

NORTH CAROLINA SUPPLEMENT – 342-I-1

U. S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

Technical Guide - Section IV
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CRITICAL AREA PLANTING – Sod

Conditions Where Practice Applies

Where perennial vegetative cover is needed sooner than can be established by seeding and/or where a very high quality turf is desired.

Specifications Guide

Limitations

Sod may be placed nearly any time of the year as long as moisture requirements are met and the ground is not frozen. Sod cannot be expected to provide erosion control and prevent soil slippage on a slope that is not stable because of its structure, water movement or excessive gradient.

Due to difficulty of successful maintenance on slopes steeper than 3:1, consider the use of low or minimum maintenance ground covers rather than grass sods. Where slopes must be steeper than 2:1, consider retaining walls rather than vegetative cover.

A. Sod Specifications

1. Nursery grown permanent sod one-year-old is preferred over native or pasture sod.
2. Sod should be free of weeds and undesirable coarse weedy grasses.
3. Sod should be of uniform thickness with a ½ to 1-1/2 inch layer to soil (excluding top growth) depending on species and season harvested.
4. Sod should have a compact root mat to assure mechanical strength and to assure early and firm anchoring to soil surface.
5. Only moist, fresh sod shall be used. The area from which sod is to be obtained should be mowed to a height of not more than 2 inches and raked free of grass clippings and debris.
6. Sod should be lifted, delivered, and installed within a period of 7 to 36 hours depending upon season and temperatures. It shall not be harvested when excessively dry or wet conditions may adversely affect its survival.
7. Sod should be cut into rectangular sections of sizes convenient for handling without breaking or loss of soil.
8. If cool season perennials are used, a sod of KY-31 and Bluegrass is preferred over a straight Bluegrass sod for critical slopes, droughty or shaded sites.
9. On hot, droughty areas and outlet channels, low-growing Bermudagrass may be preferable to cool season grasses. They should be installed during spring and summer months.

B. Site Preparation

1. Grade as needed and feasible to permit the use of conventional equipment for liming, fertilizing, and soil preparation.
2. Excessive water runoff must be controlled by well planned and installed needed erosion control practices, such as ditches, storm sewers, berms, diversions, sodded waterways, and desilting basins.
3. Resoil areas where excavation was made into clay material.

C. Soil Preparation

1. Apply 45 to 75 pounds per 1,000 square feet of pulverized dolomitic limestone and 12 to 25 pounds per 1,000 square feet of 10-10-10 fertilizer, or its equivalent. If soils are reasonably uniform, lime and fertilize according to soil test. Lime and fertilizer shall be spread uniformly over the area to be planted.
2. Harrow or disk lime and fertilizer into the soil to a depth of 3-4 inches. Continue tillage until a reasonably

uniform, fine, seedbed condition has been attained. Hand work may be necessary on odd corners or critical slopes. On sloping land, the final harrowing or disking operation should be on the contour where feasible. Any irregularities in the surface resulting from fertilizing, liming or tilling should be leveled prior to sodding.

3. Prior to sodding, clear the surface of all trash, debris, stones, roots, wire, stakes, and other objects that would interfere with planting or maintenance operations. If needed, firm the seedbed with a cultipacker or other tool.

D. Sod Placement

1. Soil Sodding

- a. Sod strips should be laid across slope, never up and down the slope, starting at the bottom of the slope and working up. On steep slopes, the use of ladders will facilitate the work and prevent damage to the sod. During periods of high temperature, lightly irrigate the soil immediately prior to laying the sod.
- b. Place sod strips with snug even joints. Open spaces invite erosion. Stagger joints. All joints should be butted tight in order to prevent voids which would cause air drying of the roots.
- c. Roll or tamp sod immediately following placement to insure solid contact of root mat and soil surface. Care should be taken to prevent the installed sod from being torn or displaced.
- d. On sloping sites and outlet channels, secure sod to surface soil with wood pegs, wire staples, or split shingles (8 to 10 inches long by 3/4 inch wide).
- e. Surface water cannot always be diverted from flowing over the face of the slope, but a capping strip of heavy jute or plastic netting, properly secured, along the crown of the slope will provide extra protection against lifting and undercutting of sod. This same technique can be used to fortify sod in water carrying channels and other critical areas. Use wire staples only to anchor jute or plastic netting in channel work.
- f. Immediately following anchoring, sod should be watered until moisture penetrates the soil layer beneath sod to encourage quick root growth. Irrigate as needed to prevent desiccation during the first growing season.

2. Spot Sodding

Each sod spot should be a minimum of 4 inches in diameter or square and spaced a maximum of 18 inches apart within the row. Sod spots within a row should be placed alternately and not directly opposite sod spots in adjacent rows. Sod pieces shall be even with the surface of the adjoining ground.

3. Strip Sodding

Sod strips should be continuous. Areas to be strip sodded should be fertilized, prepared and smoothed like solid sodding.

E. Maintenance

If soils are fairly uniform, lime and fertilize according to soil test. Otherwise:

1. Apply 60 pounds of pulverized dolomitic limestone per 1,000 square feet during late fall or winter every 3 to 4 years.
2. Topdress Bluegrass and Tall Fescue sods in early fall with a turf fertilizer such as 10-4-6 or 10-10-10. Additional fertilization in early spring with nitrogen or a complete fertilizer is usually needed to maintain vigorous healthy growing grass. Rates per application will range from 10 to 25 pounds per 1,000 square feet, depending upon the site. To reduce incidence of leaf diseases, do not use nitrogen on Fescue or Bluegrass from mid-April to mid-August.