

Lawn Renovation in New York State

Lawn renovation is a process of improving an area by seeding into the existing sod. It is a selective tillage process that falls short of completely reestablishing the turf. Lawn renovation becomes necessary when the area has been damaged to the extent that it cannot recover with standard maintenance practices, such as irrigation and fertilization.

When a lawn is damaged beyond its capability to recover, some environmental or biological factor caused it. If the cause is not effectively dealt with, renovation may not be successful. Causes of turf deterioration may include poor drainage, thatch, compaction, excessive shade, unadapted grass species, disease, insects or other causes. Most of these problems can be corrected through renovation and proper maintenance.

The renovation method used depends on such factors as the amount of desirable permanent turfgrass species present, as well as the amount and kinds of undesirable grass, grass-like weeds or broadleaf weeds present. The thickness of thatch accumulation should also be considered. On lawns that have accumulated more than 1+ inches of thatch, renovation will probably not be successful. It then becomes necessary to remove all the existing sod and reestablish the lawn by seeding or resodding.

Regardless of the renovation method used, a soil test should be made before starting work. Soil testing provides valuable information on the nutrient status of the soil at a nominal cost. County extension offices have information on soil testing services.

Early fall is the best time to renovate a lawn. Cool temperatures, warm soils, and adequate rainfall are conducive to rapid germination. Spring renovation is also possible; however, weed competition and summery heat may threaten its success.

Partial renovation. Partial renovation is designed for areas containing more than 50% of desirable permanent grass species, containing no other perennial grasses, and having a thatch depth not more than 1+ inches.

1. All the weeds present in the area to be renovated should be properly identified. If only easy to kill weeds, such as dandelion and plantain, are present, 2,4-D may be applied. The area can then be seeded two weeks after application. If hard to kill weeds, such as chickweed or clover, are present, then 2,4-D should be applied in combination with dicamba or MCP. A 6-week waiting period is required before seeding can begin.
2. Mow the area as short as possible (3/4 inch), removing all the clippings. This is to ensure that the germinating seedlings obtain enough light to support their development.
3. Thatch must be removed by mechanical means. Power rakes are available from many garden equipment rental outlets. Power rake the area in four directions (including diagonally) or as many times as necessary to remove the accumulated thatch. Rake off all the debris.

4. Mechanical core aerifiers remove plugs of soil from the turf area and redeposit the soil on the surface. Core aeration is an excellent means of preparing a seedbed and alleviating soil compaction. If a core aerifier is available, aerify the lawn a minimum of six times, altering the direction each time.
5. Fertilizer and lime should be applied in accordance to soil test recommendations. Where a soil test has not been made, apply 10 pounds of triple superphosphate (0-46-0) per 1,000 square feet. Immediately prior to seeding, broadcast 20 pounds of 10-5-5, 10-6-4 or 20 pounds of 16-8-8 fertilizer, or the equivalent per 1,000 square feet. The fertilizer should be turf grade, having an approximate 2-1-1 ratio and containing at least 35% of the total nitrogen as water insoluble or controlled release nitrogen. As an alternative, 7 to 8 pounds of a 13-25-12, 10 pounds of a 10-10-10, or 5 to 6 pounds of an 18-46-0 farm grade (water soluble nitrogen) fertilizer may be applied per 1,000 square feet. Use of a water soluble fertilizer will necessitate refertilization after 6 to 8 weeks of growing weather. Work the fertilizer into the soil by dragging the area with a large doormat or piece of chainlink fence.
6. Seed the area with high quality seed of the permanent species best adapted to the environmental conditions of your area. For sunny areas, a blend of two to five Kentucky bluegrass varieties is recommended. Improved varieties that have done well in New York include Adelphi, BenSun, Bonnieblue, Bristol, Fylking, Glade, Majestic, Ram I and Touchdown. See information bulletin 190, Home Lawns: Varieties and Pest Control, for more information. Kentucky bluegrass should be seeded at a rate of 1 to 1+ pounds of seed per 1,000 square feet. To obtain a relatively fast cover with spring seedlings, an improved cultivar of perennial ryegrass may be added to the mixture in amounts not to exceed 20% of the total mixture. Fall seedlings of Kentucky bluegrass establish quickly. Therefore, bluegrass-ryegrass blends should not be planted at this time. In partially shaded areas, use a mixture of 50% chewings, hard or red fescue and 50% Kentucky bluegrass. Heavily shaded areas may be seeded with 100% chewings, hard, or red fescue at a rate of 4 pounds of seed per 1,000 square feet.

A turf-type disk seeder is the best tool for seeding. This machine cuts grooves into the soil and deposits the seed in the groove, insuring good seed soil contact necessary for rapid germination and establishment. When no seeder is available, broadcast the seed uniformly over the area. The total seed quantity should be halved, sowing one half in one direction and the other at right angles to the first. Drag the area again to work the seed into the seedbed.

7. If this area has history of crabgrass problems, and the area is being renovated in the spring, siduron (Tupersan) is an effective herbicide for pre-emergent crabgrass control that is safe in the seedbed. It is available to the homeowner only in starter fertilizers with crab grass preventer (siduron). Do not use regular turf fertilizers with crabgrass killer! Apply the material according to the label directions.
8. To help retain moisture and promote germination, mulch the area with a light application of straw (1 to 1+ bales per 1,000 square feet) or reed-sedge peat. Care must be taken not to apply a layer of mulch so heavy that it smothers the existing grass.
9. Lightly irrigate the area when dry. Irrigation should only be sufficient to moisten the surface. Avoid runoff!

Total renovation. This program is designed for areas containing less than 50% of desirable grass species and having a thatch depth of not more than 1+ inches.

After omitting one regular mowing, apply glyphosate (Roundup or Kleenup) according to label recommendations. Allow 7 days before renovation, and then follow steps 2 through 9 in the above program.

Turfgrass renovation is time consuming and expensive, and it is only the first step in having beautiful turf. A sound management program must be followed to insure continued improvement on the turf.

Every effort has been made to provide correct, complete, and up-to-date pest management information for New York State. Changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Trade names used herein are for convenience only. No endorsement of products is intended, nor is criticism of unnamed products implied.

Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied.

****HOME REMEDIES: These remedies are not endorsements by Cornell University of any product or procedure. They are not recommendations for use either express or implied. Neither Cornell University, nor its employees or agents, are responsible for any injury or damage to person or property arising from the use of this information.**

12/1988 Prepared by Norman W. Hummel, Jr.
 Extension Turfgrass Specialist
 Cornell University