

Riparian Planting and Materials Resource Guide

THIS HILL COUNTRY ALLIANCE LANDOWNER RESOURCE HAS TWO SECTIONS. The first provides an overview of the planting methods used along Hill Country creeks and rivers in what is referred to as the riparian zone. Key considerations, as well as a few appropriate riparian species, are listed for each planting technique. The second section is a resource guide on where to obtain native plant materials in Central Texas.

While this resource focuses on plants and planting methods, the land steward should consider managing potential stressors (livestock, an overabundance of browsers, lawn mowers, as well as foot and vehicular traffic) that may impact success. In the Hill County, this may take a variety of forms, including temporary removal of livestock from a riparian pasture for several growing seasons; controlling an overabundance of feral hogs, exotic Axis deer or native White-tailed deer; or perhaps delineating planting sites with clear signage.



SECTION 1: Planting Methods

- A. Cuttings (Black willow, Sycamore, Button bush, Box elder)
- Best time to cut and plant tree cuttings is in late winter or early spring, during dormancy.
- For best cuttings, use young branches—about the size of your thumb, with no thick bark, and several feet in length.
- Remove side branches off cuttings and plant cutting where there is shallow groundwater.
 Often, this may be within a few feet of the waterline.
- Do not remove more than one-third of the branches from a particular bush or tree when sourcing material for cuttings.

Land stewards use rock bars to plant cuttings of Box elder, Sycamore, and Black willow along a creek.

- Ideally, the land steward plants the cuttings immediately after sourcing them. However, if cuttings are purchased from a nursery or planting must be delayed, consider soaking the cuttings in a bucket of water for one to two days before planting.
- Plant cuttings at least 18 to 24 inches deep in the soil so they can contact saturated soils and withstand potential
 flood events. Make sure there is good soil contact around the cutting once it is punched in the ground. A rock bar
 (sometimes referred to as a digging bar) may be used to create planting holes.
- Beaver, feral hogs, deer and other animals can severely damage these plantings, so be prepared for potential losses. Planting cuttings in protected niches will improve success.

B. Transplants (Switchgrass, Eastern gamagrass, Emory sedge, Spikerush)

- Best time to source transplants from native grasses and sedges is fall and winter; avoid summer when plants can get water stressed.
- Find a healthy plant stand as your source. Using a sharpshooter shovel or sturdy gardening trowel, cut down into the soil to remove a plug from the edge of the plant.
- Try to keep as much of the root material intact as possible.
- If a large clump can be removed, use a sharpshooter, hatchet or bread knife to divide into smaller clumps.
- Fill the hole formed at the source plant with nearby soil and leaf litter.
- Water the transplants when first planted. If feasible, consider additional watering during the first year of establishment, especially during dry spells.
- Some people like to soak transplants with water and a product called "Super Thrive" (available at most plant nurseries) before putting in the ground to help with root growth.

Landowners learning about the proper methods for sourcing and transplanting plugs of native grasses and sedges.



Obligate wetland species, such as Emory sedge and Spikerush, should be planted at or near the waterline. Facultative species, such as Switchgrass and Eastern gamagrass, can be planted at the waterline or on higher sites where they must be initially watered. (Note, the terms obligate and facultative are explained on page 18 of *Your Remarkable Riparian Field Guide*, available at remarkableriparian.org)

- Spacing of transplanted plantings can be one to three feet apart.
- Livestock, White-tailed deer and exotics may severely reduce successful establishment of transplants. Consider protecting transplants by piling tree limbs around a cluster of plantings or "planting" sticks around individual transplants as vertical fencing.



- When seeding, the most important consideration is ensuring that there is good contact between the seed and the soil. For some sites, this may require roughing up the soil with a heavy rake, pick or shovel, then smoothing out the soil a bit, casting the seed, then packing the seed down to ensure good contact with soil.
- Depending on the site and scale of seeding, packing the seed down can be done by scuffing a boot heal over the area, sweeping a tree branch, or applying mechanical equipment (no-till drill seeder, cultipacker) to mix seed into the soil.
- Seed may be purchased from several regional sources or harvested from the field. However, self-collected seed is of unknown quality and may or may not be viable.
- Harvesting from the field should only be done by people able to accurately identify species—distinguish from and avoid non-native or invasive species—as well as to determine when seed is ready for harvest.
- Toss seed as if you are feeding grain to chickens—casting and spreading, not clumping. Use of cyclone-type seeder will greatly improve seed distribution and efficiency of planting.
 Strive for a seeding rate of 25 to 50 seed per square foot.



Here, a landowner has used fallen branches to protect Eastern gamagrass plugs and a Cedar elm seedling. The height and width of protective structures will depend on a variety of factors, including availability of woody debris.



In hand are native seeds for Yellow Indiangrass (bottom), Eastern gamagrass (middle) and Switchgrass (top). Grass seed should be raked or pressed—but not buried deeply—in the soil.

SECTION 2:

Where to Purchase Plant Materials

While the source lists below are not exhaustive, the Lady Bird Johnson Wildflower Center's website offers a National Suppliers Directory where you can search for nearby commercial businesses. See wildflower.org/suppliers

A. Regional Sources of Native Seed

- Native American Seed, Junction, TX
- Douglass King Seed, San Antonio, TX
- Turner Seed, Breckenridge, TX
- Bamert Seed Company, Muleshoe, TX

B. Regional Sources of Containerized Stock

There are many businesses, agencies, and non-profit organizations in the Hill Country that sell containerized native riparian plants, including:

- McNeal Growers, Cedar Creek, TX
- Madrone Nursery, San Marcos, TX (512) 353-3944 by appointment
- Friendly Natives, Fredericksburg, TX
- Medina Garden Nursery, Medina, TX
- Far South Wholesale Nursery, Austin, TX
- Numerous entities have annual plant sales, such as local chapters of the Native Plant Society of Texas and Master Gardeners, Lady Bird Johnson Wildflower Center, and Texas A&M Forest Service West Texas Nursery.



We invite you to learn more at: HillCountryAlliance.org/RiparianManagement

