grasses provide both shelter and food for cottontail rabbit and wild turkey. Turkey also benefit from seeding trails and roads through woodlands with native grasses.

Establishment

In the past, many have been discouraged from using native warm season grasses because they emerge in late spring and grow slowly in the seeding year. This is common with NWSG establishment because the grasses are putting down a deep root structure the first growing season, and little above ground

growth is seen. Generally, establishment potential is reached in year two. A commitment to proper management is necessary in order to assure establishment of a native grass stand. Native grass seeding rates are based on pounds of pure live seed (PLS) per acre, not bulk pounds per acre. Seeding rates are provided in this guide sheet for several native perennial grasses suitable for wildlife in Georgia and are to be planted as a seed mix.

The recommended planting dates for Georgia are:

North Georgia	April 1 to May 15
Central Georgia	March 15 to May 15
South Georgia	March 1 to April 30

Competition Control

It is very important to control the vegetative competition. If Bermuda, bahia, fescue or Johnson grass occur, then remove these species with the appropriate herbicide that is recommended by the UGA Extension Service prior to planting NWSG. It is very important to follow guaranteed label rates. Also in the control of these species, it is important to use a "residual" herbicide and to follow label directions.

NOTE: It is also important to control broadleaf plants that will shade out the developing NWSG. These can be controlled with pre-emergent or post emergent herbicides.

NOTE: Be very careful with soil active herbicides such as Imazapyr. If these herbicides are applied under the "drip line" of oak, hickories, pecan and other hardwoods, severe damage or death to the

hardwoods may result. Imazapyr requires a waiting period before planting NWSG

Planting with No-till Drill in conventional seedbed

Most NWSG has fluffy seed with awns with the exception of switchgrass. Native grasses can be established by preparing a clean, firm conventional seedbed prior to planting.

NOTE: if seed has not been debarbed, then it can be conveniently planted with a specialty NWSG no-till grass drill, which has picker wheels and oversized tubes to reduce clogging. If debarbed seed is used, then conventional no-till drills can be utilized. Pre-mixing of seed is also recommended regardless of planting technique.

When seeding into a conventional seedbed, tillage operations typically used for small seeded forages can be used to prepare a clean seedbed. Plant seeds on the freshly prepared seedbed. It is critical that the seedbed be firm (not clodded) or the tiny seed will be covered too deep with loose soil. Loose, uneven, and/or cloddy seedbeds are a major cause of poor stands. *To ensure seed-to soil contact and improve germination and seedling survival, the seedbed should be cultipacked before seeding with no-till drill.*

Planting with No-till drill in existing vegetation

(This option will require careful seed placement) Planting of native grasses by no-till methods in existing vegetation requires that all existing vegetation be killed. Also, height of surface residues will need to be reduced so as much light as possible is available near the soil surface. Fire may be needed to remove tall standing vegetation prior to planting. If the dead material on the field is sparse and only a few inches high, no preparation may be necessary.

Planting with drop spreader or cyclone spreader

Prepare clean, firm seedbed which includes using cultipacking prior to and after planting. It may be necessary to mix a carrier with the seed so it will spread evenly. The carrier can be 20-30 lbs/ac of pelletized lime or other materials such as oats, sawdust, cracked corn, or cottonseed hulls.

NOTE: Soil Depth is critical, cover the seed from 1/8-inch to 1/4-inch depth, 10-15 % of the seed may be visible on surface.

Forb Establishment

To add additional species that benefit wildlife, at the time of seeding NWSG, add .5 lbs of partridge pea and .5 lbs of beggar weed or a 1 lb mix of partridge pea, beggar weed and native lespedezas.

Planting NWSG/forbs with Longleaf Pine

Plant NWSG between pine rows with either a no-till drill or conventional spreaders. If using conventional equipment, it will be necessary to prepare seedbed by harrowing the soil. Make sure to allow two feet on either side of the row as a buffer protecting the planted pine. For example, if the rows are 12 ft apart, the maximum size harrow would be 8 ft.

Fertilization

Soil test a site prior to native grass establishment. Native grasses have low fertility requirements and nitrogen will promote weed growth. If the soil test reports a pH <5.0, lime should be used to adjust the pH to the 6.0 range prior to planting. Phosphorus and potassium can be applied at planting according to soil test recommendations. Pelletized lime can be used a carrier if planting with drop or cyclone spreaders.

Management

Broadleaf weeds can be controlled by using herbicides labeled for native grasses. Grasses should reach a height of 6-8 inches before applying herbicides.

Prescribed burning or disking are a beneficial management tools for native warm season grasses. Beneficial uses include reducing unwanted vegetation buildup that can decrease wildlife benefits mentioned above. Most controlled burning should be done in late fall and winter before growth of grasses begins. However, controlled burning or disking should not be done during the nesting season except in certain cases where a burn during the growing season may be needed to control hardwood and shrub competition.

