



Native Grassland

Louisiana's native grasslands are among the most threatened ecosystems in North America. Of the more than 2.5 million acres of coastal prairie that once covered southwest Louisiana, less than 1000 acres remain. Most of these are small remnants along unplowed railroad and roadside right-of-ways. As a result of diminishing habitat and the change in land use priorities, some wildlife populations such as bobwhite quail and grassland songbirds are in alarming decline. Other species, such as prairie chicken, have disappeared from southwest Louisiana.



Native grasslands once covered a large portion of southwest Louisiana.

The deterioration of this once diverse and thriving prairie ecosystem began in the 1800's. Settlers began converting historic prairie to pasture land and cultivated crops, such as rice and soybeans. Some prairie habitat persisted on the agricultural landscape in the form of native pastures, fence rows, field borders, and ditch banks, but these have now largely disappeared.

While most landowners cannot restore the diversity of the historic prairie, they can establish a simple less diverse habitat, known as native grassland. Restoring native grasslands to the landscape can have numerous benefits for landowners and wildlife. Native grasslands consist of a variety of grasses and forbs, that are well adapted to the climate conditions of Louisiana's Gulf Coastal Plain, and are resistant to fire, flooding, and drought. They can be grazed or hayed, providing a revenue source to the landowner. The plants provide food and cover for wildlife such as deer, turkeys, quail, and songbirds. Many native grassland plants produce colorful flowers and attract a variety of insects such as butterflies, skippers and dragonflies, which are important pollinators.

Plant Species

Grasses

Historic native grasslands contained grass species such as Indian grass, switchgrass, little and big bluestems, and Gulf Coast muhly grass. These grasses typically grow in clumps, leaving patches of bare ground exposed. They provide excellent cover and foraging habitat for many types of wildlife. These species have evolved over thousands of years in response to local environmental conditions including drought, fire, flooding, and grazing. In fact, native grasslands require periodic disturbance such as grazing or prescribed burning, which helps control invasive species. The grasses are resistant to disturbance because they form extensive root systems, which persist even when the exposed parts of the plants are removed.

Forbs

Other components of native grass systems are forbs. These are herbaceous plants that usually produce flowers and also provide food and cover for wildlife. Forbs that are commonly found in native grasslands include rattlesnake master, and showy wildflowers such as blazing star, coneflower, compass plant and butterfly weed. These plants not only provide seed for foraging wildlife, but also attract insects and other arthropods, which are important food source for wildlife. Like the grasses, grassland forbs are maintained by periodic disturbance.



Skipper (*Thymelicus sylvestris*) resting on rattlesnake master flower (*Brazoria truncata*).



Gulf Coast muhly grass (*Muhlenbergia capillaris*)



Kansas blazing star (*Liatris pycnostachya*)

Species of Concern

Many species of conservation concern are known to occur in Louisiana's native grasslands. Bobwhite quail are rapidly declining throughout the South, with Louisiana estimates showing declines as much as 85% since 1962. This once popular game bird is becoming more and more rare and its decline is directly tied to declining native grassland habitat.



Northern bobwhite quail (*Colinus virginianus*)

This decline is not limited to bobwhite quail. The entire suite of species that depend on grassland habitats are declining. Loggerhead shrikes, Henslow's sparrows, sandhill cranes and dickcissels are just a few of the many bird species that are becoming more difficult to find. There are several species of reptiles and amphibians, including the western slender glass lizard and the southern crawfish frog that could once be commonly found in southwest Louisiana, but no more. A large number of butterflies and skippers were once abundant in Louisiana's native grasslands, but are now in considerable decline.

So what can landowners do to reverse these alarming trends?

Field Borders



Field borders are an effective way to restore native vegetation on working farmlands.

As agriculture continues to be an important income source for many landowners, farmers and biologists have found ways to restore native grassland habitat on working farms. One promising method is to install borders around actively producing fields. The field margins are usually the least productive areas of the field, and by installing these field borders, producers can create wildlife habitat while reducing erosion and chemical runoff and preserving water quality. Effective field borders are typically at least 30 feet wide and consist of a variety of native grasses and forbs which provide food and cover for wildlife.

Field Restoration

If a landowner wishes to restore an entire field, there may be even more benefits. Landowners often have fields that lie fallow for many years, and succumb to invasive vegetation such as Chinese tallow tree. These species grow aggressively and quickly degrade the habitat. Landowners can restore native grasslands in these inactive fields, and do a service to these declining species while increasing recreational opportunities.

Methods

The techniques to establish native grasses and forbs vary considerably from the traditional agriculture or food plot plantings familiar to many landowners. Successful native planting requires planning and patience.

On most sites, existing vegetation must be removed before native grasses and forbs can be established. While native grasses and forbs are vigorous, they can be slow to establish and plantings are usually not successful when there is significant competition. Sod forming grasses such as bahiagrass and Bermuda grass are particularly troublesome and must be eliminated before native grasses and forbs are planted. Herbicide applications in conjunction with mowing are the most effective way to eliminate existing vegetation.

Seeds of many native plants are light and fluffy, making it difficult to plant them with standard equipment. They must also be planted into a firm seedbed. A well disked, fluffy seedbed is not desired for native plantings. One of the most effective ways to plant native grasses and forbs is with a specialized no-till drill with a fluffy seed box. Several of these specialized drills are available for rental to landowners desiring to establish native grasses and forbs. Contact a LDWF Private Lands Biologist for more information.

Programs

Several programs are available to assist landowners who are interested in restoring native grasslands on their property. Landowner assistance programs offer a range of services from technical assistance to cost-share assistance.

LDWF biologists are available to meet with you and help determine which programs may suit your needs.



Louisiana Department of Wildlife and Fisheries
Wildlife Division Private Lands Program
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