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 non-adapted grass species, excessive shade, tree and shrub root competition or winter injury. Excessive shade and tree/shrub root competition can sometimes be relieved by selectively pruning roots or limbs or by using a groundcover that may be more suitable. Areas affected by excessive shade may best be mulched and planted with shade-loving annuals, perennials or shrubs.

**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 occur. 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. Soil samples can be taken to your local Extension office. Please see [HGIC 1652, Soil Testing](http://www.clemson.edu/extension/hgic) for more information.

**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
grow 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.
Thatch is more of a problem on warm season
turfgrasses, such as bermudagrass, centipedegrass,
St Augustinegrass, and zoysiagrass.

**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 somewhat moist because the tines will
penetrate deeper.

**Step 7:** Apply fertilizer and lime or sulfur 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 re-infest 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 add lime or sulfur according to
soil test recommendations.
- Seed or sprig the desired turf-grass species
into the existing dead vegetation.

Glyphosate is labeled 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 turfgrass, shrubs, trees,
and flowers. Application rates vary according to the
weed species present in the area, but typically a 3%
solution of glyphosate will kill almost anything as
long as the weeds or grasses are actively growing. Most concentrate products are 41% glyphosate. Follow the label directions for use and safety.

Examples of glyphosate products in homeowner sizes include:

- Ace Concentrate Weed & Grass Killer
- Bonide Kleen-up Grass & Weed Killer
- Bonide Green Thumb 41% Super Concentrate Weed & Grass Killer
- Gordon’s Groundwork Concentrate 50% Super Weed & Grass Killer
- Hi-Yield Super Concentrate Killzall Weed & Grass Killer
- Martin’s Eraser Systemic Weed & Grass Killer
- Monterey Renuca Full Strength 41% Glyphosate
- Roundup Original
- Southern States Grass & Weed Killer Concentrate
- Tiger Brand Quick Kill Grass & Weed Killer
- Ultra Kill Weed & Grass Killer Concentrate
- Zep Enforcer Weed Defeat III
- Eliminator Weed & Grass Killer Super Concentrate

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


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