Do not disk more than 1/3 of an area in any one-year. For optimum habitat benefit, disk every third row and only disk from November through February.

Mowing is not recommended for NWSG except to control competing vegetation during the first growing season. Mowing will encourage the development of undesirable plant species.

Native Perennial Grasses Suitable For Wildlife In Georgia

Big bluestem (*Andropogon gerardii*) is a native, warm season perennial bunchgrass that grows well on most soil types. It grows best on moist, well-drained soils, but is more drought tolerant than most warm season grasses. Big bluestem grows 3 to 6 feet tall and adapted varieties for Georgia are Earl, Kaw, or southern ecotype

Indiangrass (*Sorghastrum nutans*) is a native, warm season perennial bunchgrass which grows 3 to 5 feet tall. It is drought tolerant and is well adapted to medium-heavy to light, sandy textured soils. Adapted varieties for Georgia are Lometa, Americus, Cheyenne or a southern ecotype.

Little bluestem (*Schizachyrium scoparium*) is a native, warm season bunchgrass which grows to a height of 3 feet. It grows well on deep, shallow, sandy, fine textured, and rocky soils, and has good drought tolerance. Adapted varieties for Georgia are Aldous, Cimarron, Pastura or a southern ecotype. Cimarron is known to be very successful. Little bluestem should be planted on a firm, weed-free seedbed.

Switchgrass (*Panicum virgatum*) is a native warm season perennial bunchgrass that can be found growing in Georgia along roadsides, edges of fields, and abandoned sites. It is used as a forage for grazing or hay, provides excellent erosion control, and is beneficial for wildlife such as quail. Switchgrass is well adapted to deep soils with good water-holding capacity, including well-drained to poorly-drained soils. Lowland types may grow to a height of 6 feet on moist, fertile sites. Adapted varieties of switchgrass for Georgia are Alamo, Cave-In-Rock or a southern ecotype. The seeds of switchgrass are readily eaten by bobwhite quail.

Native Grass*	Seeding Rate**
Use adapted varieties listed below or use a Southern ecotype not listed below	
Big Bluestem Earl, Kaw,	1.5 lbs PLS/ac
Indian grass Lometa, Americus, Cheyenne	1.5 lbs PLS/ac
Little Bluestem Aldous, Cimarron, Pastura	1.5 lbs PLS/ac
Switch grass Alamo, Cave-in-Rock	0.5 lbs PLS/ac
Forbs	1 lbs/ac
TOTAL	6 lbs/ac
* plant total mix of seed	
* substitute 3 lb PLS/ac of wire grass when seed becomes available	
** add 15% when planting during dormant season	

References

- Harper, et.al. *Native Warm-Season Grasses in the Mid-South*. University of Tenn. PB 1746. December 2004.
- Seymour, Randy and John. *Six Basic Elements for a successful Native Grass and Form Establishment*. Roundstone Seed Co. 2003.
- Surrency, Don, et.al. *Native Warm Season Grasses for Georgia, Alabama and South Carolina*. USDA NRCS, September 2005.

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Summary of CP36 Practices and Procedure

1. Treat Exotic grasses before planting trees or NWSGs.
2. Subsoil site 6 weeks before planting longleaf pine.
3. If using soil active herbicides, be very cautious near the tree line due to possible injury or death to trees. Also these herbicides should be used at least 6 weeks before planting trees and 4 months before planting NWSGs.
4. Plant trees before planting NWSG.
5. GFC will recommend if scalping is necessary.
6. Tree spacing of 12 ft between rows is required for planting long leaf pine.
7. Plant NWSG and forbs in a seed mix of 6 lb pls/ac
8. A clean seed bed is important to maximize seed contact with the soil
9. Cultipack before and after planting when using cyclone or spreader equipment.
10. Apply pre-emergent herbicide at the time of planting NWSG. Remember some herbicides such as plateau will kill switchgrass seedlings and some require a waiting period.
11. Band spray longleaf pine in the spring following planting.

Top seven reasons why NWSGs planting fail:

1. Planted too deep-either drilled to deep or disked after top sowing.
2. Planted to late- planting in late spring or summer often results in poor germination because of lack of moisture or not enough time for adequate root development prior to drought conditions.
3. Inadequate weed control- no herbicide, the wrong herbicide or incorrect herbicide application.
4. Percentage of pure live seed not calculated- not enough seed was planted.
5. Drill not calibrated- not enough seed was planted.
6. Field planted when to wet- mud packed into the depth bands, coulters, and/or seeding tubes—or after a hard rain packed a well-prepared seedbed.
7. No patience—the planting was actually a success, but it may take two years for establishment.