

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

Notice of the Selected Class Germplasm Release
of
Panicum hemitomom Citrus maidencane

The Natural Resources Conservation Service, United States Department of Agriculture announce the naming and selected class Germplasm release of Citrus maidencane, *Panicum hemitomom* Schultes.

Citrus maidencane was assigned the NRCS accession number 12-5434 and the Plant Introduction (PI) number of 421993. It has been developed to provide a Florida native maidencane that exhibits superior characteristics to other native maidencane, to be used primarily in controlling erosion along ponds and stream banks.

Origin: Citrus Germplasm was collected vegetatively by NRCS employees J. Joiner and J. Moen August 28, 1970, on Stage Pond Road off County Road 480, Citrus County, Florida (MLRA 154).

Ecotype Description: Citrus Germplasm maidencane is a native perennial, warm season, semi-erect grass, stems diverging from true vertical to 30-35 degrees. It grows 36-40 inches tall and spreads by creeping rhizomes. Growth generally commences in June and persists with good vigor into mid-autumn. Leaf blades are characteristically lush green, 8-12 inches long, ½ inch wide. Rhizomes produce both sterile and fertile shoots. Sterile stems, which produce no seed heads, have hairy leaf sheaths; stems producing seeds are hairless. Inflorescence a compact, elongated panicle, 6 to 8 inches long however, the quantity of viable seed produced by this plant makes it impracticable to use seed for planting. Citrus maidencane has not shown susceptibility to disease or insects.

Citrus maidencane will grow in a wide variety of soils varying from mineral to peat. It is a good indicator of fresh marsh conditions.

Anticipated Conservation Use: The potential use of Citrus Germplasm maidencane is controlling erosion along ponds, stream banks, shorelines, channels and as a native forage for use on moist areas of improved pastures and rangelands. Evaluations have shown this

germplasm to be more beneficial than other native species in controlling erosion because of its rate of spread and height. When used for pasture and rangeland, evaluations have shown the Citrus Germplasm produced three times more high quality forage than other native maidencanes, or the released cultivar 'Halifax'. Overgrazing can be detrimental to maidencane, especially if sites are abnormally dry. Nutrient uptake on wastewater application sites is another conservation use where this germplasm has shown great potential.

Selection Method: Citrus Germplasm maidencane was selected from an original assembly of 121 accessions collected throughout the State of Florida in 1970 and 1971, for its leafy to semi-erect growth habit and rate of spread. Evaluations at the Florida Plant Materials Center, and off center plantings, have shown PI-421993 performed better than other accessions of native maidencane, and as well or better than the released cultivar 'Halifax'.

Potential Area of Adaptation: Wet or moist areas throughout the State of Florida.

Management: Field production can be established with mature stem material or rhizomes.

Leaf and stem material may be cut and used for mid-summer planting of material on moderately well drained to poorly drained soils. A period of almost daily rainfall should be selected for this type planting. The material should be distributed on well prepared soils and embedded by means of a disk or roller chopper. When disked into the soil about 1/4-1/3 of the stem materials should be left exposed. One to one and one-half tons of top material should be used per acre. Care must be taken to prevent drying out of these materials until the planting is well established.

Well developed, fleshy and vigorous rhizome materials may be used for summer or winter plantings. Similar materials may be used in spring or autumn plantings if irrigation is available. For quick stand development, plant in a shallow furrow and cover about 2 inches deep, or spaced about one foot apart. Lay the rhizome pieces end to end in the furrow, or spaced with one foot intervals between the rhizome pieces (25-30 bushels per acre). Moist soil should be used for covering the rhizomes and the planting should be prevented from drying out until well established. Once well established, the maidencane is very drought tolerant and will respond quickly to renewed rains.

Digging or harvesting of material should not occur until the end of the second growing seasons, or until the field is well established.

Release Justification: Currently the released cultivar ‘Halifax’, from the state of Mississippi, is the only maidencane commercially available. There is a need for a maidencane native to Florida. Citrus Germplasm maidencane has been developed to meet this need.

Source Material Maintenance: Foundation stock (stem material or rhizomes) is available from the Brooksville Plant Materials Center, Brooksville, Florida, to commercial producers. Citrus Germplasm maidencane production blocks must be established from foundation materials distributed by the Brooksville Plant Materials Center.

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Approvals:

State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Gainesville, Florida

Date

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

Date

Plant Performance

Defuniak Springs – Borrow pit planting in Plinthic fine sand subsoil of the Troup soil series, in ten foot rows with plants one foot apart and rows five feet apart. Planting established during 1983.

<u>Accession</u>	<u>Tolerance</u>		<u>Leaf</u>	<u>Stems per</u>		<u>Basal</u>	<u>Foliage</u>	
	<u>Vigor</u>	<u>Heat</u>	<u>Drought</u>	<u>Abundance</u>	<u>Plant</u>	<u>Spread (cm)</u>	<u>Width (cm)</u>	<u>Height(cm)</u>
PI-421992	5	4	6	5	6	13	60	57
PI-421993	5	4	4	5	30	30	60	75
'Halifax'	5	5	7	5	8	13	75	60

Rated 1-9: 1 = excellent, 9 = very poor

Ocala Pine Oaks Golf Course – Wastewater Application Site

The following accessions were established on this site during 1990

PI-421993

PI-421992

'Halifax'

In all plantings, the native Florida accessions were superior to 'Halifax'. 'Halifax' spread well but produced less than half the above ground growth compared to the Florida native materials. Fresh weight estimates of yields for the two Florida accessions are about 20 tons per acre while 'Halifax' produced only about 6 tons.

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