



## Using Native Plants on GRAZING LANDS

### Benefits of Native Grasses and Forbs

#### Introduction

More than 2.5 million acres of grassland once covered southwest Louisiana. Historically these coastal prairie systems thrived while being seasonally grazed by free-roaming herds, and periodically burned by lightning fires. The conversion of these grasslands first to agriculture then to urban development has resulted in their degradation and near decimation. But landowners are increasingly aware of the benefits of restoring these native systems to the landscape for use as livestock forage, and for use in conservation plantings.

#### General Benefits

Native grass restoration on and around agriculture lands provide multiple benefits for the landowner. Native plant species are well-adapted to climate conditions of the coastal plain, and will survive drought as well as flooding. They thrive when grazed properly or periodically burned. In addition to providing a variety of nutritional forage for livestock, the plants are likely to attract wildlife such as deer and upland game birds. A host of other species all along nature's food chain, including important pollinators, find food and shelter within native grass systems, thus enhancing the balance of the ecosystem.

Once established native grasslands require little maintenance and inputs when compared to typical monoculture forage crops. Good management (i.e. rotational grazing, prescribed burning) will stimulate growth and decrease competition from undesirable vegetation. Their extensive root systems make them persistent even after significant drought or if exposed parts of the plant are removed.

If landowners are restoring fallow fields, natives are an ideal choice because they will (eventually) deter encroachment of invasive plants, and require less mechanical or chemical management. The perennial nature of these plants eliminates the need for annual seed purchase, seed bed preparation and planting associated with annual forage crops. NRCS incentives are available for conversion of existing cropland or pasture/hayland currently dominated by "introduced" species, to native warm season bunchgrasses, although specific management techniques must be followed.

#### Disadvantages

Once removed from a landscape, natives are relatively difficult to re-establish. The adage, "1st year they sleep, 2nd year they creep, 3rd year they leap..." is an accurate observation. If landowners will be patient and manage the site carefully in early years of planting, they will realize immeasurable ease of maintenance after the third year of establishment.

The primary cause of landowner dissatisfaction is weed competition when native plants are emerging their first year. The best treatment is bush hogging (on a high setting) the area before weeds begin to produce seed heads. Mowing the weeds (now taller than the native grasses) will allow emergent native grasses to receive the sunlight they need to mature and produce their own seed heads. When the seeds fall, a seedbank for future growing seasons is created.

Another disadvantage (perhaps insignificant to most landowners) is the fact that there is very limited seed available for Louisiana ecotypes. However, seed native to Arkansas, Texas, and other areas is readily available and thrive well in areas of historic Louisiana coastal prairie.

## **Forage Benefits**

Several of the native prairie bunchgrasses are favorable as forage for livestock production. They may be planted along with other native grasses and forbs or as a monoculture. If planted in combination with other natives, certain compatibility issues should be considered, such as planting and maintenance methods, growing conditions, and seasonal growth as it pertains to desired nutritional yields. Planting rates should be adjusted according to desired percentages of each species.

The most common native warm season perennials recommended for forage are Eastern Gamagrass, Switchgrass, Indiangrass and Big Bluestem. These species are considered compatible within a grazing system, although grazing during the first year of establishment is not recommended for any of them.

## **Eastern Gamagrass**

Of the four named above, Eastern Gamagrass is referred to as more palatable, more productive and more nutritious. For this reason, a management intensive grazing program is recommended if planted along with other compatible species. If established strictly for hay or silage, it should be planted as a monoculture. It should only be cut or grazed after it reaches a height of at least 15" and should not be cut or grazed to a height any shorter than 8". The 'Tuka IV' variety is most-often recommended in Louisiana. Eastern Gamagrass emerges sooner in the spring than most other native grasses, with its peak growing season occurring mid-April through mid-September.

Prolonged wet--chilling (stratification) or pretreatment of seed with hydrogen peroxide can almost certainly improve germination rates. Seed should be planted at a depth of  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches using a conventional grain (corn or cotton) drill, and preferably into a stale seedbed of standing dead litter mulch.

## **Switchgrass, Indiangrass, Big Bluestem**

In addition to providing nutritional forage for livestock, these native perennial grasses provide wildlife habitat, cover and food year round. They are also ideal for use in conservation plantings for erodible lands, and for use as field borders and buffer strips. All are drought and winter hardy. Switchgrass is most tolerant of soils that tend to stay moist, while Big Bluestem and Indiangrass are less tolerant of saturated soils.

Of the four named above, these three species are most compatible in planting times, planting depths and planting rates. Phosphorus and potassium may be applied (according to soil test recommendation) before or at seeding, but nitrogen application at this time will only encourage weedy competition. The use of nitrogen fertilizer should be delayed until plants reach a height of about 6 inches. During the establishment year, mowing is recommended when new plants reach a height of 8– 12 inches to control weed competition.

These native grasses should be planted with a native grass drill, then over-seeded with Eastern Gamagrass. Recommend varieties are as follows: 'Alamo' or 'Blackwell' Switchgrass; 'Lometa', 'Americus' or 'Cheyenne' Indiangrass; 'Kaw' or 'Earl' Big Bluestem; 'Pete', 'TUKA IV', 'Highlander', or 'San Marcos' Eastern Gamagrass.

## **Conclusion**

The initial costs of establishing natives grasses on grazing lands are significant. Seed costs, the need for specialized equipment for planting (native grass drills), fencing to facilitate rotational grazing and the fact that newly planted acreage cannot be grazed until the second or third growing season are realities the landowner faces. The Natural Resources Conservation Service (NRCS) offers several incentives to offset these initial costs.

The long term benefits are deferred, but eventually outweigh the initial investment. Once native grasses are established, very little chemical input is needed to maintain them. Healthy stands of native grasses naturally deter encroachment of undesirable invasive plants, and are genetically more resilient to climatic stresses and disease. Pests are organically controlled by the return of diverse wildlife populations. Rotational grazing results in "natural" fertilization and periodic disturbance, mimicking historic prairie conditions. With careful management, landowners may only need to employ prescribed burning every 3-5 years in late winter to control weeds and encourage rapid regrowth.