

Establishing new turf: Seeding or Sodding can do the job

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Even though there is no "perfect" bluegrass, there are quality varieties available for aesthetic, athletic or industrial turf use. Turf established from quality grasses will provide fewer problems at less expense in labor and materials. Turf generated from poor quality seed or varieties can never produce quality turf.

The quality result we all demand begins with the discovery of an individual grass variety more than a decade before the professional turf market ever realizes it.

Once selected the new grass is watched closely under natural growing conditions or in the greenhouse. Before a grass is tested outdoors, there must be enough seed to establish plots. Therefore, after a greenhouse evaluation, the most promising plants are moved outdoors into clone fields where they produce seed. Hopefully, each clone will only require two years to produce enough seed to plant 20 square feet of a test area. Those grasses which advance are established in three plots measuring 2 x 5 feet. One half is mowed at two inch height while the other half subjected to a mowing height of 3/4 inch. These preliminary test plots are fertilized four times annually and do not receive the benefit of any pesticides or irrigation. Each plot is evaluated periodically for its color, texture, density, growth habit, disease resistance and drought tolerance.

A tremendous amount of research, time and testing goes into the development of a new grass variety. Still there is no "super grass" on the market today. Disease, insect and other pest problems exist now and will exist in the future. For this reason it is essential that the turf manager do the best job of initial turf establishment in an attempt to bring to maturity, hopefully within the first growing season, a dense, thick, green carpet of turf. I cannot overstate that the healthier each grass plant is, the more it will be able to resist the encroachment of bothersome turf pests.

When considering the establishment of turf seeding, our first concern should be to apply quality seed. This seed should come from a reliable vendor, and it should have been tested thoroughly for weeds, crop content and the amount of inert matter. Because of the age and intent of early seed labeling laws, modern day seed labels do not provide the seed purchaser with adequate information regarding the cleanliness of the seed for turfgrass use.

In the early 1900's seed labeling laws were established for farmers who did not blend seeds together and who had different weed problems than those today. Seed labeling laws address themselves to agricultural type rather than turf problems. For this reason, the seed buyer must rely of the credibility and reliability of the seed vendor. Simply put, there are no bargains in grass seed. You do get what you pay for. Because of the enormous cost involved in seed production, clean, high quality, vigorous grass seed cannot be obtained at bargain prices.

Having obtained quality seed and determined the seeding rate which will provide enough seed for a good stand of turf, the turf manager should follow prescribed and proven seeding procedures. First, prepare an adequate rough grade, paying special attention to the slope of the ground. This is critical guaranteeing adequate drainage after the turf has matured. For this task, a bulldozer is normally used. Second, establish a coarse-textured finish grade. Many times, a roto tiller can be used in small areas while larger, tractor drawn equipment is easier and quicker in open areas.

Now is the time to remove rocks! Don't leave debris behind which could endanger someone who must later mow the young turf. Third, apply seed through a drop-type spreader if possible. Rotary spreaders may be used on large turf areas but should only be used as a last resort and on a calm day. Be sure when using the drop-type spreader to overlap at least the width of a wheel. Avoid the embarrassment of mis-strips 2-3 inches wide which can take as much as a year or more to fill in. Fourth, after applying the seed in one direction with the drop spreader, make an application of a high phosphorus starter-type fertilizer in the opposite direction. This will insure that you don't confuse spreader tracks. This

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Seeding or Sodding

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starter-type fertilizer should be a complete fertilizer of a slow release type.

There is no need to till starter fertilizer in. Tests have shown that surface applications do an adequate job of turf establishment because of the ability of the plant to take up and translocate nutrients to the deepest growing portion of the roots. It would be a mistake to apply nitrogen only or a high nitrogen fertilizer to germinating plants. The primary nutrient required by seedling turf is phosphorus. Even if phosphorus levels seem adequate, I would still recommend a high phosphorus slow release type fertilizer as the phosphorus in the soil may be unavailable for a variety of reasons.

