

Availability of Plant Materials

Foundation seed is being maintained by the USDA-NRCS Cape May Plant Materials Center. Parties interested in obtaining 'Carthage' for increase purposes should contact the center.

Karl Graetz collected 'Carthage' switchgrass in 1957. Karl realized the potential of this material and made numerous plantings and evaluations throughout the Mid Atlantic States. This release is dedicated to the memory of Karl Graetz who passed away in December of 1998.



To request plant stock or further information, contact:

USDA-NRCS
Cape May Plant Materials Center
1536 Route 9 North
Cape May, NJ 08210
phone: (609) 465-5901
fax: (609) 465-9284

For information on-line:

Visit the Plant Materials Program or NRCS websites to learn more about using plants to address conservation problems.

<http://Plant-Materials.nrcs.usda.gov>
<http://www.nrcs.usda.gov>

Revised July 2007

**USDA is an equal opportunity provider
and/employer.**



'Carthage' switchgrass

(Panicum virgatum)



Released by

**Cape May
Plant Materials Center
Cape May, New Jersey**

‘Carthage’ Switchgrass

‘Cathage’ Switchgrass (*Panicum virgatum* L.) was released by the Cape May Plant Material Center in 2006 as a cultivar. It is primarily used for forage and pasture. Its secondary purpose is for wildlife habitat, land restoration, and critical area planting.

Description

‘Carthage’ is a native, perennial warm-season grass that has been tested by the Cape May Plant Materials Center for over 25 years. This selection shows better than average spread, a higher forage nutrient value, and earlier spring recovery than current Midwest selections of switchgrass being used in the Northeast. Agricultural Research Service studies from Penn State show ‘Carthage’ as having very good yields of high quality forage with excellent stand persistence. The good seedling vigor and outstanding leafiness are the most desirable traits of this release. Because it matures late compared to other varieties of switchgrass, it complements cool-season forages for mid to late summer use. Seed production is fair but can be improved by good management. At maturity, it typically reaches a height of four to five feet.

Method of Selection

Seed from a single plant was collected in 1957 near Carthage, North Carolina. This material was multiplied vegetatively. Open pollinated seed from isolated material formed the initial

germplasm for multiplication. The Carthage collection was selected from four accessions in a multi-center switchgrass strain trial.

Anticipated Conservation Use

‘Carthage’ may be used for wildlife habitat, buffers, pastures, and as a component of native plant mixes

Area of Adaptation

‘Carthage’ is well adapted to the growing conditions of the Middle Atlantic States, but its northern limit is undetermined.

Optimum soil type is a loamy or sandy well drained soil, however, it will also grow on poorly-drained soils.



Establishment

Switchgrass seeding is best done by drilling into a well-prepared conventional seedbed or no-till into a killed sod at a ½ inch depth. If seed is broadcast, lightly rake and cultipack the site to provide good seed to soil contact. Solid stands of switchgrass are established using 8-10 pounds of pure live seed (PLS) per acre. In a mixed seeding with other warm-season grasses, the rate would be lowered to 4-6 pounds per acre. The optimum seeding time is mid-April to mid-June. If early cool-season weeds are a

problem, suppress weed competition and plant towards the later end of the seeding window (late spring to early summer). On sites where weeds are not a problem, an early spring seeding (April) is best. Fertilization should be with a moderate range of phosphorus and potassium as determined by a soil test. The pH should be adjusted to a range of 5.5 - 6.5. Amendments may be applied prior to, during, or after seeding. Nitrogen should not be applied at seeding time, however, may be applied to the stand after green-up of the second growing season at 50 pounds per acre.

Management

Switchgrass seedlings are slow to establish relative to the cool-season fescue and ryegrass. Stands that appear poor the first year will most likely improve the second growing season. Two or more years may be required to establish productive stands for forage. Weed Control: Mowing to a height of 4-6 inches is often effective if done three to four times the first year. Atrazine may be applied 4 to 6 weeks following seeding at a rate of two pounds per acre of active ingredient. Broadleaf weeds may be eradicated with 2,4-D or Banvel, however do not apply until switchgrass seedlings have at least four leaves.

Hay/Grazing: Do not graze the first year. Begin grazing in a rotational system when switchgrass plants are 18-24 inches tall. Graze no lower than 8-10 inches and allow the plant to recover to 24 inches before utilizing again.