

Native Grasses

Introduction

Coastal grasslands are critical habitat for many rare and endangered species, which is why it is important to restore native grasses. Maritime grasslands are found within the coastal zone, where they are influenced directly by spray from the ocean and strong onshore winds. The grasshopper sparrow (*Ammodramus savannarum*), the upland sandpiper (*Bartramia longicauda*), and the northern harrier (*Circus cyaneus*), all rely on coastal grasslands. Other species like the American Kestrel (*Falco sparverius*), rough-legged hawk (*Buteo lagopus*), red-tailed hawk (*Buteo jamaicensis*), common barn owl (*Tyto alba*), and the bobolink (*Dolichonyx oryzivorus*) depend on grasslands for feeding. Development has been the most significant threat to coastal grasslands, and much of this once extensive habitat has been lost. Invasive, exotic species have degraded coastal grasslands, and the fire needed to maintain them has been suppressed.

Grasses are divided into two main categories, cool season and warm season. Cool season grasses produce most of their growth during the spring and late fall when soil and air temperatures are cooler. Most of the commercially available turf grasses used in the northeast are introduced cool season grasses.

Warm season grasses produce most of their growth during the hot summer months from July through September. They survive and adapt better than cool season species under conditions of drought and heat. The ability of warm season grasses to remain standing through the winter provides better nesting and winter cover than cool season grasses. Little bluestem, indiagrass, and switchgrass are among the characteristic warm season grasses native to this region. The term native is used here to mean grasses indigenous to the region at the time of European settlement. Due to the recent interest in growing native, warm season, coastal grasses, the availability of local and adapted species is increasing.

We have selected three species of grasses for you to try. All of these are common inhabitants of coastal environments and are easily propagated. They are little bluestem (*Schizachyrium scoparium*), indiagrass (*Sorghastrum nutans*), and switchgrass (*Panicum virgatum*). Since grasslands often have diverse wildflower communities as well, we are also suggesting you try planting seaside goldenrod (*Solidago sempervirens*).




Sea Grant
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Marine Program

Little Bluestem
turns orange
in the fall.



About These Species

Little Bluestem

Little bluestem is a native, perennial grass, which grows from 1 to 3 feet tall, in tufts or clumps. Its dense root system can reach 8 feet deep. Because it is quite drought tolerant and can withstand occasional flooding in coastal areas, it is commonly used on beaches for holding sand. In the fall it turns orange. For that reason it is sometimes used as an ornamental grass in home landscapes. It tolerates salt spray and wind, as well as dry conditions and poor soil. As a warm season grass it begins growth in late spring and continues through the hot summer period until the first killing frost. Basal shoots are bluish colored, hence the name.

Indiangrass

Indiangrass is native throughout the east, but not as common as bluestem. It is an excellent grass for use as food and cover for wildlife. It reaches a mature height of 3-8 feet. The blue green leaves are attractive — they are long and stiff, and produced in dense clumps. Like other warm season grasses, it turns a nice bronze color in the fall. It too is used as an ornamental grass in home landscapes. The flower head can be 8-12 inches in height. Although it grows best in deep, well-drained floodplain soils, it is highly tolerant of poorly to excessively well-drained soils.

Switchgrass

Switchgrass is found in prairies, open woods, and brackish marshes. It does well at the seashore. Song and upland game birds will feed on switchgrass seeds. It provides excellent spring nesting habitat. Switchgrass grows to heights of 3-8 feet. Leaves are 1-2 feet long. Like other warm season grasses, it produces clumps or bunches. It adds interest to winter gardens, and is planted as an ornamental for its shape and fall color.

Indiangrass reaches a
height of 3'-8'.



Seaside Goldenrod

Seaside goldenrod is a showy plant in the dunes and along marsh borders. It has bright yellow flowers in the fall. It is a smooth-stemmed goldenrod, usually 1-3 feet in height. It is typically found along the borders of marshes.

Planting Native Grasses

The type of planting chosen will depend on the scale of the project. For small-scale projects, it may be simpler to use grass plants rather than seed. The cost of using plants gets prohibitive in large-scale projects. Grass plants come in flats like those in which you buy other flowers and vegetables for your garden. It is also possible to buy large, individual grass plants in quart or gallon containers for ornamental landscape accent purposes. Some companies ship grass plants bare root, in the dormant stage. If bare root plants are purchased, be sure to keep the roots moist until planted (stick them in a bucket of water, or wrap the roots in a wet paper towel) or heel them into the garden soil for a day or two. It is best to plant grasses in the early spring, so that they can become established before the heat of summer. Grasses like full sun! They may require some irrigation for a short period of time; however, they require little maintenance once established.

