

**United States Department of Agriculture
Natural Resources Conservation Service**

**Notice of Release of St. Lucie Eastern Gamagrass
Selected Class of Natural Germplasm**

The Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture announces the release of a selected ecotype of eastern gamagrass (*Tripsacum dactyloides* L.) for the State of Florida and portions of the southeastern region.

As a selected release this plant will be referred to as St. Lucie Germplasm eastern gamagrass to document its original collection location. It has been assigned the NRCS accession number 9059278. St. Lucie Germplasm is released as a selected class of native vegetative plant material.

This alternative release procedure is justified because the demand for native Florida plants is high and the existing commercial sources of gamagrass are inadequate.

Collection Site Information: St. Lucie Germplasm was originally vegetatively collected by NRCS employees Daniel Stankey and Clarence Maura, Jr. March 28, 1990, on Highway 712, two miles east of the junction with U.S. 1 in St. Lucie County, Florida (approximate longitude of 80° 20' west and latitude 27° 25' north.) The native stand was growing within a few hundred feet of the Indian River on poorly drained, nearly level, sandy soils. The water table varies from 10 to 40 inches. The climate is warm and humid in the summer with mild winters. The total rainfall averages 55 inches. Average number of days with temperatures of 90° or higher is 39; lower than 32° is one. Daily average temperature is 73.8°.

Description: It is a robust warm-season, perennial grass with thick knotty rhizomes. In initial evaluation trials at the Brooksville, Florida PMC, average height was 59 inches. Average base width was 17 inches and average canopy width was 45 inches. Stems are dark red with flat stiff leaves that have a pronounced midrib and scabrous margins, averaging 32 inches long and 3/4 inches wide. The plant growth habit is upright divergent with a distinctive blue color. Seed stalks averaged 85 inches. Inflorescence is composed of a staminate or pollen-producing portion on the upper part of the spike, which averaged 8 inches. The pistillate portion located on the lower section of the spike averaged 4 inches in length. Each spike produces an average of 5 seeds. St. Lucie is a diploid $2n=2x=36$ and will outcross, producing offspring with different color characteristics. Therefore, vegetative propagation is necessary in order to insure the blue color is maintained.

Method of Selection: Initial evaluations of 114 accessions of eastern gamagrass began in 1990. Collections were from sites throughout the state of Florida and 36 accessions from the Kansas Plant Materials Center. Among the collections plant shape, form and color varied from many leafed with leaves reflexed downward to erect shaped plants; colors

were yellowish-green, green to dark green and a few were blue-green. St. Lucie Germplasm was selected for its blue color, growth habit and ability of the foliage to maintain its blue color even when lightly frosted. During initial evaluations at the FLPMC it has maintained the vigor rating of 4 with other accessions varying from 2 to 8. Other ratings included uniformity - 7 (others 2-7 with 1 being most uniform); survival - dry sites 60% (others 0% to 100%) wet sites 50% (others 0% to 50%).

Environmental Impact Assessment: St. Lucie Germplasm Eastern gamagrass is a selection of naturally occurring germplasm and has been unaltered from its original collection. St. Lucie Germplasm did not meet the assessment of a plant that could become invasive based on guidelines adapted by the NRCS Plant Materials Program.

Anticipated Conservation Use: It was selected for use as an ornamental landscape plant in xeriscapes and for use in buffer strips. The erect ascending growth habit of St. Lucie Germplasm prevents the plant from interfering or shadowing other plants growing near by.

Anticipated Area of Adaptation: Eastern gamagrass prefers moist, well-drained fertile soils in full sun or partial shade. It tolerates a wide range of soil conditions, from sand to clay (as long as moisture is sufficient) (Greenlee, 1992). St. Lucie Germplasm, though drought-tolerant once established, resents drying out completely. Initial evaluations indicate it is adaptable to USDA Hardiness Zone 8 to 10, however it will not survive freezing temperatures for extended periods of time.

Availability of Plant Materials: Vegetative propagules will be maintained at the USDA-NRCS Plant Materials Center in Brooksville, Florida, and are available in limited quantities to interested parties for increase purposes.

References:

Greenlee, J., 1992. The Encyclopedia of Ornamental Grasses, Rodale Press. Emmanu, PA, p.163.

Prepared by:

C. Maura, Jr., and S. Pfaff, USDA NRCS Plant Materials Center, 14119 Broad Street, Brooksville, FL 34601.

Signatures for release of:

St. Lucie Germplasm eastern gamagrass (*Tripsacum dactyloides* L.)

T. Niles Glasgow
State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Gainesville, Florida

Date

Diane E. Gelburd
Director Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Date