

NORTH CAROLINA SUPPLEMENT – 342-V-1

U. S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service

Technical Guide - Section IV
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CRITICAL AREA PLANTING – Coastal Dune Areas

Conditions Where Practice Applies

Along the coastal beaches where blowing sand is a problem and where there is a need to: (1) build protective dunes; (2) prevent damaging erosion of established dune areas; (3) prevent accumulation of sand over roads, walks, buildings, and other man-made works; and (4) impede sand encroachment and burying of sites already protected by perennial woody vegetation.

Specification Guide

A. Planting Stock

American beachgrass stems are used to establish plantings for stilling sand in beach areas. Three cultivars of American beachgrass are in commercial production: "Bogue," "Hatteras," and "Cape."

B. Planting

1. Date:

Plantings are made during the dormant season from about November 15 to April 1.

2. Plant Material:

Plants will be certified (or better) material and will be planted within 3 weeks of harvest. Harvesting and certification tags should be provided by grower. Culms will be a minimum of 14" long. Plants will be properly stored or "heeled in" until planted.

3. Methods:

Each plant, with two or three stems, is planted 4 to 6 inches deep. A good tool for this job is a narrow bladed short handle spade or tree dibble.

On large, level sites, mechanical tobacco planters modified for deep planting have been used successfully. In all cases, the sand is thoroughly firmed around each plant after planting.

4. Spacing of Plants:

For ordinary sand stilling on large bare sand areas, plants may be planted in 3' rows with plants 2' apart in the row. This is getting close to a maximum spacing, and amounts to 7,260 plants per acre.

Where the force of the wind is severe (such as "blowouts," guts between dunes, dune tops, etc.) use 1-1/2' rows with plants 1' apart.

5. Dune Building:

The vigor of American beachgrass enables it to grow up and through sand which drifts around it. Thus, dunes can be built by planting long parallel rows of grass. Such plantings are most often used to restore the frontal dune. Width of these plantings (number of rows) vary considerably. But, generally for a small group project or an individual cottager's undertaking, planting might vary from 12 to 24' wide. The rows are laid out so that the ones toward the center are closest. The middles get progressively wider toward both edges of the planting rather than pile up along the outside rows. Thus, a planting may have middles reading from outside to outside in feet: 3, 2, 1-1/2, 1, 1-1/2, 2, 3; a total of 8 rows, 14' wide. For a larger planting, add outside rows with 4' middles. All plants in the row are spaced 1-1/2' apart.

Dune buildings may be speeded up by using straw bales or installing a sand fence along the centerline of the proposed dune. Rows, as above, are planted when the sand is within a foot or less of the top of the fence or when the bales have been covered.

6. Use of Sea Oats:

In some areas, American beachgrass declines after several years. Consequently, the long lived sea oats should be introduced into the planting. This should be done in late March through May. Six rows at a 3' x 3' spacing is enough to introduce the sea oats on a dune building job. Sea oats are available from commercial nurseries. Local ecotypes are preferred. Stems are planted about 4"-6" deep with a third or more of the stem surface buried. Deep planting is the secret of success. Sea oats gradually spread and help restore the dune ecosystem.

7. Fertilization:

Tests on beach sands prove that nitrogen is the most needed element. Phosphorus gives some response. Added potassium gives little to no response. An ideal beach fertilizer analysis is 30-10-0. Such a mixture is sometimes available or could be mixed. Lacking that, 10-10-10 or similar fertilizer is acceptable.

Year of Establishment Broadcast:

15 pounds of 10-10-10 per 1,000 square feet
(or equivalent) two weeks after planting.

8. Maintenance:

Fertilize as above each April until good cover is established. Thereafter, fertilize as needed to maintain good cover and grass color.