The planting site will have to be prepared before planting time. If the area currently supports cool season turf species, you will need to remove them. This can be done with hand tools for a small area; for larger areas a sod cutter can be used. The sod

should be dug or cut and can be composted. Sod cutters are available for rent in many locations. Covering an existing lawn with black plastic mulch is a good way to kill fast-growing grasses that would otherwise compete with your native slow-growing grasses. It may take several weeks for the grass to die. A site can then be roto-tilled. Roto-tilling needs to be repeated several times to kill new plants that spring up on their own. If the site has quack grass or other plants with rhizomes, roto-tilling will not kill them. In some locations, it may be necessary to use a chemical herbicide to kill existing vegetation at the site. New types of herbicide are available that break down quickly, and are not persistent in the landscape. Before using an herbicide, one should contact Cornell Cooperative Extension Agricultural Program for advice.

Putting grass plants in the ground is not much different from planting any plant. Dig a hole large enough to accommodate the length of the roots and the width of the plant. If the grass plants are being taken out of flats or other containers, check to see if the roots have become root bound, or tightly wrapped around themselves. If so, gently break them apart before planting. Be careful not to plant the grass too deep. The crown of the grass plant should be level with or slightly higher than the soil level. Firm the soil around the plant with your hands, and water quickly. Adding mulch around the plant will help keep it moist. Spacing of 18 inches between plants is one guideline. Another is to space the plants as far apart as their expected height when mature. Stagger the plants for a more natural effect.

For larger projects, it is probably more cost effective to start native grasses using seed. Native grass seed is very fine. The seeders used to plant cool season grasses do not work well with warm season grasses. Seed drills are used with warm season grasses. Seeds need to be 'drilled' into the ground, about 1/2 inch deep. Competition from cool season grasses and weeds is a major cause of failure for this type of project and they must be controlled.

For a small-scale seeding project, it is possible to sow by hand. Sowing is done in the early spring. Seed should be mixed with a damp 'extender' such as sawdust or Kitty Litter. The normal ratio is four pounds of extender to one pound of seed. Seed should be broadcast in the patterns of a tic-tac-toe board, first in parallel rows, then in new rows crossing the first ones perpendicularly. The extender helps you see where the seed has landed. A guideline is one pound of seed per one thousand square feet. The seed should be raked into the soil to a depth of about 1/2 inch, and then the soil should be rolled with a water-filled lawn roller. Warm season grasses germinate and grow slowly. Seeded areas will need to be kept moist by regular irrigation. It usually takes two years before the grass looks good and fills in. The major challenges are the cool season grasses and aggressive weeds that will grow faster than the warm season grasses. These competitors will have to be cut. Setting the lawn mower blade tall enough to cut the weeds, while not cutting the warm season grasses will allow you to accomplish this.

Youth groups and environmental organizations should probably not attempt to establish larger areas of native grasslands without professional guidance and the proper equipment. A good place for guidance is the United States Department of Agriculture Natural Resource and Conservation Service office in Riverhead. (See 'Obtaining Help' on page 4, for address and telephone number.)

Once established, warm season grasses need maintenance. Historically, in natural ecosystems, periodic fires kept shrubs and trees from invading grasslands. Fire is still one of the tools resource managers use to maintain native grasslands. Fortunately, for restoration efforts, warm season grasses can also be maintained by periodic mowing.

Song and game birds feed on Switchgrass.



Seaside Goldenrod is thick stemmed.



Native Grasses

Planting Seaside Goldenrod

Seaside goldenrod is easy to grow in full sun or light shade. It will grow in ordinary soil, but will also grow on sand dunes. It is quite drought-resistant. In the fall, Monarch butterflies are often seen visiting seaside goldenrod. Try planting it along the borders of your grassland planting. It typically comes in a container as an individual plant. As described with the grasses above, remove it from the container, loosen the roots, and place it in a hole that allows the roots to spread out. Be careful to plant the seaside goldenrod level with the soil line. Irrigate and mulch after planting.

Other Resources

1. *East Coast Seashore Gardening with Native Plants*
R. Marilyn Schmidt.
Pine Barrens Press, P.O. Box 305, Barnegat Light, NJ 08006
2. *Long Island Native Plants for Landscaping: A Source Book*
Karen Blumer, 1990.
Growing Wild Publications, PO Box 275,
Brookhaven, NY 11719
516-286-0097
3. *Native Plants Naturally*
Available from Talmage Farm
2975 Sound Avenue, Riverhead, NY 11901
516-727-0124
4. *Taylor's Guide to Ornamental Grasses*
Roger Holmes, Editor. 1997.
Houghton Mifflin Company
Boston, MA
5. *Vegetating with Native Grasses in
Northeastern North America*
USDA Natural Resources Conservation Service
Plant Materials Program
(and additional fact sheets on native grasses)
See local contact at right side bar



and
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Obtaining Help

For more information and local suppliers of native grasses, contact:

**Cornell Cooperative
Extension of
Suffolk County
Marine Program,
3690 Cedar Beach Rd.,
Southold NY 11971
516-852-8660**

**New York Sea Grant
Extension Program,
3059 Sound Ave.,
Riverhead, NY 11901
516-727-3910**

**USDA Natural Resources
Conservation Service,
Riverhead County Ctr.,
Room N-210,
Riverhead, NY 11901
516-727-2315**



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