



United States
Department of
Agriculture

Cutthroat Grass; a Florida Endemic Native Plant Protected on USDA – NRCS Conservation Easements & Expanded by the Plant Materials Program



Natural Resources
Conservation Service

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INTRODUCTION

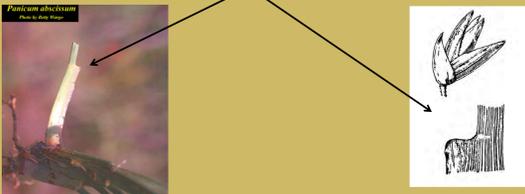
Cutthroat grass, (*Panicum abscissum*) is native, warm season, endangered, endemic grass found mostly in wetlands, but occasionally on non-wetland sites in Central and South Florida. It is a rhizomatous, turf-forming, perennial grass that grows 1.5–2.3 ft, produces pure-stand, dominant communities where established, and occurs mainly in sandy, seepage slopes and swales, mesic flatwoods, and around depression marshes and ponds in wet flatwoods.

FORAGE PRODUCTION

The annual forage production from cutthroat seep ecological sites varies from 3,000–6,000 lb of above ground forage per year in a dry year, to 7,000–10,000 lb in a wet year. The growth period of cutthroat grass is from March to early June. It grows into a robust tuft from strong, thick rhizomes. The leaf blades are 16–18 in long. Winter temperatures of 20–25°F will not produce frost damage.

PLANT IDENTIFICATION

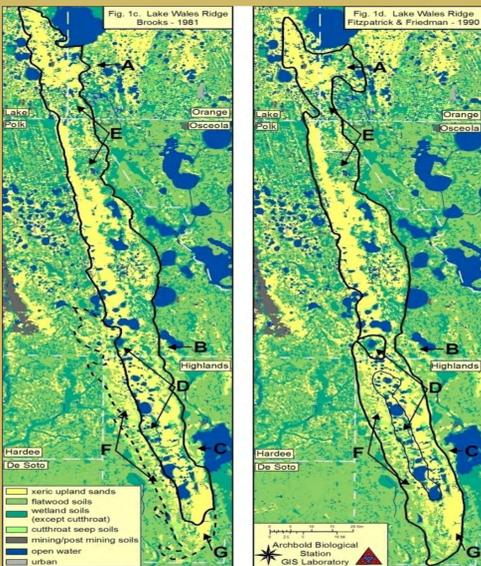
Similar in form to other *Panicum* spp. found in mesic flatwoods (torpedo grass, redtop panicgrass, bluejoint panicgrass, switchgrass). The distinguishing field characteristic is a leaf sheath that is square at the end, forming distinct “shoulders”, and extending into a wedge-shaped auricle. The seed head is an open purple panicle roughly 8–10 in long.



HABITAT AND RANGE

The cutthroat seep ecological site is always associated with a sand scrub site located at a higher landscape position. The water table stays below the surface throughout the year in the sand scrub site, providing adequate subsurface flow of groundwater to the cutthroat grass downslope. Flatwoods seepage slopes have an underlying layer of clay or hardpan that keeps the water from moving downward, and instead water from this surficial aquifer moves laterally through the sand, emerging on the surface, flowing across the slope into a creek.

Cutthroat grass is found in 2 community types: 1) wet flatwoods—a pine forest community dominated by a dense cover of cutthroat grass having little or no midstory, and 2) wet prairie—a non-forested seep. Within the seepage slope there are 11 microhabitat zones that transition from the dry cutthroat grass zone at the highest elevation, to the seepage slope natural drainage way at the lowest elevation.



Water in this habitat is nutrient poor and strongly acidic, slowing plant growth. While cutthroat grass is the dominant species where it is found, other native forage species include purple, creeping, and chalky bluestem, little blue maidencane, redtop panicgrass, bluejoint panicgrass, wiregrass, and switchgrass.

Cutthroat grass is site-specific with a narrow range comprised of the Lake Wales Ridge in Central Florida, Highlands, Polk, Osceola, Glades, and Palm Beach counties. Historically, the species was more widespread and has been decimated by agriculture and development. The specific soil mapping units that correspond to the cutthroat grass seeps are the Basinger, Ona, St. Johns, Myakka, Immokalee, and Johns-Placid complex.

