

Hidalgo Germplasm multiflower false Rhodes grass

Trichloris pluriflora Fourn.

A Conservation Plant Release by USDA NRCS E. "Kika" de la Garza Plant Materials Center, Kingsville, Texas



Figure 1. Hidalgo Germplasm multiflower false Rhodes grass plants in a seed increase field. Photo by Shelly Maher, STPMC, Kingsville, TX.

Hidalgo Germplasm multiflower false Rhodes grass (*Trichloris pluriflora* Fourn.) is a selected plant material cooperatively released in 2011 with Texas A&M University-Kingsville, Caesar Kleberg Wildlife Research Institute, *South Texas Natives*.

Description

Multiflower false Rhodes grass, also known as fourflower trichloris, is a warm-season, native, perennial bunch grass. Mature foliage height ranges from 120 to 150 centimeters (4 to 5 feet) tall. The leaf blades are 5-10 millimeters broad and up to 30 centimeters (12 inches) long. The inflorescence is pale to tawny in color. The plants produce seed from July through September.

Source

Hidalgo Germplasm is a blend comprised of six natural populations collected in the South Texas Counties of Jim Wells, Webb, Medina, Jim Hogg, Wilson and Hidalgo. It is a selected plant material class of certified seed (natural track). These six populations were chosen for release from comparisons of forty-three collections. The selected accessions have superior active seed germination, greater overall seed production, and higher plant vigor ratings than other collections evaluated. No intentional breeding, selection or genetic manipulation was carried out within these populations.

Conservation Uses

Hidalgo Germplasm multiflower false Rhodes grass is recommended for upland wildlife and in range plantings. Multiflower false Rhodes grass is a co-dominant plant along with false Rhodes grass [*Trichloris crinita* (Lag.)

Parodi], also known as twoflower trichloris, across numerous range sites in the Rio Grande Plains Ecoregion. As such, this release provides an important species for biodiversity in South Texas seeding that was unavailable commercially until now. Multiflower false Rhodes grass is one of the few native grasses in south Texas that can produce abundant forage somewhere between the forage potential of Kleingrass (*Panicum coloratum*) and buffelgrass (*Cenchrus ciliaris*). Its stature and productivity should help native seedlings compete with introduced exotic grasses especially on sandy loam and sandy clay loam soils.

Area of Adaptation and Use

Soil types of the populations included in this release include fine sandy loam, clay loam, sandy clay loam, and clay. The best performance of Hidalgo Germplasm will be predominantly in the Rio Grande Plain. Multiflower false Rhodes grass is not cold tolerant and is unlikely to perform well outside of the Rio Grande plain Ecoregion.

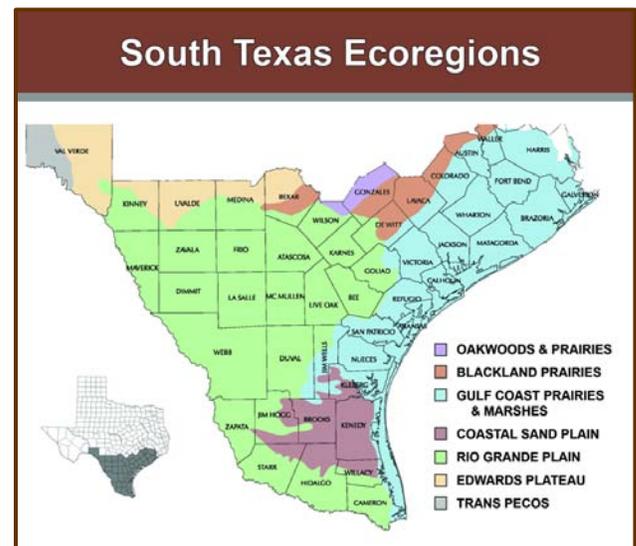


Figure 2. Map of South Texas Ecoregions.

Establishment and Management for Conservation Plantings

Seedbed preparation should begin well in advance of planting. Planting can be scheduled for early spring or, where there are few cool-season weeds, multiflower false Rhodes grass can be planted in the fall. Establish a clean, weed-free seedbed by either tillage or herbicides. Prior to planting, the site should be firm and have accumulated soil moisture.

Multiflower false Rhodes grass is best seeded using a native-grass drill with picker wheels to ensure a good planting of the fluffy seed. Broadcast seeding may be used in areas not easily planted with a drill, but some type of additional coverage such as culti-packing or light dragging will be beneficial to ensure good seed to soil contact. Seed coatings (talc based) can also be used to increase the flowability of the fluffy seed through standard seed drills.

Seed should be planted 1/8 to 1/4 inch deep. It is better to plant too shallow than too deep. For calibration purposes, Hidalgo Germplasm multiflower false Rhodes grass contains approximately 2,146,000 seeds per bulk pound. A seeding rate of 0.5 pound of pure live seed (PLS) per acre is recommended. In planting mixtures, reduce the rate according to the percent of multiflower false Rhodes grass in the mixture.

Newly planted stands of Hidalgo Germplasm should not be grazed for 1 year after planting to allow establishment and development of adequate rootstock. Plants can be grazed to a 6-8" stubble height with no adverse affects. Multiflower false Rhodes grass plants should be allowed to produce seed annually to insure stand health. Multiflower false Rhodes grass is a long-lived perennial that is extremely drought and fire tolerant once established. Contact your local NRCS Field Office to develop a grazing management plan.

Ecological Considerations

No severe insect or disease problems have been observed in multiflower false Rhodes grass. However, it is not cold tolerant which may cause survival issues if Hidalgo Germplasm is moved outside its intended area of use.

Seed and Plant Production

All six populations included in this release have similar growth rates and seed maturity dates. Seed increase plots have been planted on 36" bedded rows, however flat plantings may be possible with frequent weeding. Multiflower false Rhodes grass generally produces seed two times during the growing season. Seed is harvested with a Flail-Vac or similar brush-type harvester. The use of slow travel and RPM speeds while harvesting results in relatively clean seed, needing little cleaning or processing. To clean stems and chaff from harvests, seed is run through a Westrup Laboratory brush machine and then through a Clipper seed cleaner. No attempt is made to clean caryopsis from the bur or glumes, as seed damage or reductions in seed life are likely to occur.

Seed was harvested twice from the 2010 seed increase plot of multiflower false Rhodes grass at the PMC. The first harvest in June averaged 87 bulk pounds per acre per

accession. The second harvest in August averaged 16 bulk pounds per acre per accession.

Availability

For conservation use: At this time, release of the germplasm will be limited to a single commercial grower who will establish the multiflower false Rhodes grass seed fields within the Rio Grande Plain Ecoregion.

For seed or plant increase: Seed of the Hidalgo Germplasm multiflower false Rhodes grass release will be identified by USDA NRCS accession number 9093600. First generation (G0) seed will be produced and maintained by the USDA-NRCS E. "Kika" de la Garza Plant Materials Center, Kingsville, Texas in conjunction with the Texas Foundation Seed Service. First generation (G0) seed will be made up of equal amounts (by percent PLS, +/-10%) of each of the six accessions. Second generation (G1) seed is that which is grown from plantings of the G0 seed blend. Third generation (G2) seed is that which is grown from plantings of the G1 seed. Increase using G2 seed is prohibited.

For more information, contact:
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Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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