A soil test would be a wise investment prior to seeding. Many good labs can provide helpful information in this respect. At times, I recommend as a fifth step, light dragging of the seed. The purpose is to jiggle the seed down around the coarse-textured soil particles to a depth of about $\frac{1}{4}$ of an inch. A flexible doormat or piece of chain-link fencing will do an adequate job when used for dragging purposes. The seeds lodge around the coarse particles and do receive some protection from excessive exposure to sun and wind. Water is also preserved in these crevices for a longer period of time and is more available to the germinating seeds. Sixth, mulch is considered an option. In the northern 2/3 of the United States between May 15 and September 1, I would recommend a light straw mulching except in areas on the East Coast where salt hay is available.

Of course, the objective of applying a mulch is to both protect the seed from drying winds and preserve available water as long as possible.

For this reason, three or four pieces of straw coming together at any one point is very adequate. Many people make the mistake of applying too much straw and actually burying the seed. Peat moss makes a poor mulch since it absorbs and holds the water making it unavailable to the seed. Mulch, of course, is highly recommended on sloped areas where wash is expected.

My further recommendation on sloped areas would be simply to install sod. Seventh, be sure to keep the top $\frac{1}{4}$ inch of soil damp. It is not mandatory to soak the seedbed. As long as frequent waterings are applied for as short a period of time as 10 minutes the seed coat will be kept damp. This is the most important factor. Germinating seedlings cannot dry out totally and live. It is also good to remind ourselves that watering must be continued for at least one month.

This is especially true where blends are used and for example, in the case of a ryegrass/fine fescue/bluegrass blend, the ryegrass will be visible within one week. The fescue within 12 days and the bluegrass perhaps not for at least two weeks. In this event, many people make the mistake of watering for the first two weeks until they see what appears an adequate stand of grass, which is, of course, made up only of ryegrass and fine fescue. They then cease watering and the bluegrass may not survive. Eighth, follow-up with a repeat of high nitrogen fertilizer in 4-6 weeks.

This is important because the turfgrass plant is now shifting its nutrient requirements from predominantly phosphorus to predominantly nitrogen where it will

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remain throughout the life of the grass plant. We believe that the fertilizer should be of a slow releasing type in order to insure minimum burn potential to the young seedling turf and the long lasting characteristics which produce economies.

Where time does not permit, sodding may prove to be the best method of turf establishment. Again, as in the case of seeding, we must buy quality sod. First, be sure to buy your sod from a reputable grower. This is something that can easily be checked. Ask people who have purchased from the grower before, go look at the turf areas, evaluate the work he did, and evaluate the quality of the turf areas several months after it was installed.

Is it weed and disease free? Did the sod contain other bothersome turf pests? These are questions which must be answered. In terms of the procedures to follow in laying sod, make sure that the grade or slope is as adequate in every way as if you were establishing turf by seed. Remember, once the sod is down, there is no way to go back and change the grade or slope. You must live with the drainage you have created. As you lay the sod, make sure that the ends of the strips are staggered and do not line up evenly across the turf area.

This is a practice followed by most good sod layers to insure that if any problems develop at the end of a strip it is not obvious for more than 12 inches. Be sure that the seams are pulled tightly together as the sod is placed on the soil. As you move across the turf area, be sure to stand back occasionally and look for low spots as this again is your only chance to establish a level surface more pleasing to the eye and easier to mow at a later date.

Having laid the sod, start watering immediately. In fact, I would recommend that you start the sprinkler as soon as there is enough sod on the ground to handle the sprinkler's pattern. As in the case of turf establishment by seed, we recommend the use of a high phosphorus starter-type fertilizer which may be applied either before or after the sod is laid. Although the grass plant's roots are somewhat mature, a high phosphorus fertilizer still helps promote the strongest, quickest knitting of the sod to the soil. Again, follow-up maintenance should be basically the same whether seeding or sodding. The primary difference in procedures would be that in the case of turf establishment by sodding, fewer and heavier waterings are recommended. In the case of sod, we should soak the new turf well rather than just dampening the upper surface.