



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

Timber Germplasm switchgrass

Panicum virgatum (L.)

A Conservation Plant Release by USDA NRCS Cape May Plant Materials Center and the Rutgers University Agricultural Experiment Station



1 Timber Germplasm *Panicum virgatum* (L.)

Plant Description

Timber Germplasm switchgrass (*Panicum virgatum* L.) is a native, perennial warm-season grass. Genetically, it appears to be a lowland type similar to the cultivar 'Kanlow'. It grows to a height of 6-8 feet (2.0–2.7m) and spreads by short rhizomes. Foliage height of mature plants is mostly between 5 and 6 feet (1.7-2 m), the panicle is open with a length ranging from 21-24 inches long (54-61 cm), often extending to a height of 6 to 8 feet (1.5-2.7 m).

Source

Timber Germplasm is a high biomass yielding switchgrass selection from six experimental synthetic lines received from North Carolina State in 1991. The six switchgrass lines were established at the Cape May PMC and taller, higher yielding individuals were selected for the composite collection.

Conservation Uses

This release is intended primarily for biomass production, however it may be used for general conservation if plant size is not an issue. Timber Germplasm has the potential to produce about 8 tons/acre of biomass under ideal growing conditions. However, in most seeded trials in the Mid-Atlantic, estimated yields are between 5-6 tons/ac.

Area of Adaptation and Use

Timber Germplasm switchgrass is adapted to a range of soils conditions from wet to dry in the Middle Atlantic region of the country. Optimum soil type is a loamy to sandy, well drained soil however it will also grow on droughty to somewhat poorly-drained soils

Establishment and Management for Conservation Plantings

Switchgrass seeding is best done by drilling into a well-prepared conventional seedbed. If this is not possible you can no-till seed into a killed sod at a ½ inch seeding 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 5-8 pounds of pure live seed (PLS) per acre. In a mixed seeding with other warm-season grasses, the rate would be lowered to 1-3 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 accomplished to reach 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 it, may be applied to the stand after green-up of the second growing season at a rate of 50 pounds per acre.



2 Second year of establishment from seed.

Switchgrass seedlings are slow to establish relative to the cool-season grasses. 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 seed production.

Weed Control: Mowing to a height of 4-6 inches is often effective if done three to four times the establishment 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.

Ecological Considerations

Switchgrass can spread, especially in a wildlife planting, and reduce growth of other native warm season grasses such as big bluestem, indiagrass and little bluestem. Cultivars have been reported to dominate and reduce native plant diversity in natural plant communities and restoration sites.

This plant may become weedy or invasive in some regions or habitats and may displace other vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, state natural resource, or state agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at <http://plants.usda.gov>.

Seed and Plant Production

Stands are successfully established by seeding. This germplasm does not appear to have any dormancy issues and is relatively easy to establish.

Availability

For conservation use: Limited quantities of seed are available for conservation plantings from specialized seed growers.

For seed or plant increase: Foundation seed can be obtained from the Cape May PMC for the purpose of large-scale increase.

For more information, contact:
USDA-NRCS
Cape May Plant Materials Center
1536 Route 9 North
Cape May Court House, NJ 08210
phone: (609)465-5901
fax: (609)465-9284
<http://plant-materials.nrcs.usda.gov/njpmc/>

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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