

## Lawn Renovation

Renovation is the improvement of a turfgrass stand without complete reestablishment. Reestablishment refers to complete destruction of the old stand, thorough site preparation and replanting. Turfgrass renovation is necessary when the existing turfgrass has declined to a point where cultural practices will not revive the turf but complete reestablishment is unnecessary. Generally, if half or more of the area has desirable turf, renovation will succeed.

A number of factors can cause turfgrass to decline, including improper mowing, watering and fertilizing; poor drainage; soil compaction; excessive thatch; incorrect pesticide usage; and turf pests such as insects or weeds. Sometimes problems relate to growing a nonadapted grass species, excessive shade, tree and shrub root competition or winter injury. Excessive shade and tree/shrub root problems can sometimes be relieved by selectively pruning roots or limbs or by using a groundcover that may be more suitable.

### TIMING

Cool-season turfgrasses are best renovated during the early fall (September to October) at the beginning of their growing season. Trying to reestablish a cool-season turfgrass in the spring will not allow the lawn to mature before summer stresses appear. Warm-season turfgrasses are best renovated in the spring or early summer (April to June). Fall renovation of warm-season grasses often results in damaged turf due to winter injury.

### THE RENOVATION PROCESS

**Step 1:** Determine what caused the lawn to fail. Planting grass into a problem area without understanding the cause of that problem may result in another failed lawn.

**Step 2:** Have your soil tested. Contact a Clemson Extension office for soil sampling materials.

**Step 3:** Eliminate all undesirable weeds or turfgrass species. Identify the weeds for proper control. Your county agent will help in the identification and control

recommendations. Be aware that some weed control chemicals require a waiting period between the time of herbicide application and planting. The chemical label includes information about proper application.

**Step 4:** Mow the area lower than normal and remove the clippings, leaves and other debris by sweeping or raking.

**Step 5:** Remove excessive thatch. Thatch is a layer of partially decomposed plant material that builds up on the soil surface. Usually more than half an inch of thatch on general turf areas decreases turf vigor by restricting the movement of air, water, fertilizer and pesticides into the soil. Excessive thatch also restricts root development and provides a suitable environment for insect and disease pests. Thatch can be removed by a vertical mower or other means of dethatching, such as a power rake. This equipment is often available from rental companies.

**Step 6:** Cultivate the soil by coring or tilling to relieve soil compaction. A coring machine that removes a soil core is most effective. After coring use a vertical mower to help break up the soil cores brought to the surface. Coring is best done when the soil is moist because the tines will penetrate deeper.

**Step 7:** Apply fertilizer and lime according to soil test results.

**Step 8:** Seed, sprig, plug or sod new grass into the area. You may want to adjust the planting rates to agree with the percentage already in turf. For example, if half the area has good turf, reduce the recommended planting rate by a half. Be sure to get good seed-to-soil contact when planting by seed. Rake the seed into the soil or cover it by topdressing with a thin layer (a quarter-inch) of soil. When seeding into vegetation, drag the seed into the slits using an old carpet. In any case, firm the soil by light rolling. A light mulching is necessary where there is little existing grass or where erosion may be a problem. Some available rental machines cultivate and plant in a single operation. Vegetative materials (sprigs

or plugs) need to be planted into the soil. On small areas, use an axe or trowel to make a small opening for sprig or plug placement. Place sprigs or plugs 6 to 12 inches apart and firm the soil around them after placement. Any technique that places part of the sprig or plug below the soil surface is suitable.

**Step 9:** Apply water immediately after planting and keep the soil moist, not wet, until the seedlings or sprigs become well-established. This usually requires light, daily waterings for two to three weeks.

**Step 10:** Mow the grass when it reaches one and a half times its recommended height.

## CHEMICAL RENOVATION

Chemical renovation of turfgrass areas is usually required under one or more of the following conditions:

- The lawn is severely infested with weeds.
- Two or more turfgrass species are present.
- Existing turf cover is less than one-half the total area.
- A different turfgrass species is desired.

Undesirable vegetation (weeds, unwanted turfgrasses) must be eliminated from the lawn area prior to replanting the desired turfgrass species.

Mechanical methods, such as disking or rototilling will destroy existing vegetation and also prepare the soil for seeding or sprigging operations. However, disking or rototilling does not effectively control problem perennial weeds, such as common bermudagrass, bahiagrass and nutsedge. These weeds reproduce from various vegetative structures and can rapidly reinfest a newly renovated turfgrass area.

Chemical renovation with a herbicide is a viable alternative to disking or rototilling. However, if soil compaction, poor drainage, or low soil fertility are problems, mechanical tillage is necessary. With

chemical renovation, the level of perennial weed infestation is reduced and the potential for soil erosion is minimized. Chemical renovation involves the following:

- Apply a nonselective herbicide to control undesired vegetation.
- Remove the thatch and break up the soil surface by coring or vertical mowing.
- Fertilize and lime according to soil test recommendations.
- Seed or sprig the desired turf-grass species into the existing dead vegetation.

Glyphosate (Roundup®) is approved for chemical renovation of turfgrass areas. This is a nonselective herbicide and care must be taken to ensure that the spray mist does not contact desirable shrubs, trees, and flowers. Application rates vary according to the weed species present in the area. Also, the growth stage of the weed influences the control effectiveness of this herbicide. As true of any pesticide, a thorough reading of the glyphosate label is necessary for safe and effective use.

Excerpted from the *South Carolina Master Gardener Training Manual*, EC 678.

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