MANAGEMENT

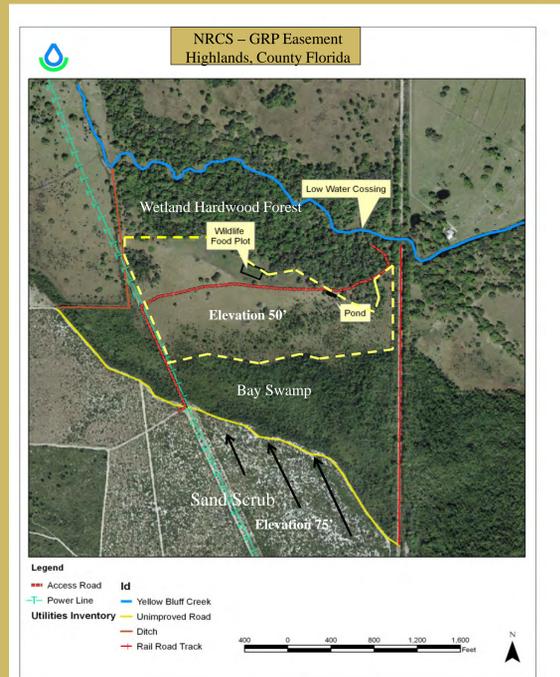
Cutthroat grass rarely blooms without a growing season burn, around April or May. It is typically burned at the same time as pineland threeawn (*Aristida stricta*), forming seed heads during July and August. Mowing and fertilization during the growing season will also stimulate flowering. Annual or biennial burns are also important to prevent the growth of competing shrubs and trees such as ericaceous spp., bay spp., gallberry, and slash pine. Cutthroat grass readily burns, even during the growing season. The historic or natural fire regimes associated with cutthroat seeps range from 2–4 year fire return frequencies.

The plant does not often produce seed unless burned, the viability of the seed is low, and there is no persistent seed bank in the soil. Spread of plant is mainly vegetative. Prolonged inundation can reduce shoot growth, rhizome expansion, and seed production. Current threats to populations include agriculture, silviculture, fire exclusion, off-road vehicle use, foraging by feral pigs, excessive grazing, and disturbance to hydrology.

GRASSLAND RESERVE PROGRAM (GRP)

Through the Grassland Reserve Program (GRP), private and tribal landowners are encouraged to protect, restore, and enhance grasslands such as pasture, hay, and rangelands on their property. Our nation’s grasslands provide critical ecological services and benefits, and play a key role toward contributing to local economies.

To protect our nation’s “working grazing lands”, GRP places emphasis on native rangelands in jeopardy of conversion to development or other intensified uses. Common grazing practices such as brush management, herbaceous weed control, prescribed burning, and cross-fencing are used to encourage participants to effectively manage, restore, and sustain grasslands entered into this Farm Bill Program.



Commercial crossbred cattle typical of Florida’s cow-calf industry, grazing a GRP conservation easement (pictured above). Cutthroat grass should not be grazed lower than 6–8 in, or approximately 50% of its above ground biomass to ensure the long-term health and vigor of the plants.



This photo (pictured above) taken on July 26, 2012, shows the rapid re-growth of a stand of fire-dependent cutthroat grass burned earlier on July 2, 2012 on the GRP cutthroat seep in Highlands County, Florida.



By September 18, 2012, cutthroat grass seed heads (pictured above) were in full-flower following a July burn on the GRP cutthroat seep in Highlands County, Florida.

PLANT & SEED DEVELOPMENT

The USDA-NRCS Plant Materials Program and its network of 27 Plant Materials Centers from around the country conduct plant selection, collection, evaluation, and establishment protocols to find plant solutions to solve natural resource conservation problems. The Brooksville Plant Materials Center (PMC) services coastal regions of Alabama, Georgia, and South Carolina, and all of Florida, Puerto Rico, and the U.S. Virgin Islands.

On October 10th and 11th 2012, Brooksville PMC Biological Sciences Technicians arrived on the GRP Cutthroat Seep in Highlands County, Florida to harvest cutthroat grass seed. The PMC staff harvested seed using a John Deere 5095 tractor and a Flail-Vac seed harvester. Cutthroat grass seed was collected in bags and transported to the Brooksville PMC. The seed was air-dried at ambient room temperature, and will be cleaned and stored at 45–50°F in a climate-control storage facility on-site. PMC staff will conduct germination tests of the seed, produce cutthroat grass plants in a greenhouse, and then transfer plants into field plots for future use as seed and plant sources.



Plants selected for further development will have the greatest vigor, resistance to pathogens, and the greatest amount of viable seed. Cutthroat grass plants and seed will be used by NRCS staff to restore a Wetland Reserve Program (WRP) conservation easement site at Archbold Biological Station in Highlands County, Florida.



Landowners interested in obtaining technical assistance from the Brooksville Plant Materials Center or further information on the USDA-NRCS Grassland Reserve Program and Wetland Reserve Program should contact their local Natural Resource Conservation Service representative.



REFERENCES

- Florida Natural Areas Inventory (FNAI), Guide to the Natural Communities of Florida, 2010
- Myers, Ronald L. and John J. Ewel, Ecosystems of Florida, University of Central Florida Press, 1992
- USDA-NRCS, Field Office Technical Guide, Section II, A (11), 1994
- USDA-SCS (NRCS), 26 Ecological Communities of Florida, 1989
- Yarlett, Lewis L., Common Grasses of Florida and the Southeast, 1996

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