

Smoothing out THE ROUGHS

Step-by-step account of how one Chicago-area golf course keeps rough areas attractive with healthy turfgrass.

By BRAD ANDERSON, CGCS

Growing good roughs starts with drainage at Midlane Country Club. Cart traffic over wet soil causes thin and patchy cover in our roughs.

The best method of draining rough is to alter the surface grade with a well placed swale, but in nearly every case the topography doesn't permit it. Our only alternative then is the installation of an underdrain system. Here's how it works:

Survey to identify the low spots. Flag low spots to designate the installation of surface risers.

Place off various trenching routes to find the one which connects the low spots in the least linear feet. Paint the route on the turf.

Wire track the trenching route. Paint hash marks where irrigation lines or wires will be crossed.

Find the closest point of discharge and survey for a minimum of 1 percent grade. In the event of having nothing close to dis-

charge into, I find the nearest swale to daylight the water back to the surface. Daylighting water hasn't been a problem as long as it's channeled into a swale which is outside of the natural flow of golf cart traffic.

Install tile and gravel to trench. Add vertical risers to the low spots. A well placed riser will evacuate the water before it has a chance to puddle, and saturate soils.

Seed bare areas in the following sequence:

- ▶ core aerify two to four times with $\frac{3}{4}$ -inch tine,
- ▶ level off depressions with C.E.C.-

rich, pulverized topsoil,

- ▶ hand-rake level,
- ▶ apply starter fertilizer,
- ▶ drop seed at a rate which lays down at least 10 seeds per square inch,
- ▶ hand roll with 50-gallon roller,
- ▶ cover with straw or fabric,
- ▶ rope off and irrigate for establishment.

For a seed mix I like to use (by seed count) 70 percent bluegrass and 30 percent fine fescue. The bluegrass is very slow to germinate, but the fescue is up in six to eight days, stabilizing the soil. During the



Members at Midlane Country Club get a colorful and attractive first impression as they approach the club house in anticipation of an enjoyable couple of hours of golf.

first year the bluegrass makes up as little as 25 percent of the stand, but with each successive application of nitrogen the bluegrass pushes the fescue out. This gives me complete control over what percentage of bluegrass I desire in my rough.

In our part of the country (northern Illinois), ryegrass is susceptible to crown dehydration in winter, and pythium blight in summer. Because of this it shouldn't be used in areas where drainage is a problem.

Having evacuated the water, and re-grassed the areas which are bare from poorly drained surfaces, my next step is the reconditioning of the underlying soils. For the last four years I have been working at this process with a tractor-drawn core aerifier. We have aerified all of our rough with one-inch tines at least twice. We usually wait to aerify rough until the second week of October because it's such a messy process. We continue to aerate right up until the ground freezes.

The next thing we address is fertilization. The fertilization of rough is a two edged sword. If rough is under-fertilized, it will not stand up to traffic and weed invasion; if it is over-fertilized, it can become expensive to keep up with the mowing.

It has been my experience that the manhours associated with mowing areas treated with higher-grade, slow-release nitrogen sources are proportionately less than that required to keep up with the mowing of areas treated with cheaper more soluble sources.

Rough fertilization should be done with quality materials, applied by someone with a good eye for determining where the product needs to be put down. Applications should be limited only to those areas which are weak from cart traffic and nutrient deficient soils. Wall to wall applications usually end up over stimulating healthy areas to the degree that overtime mowing is wastefully incurred. Another downside of wall-to-wall fertilization is the amount



Brad Anderson's rough improvement program focuses on reconditioning poorly drained and compacted soils.

of time and product required to combat algae and pond weeds associated with nitrogen and phosphorus runoff.

I have had the best results with an early May, 275-lb.-per-acre application of a 16-16-24 analysis, comprised of methylene urea, diamonium phosphate, and sulfate of potash. The high rate of diamonium phosphate builds density, and gives the turf a jump start in spring. The methylene urea gives me an even rate of release right into mid summer. In fall I might make another application of a 1-0-1 analysis if I feel it's needed.

It's of merit to note that the areas of our roughs which are irrigated rarely ever require fertilization. In addition, these same areas require very little herbicide application for weed invasion. This should be a consideration for anyone who is in the planning stages of a new irrigation system. How much time and material is spent on fertilizing and spraying non-irrigated rough? Will the installation of sprinklers in

those areas effect a significant payback savings in product application over a reasonable period of time?

Occasionally an area of rough is heavily shaded. It's almost impossible to grow hardy rough turf in the kind of shade that we have on some of our golf courses. If the trees can't be thinned to allow more sunlight to reach the turf, then we must either rope off the shaded area, mulch everything under the dripline of the trees, or install a cart path to direct traffic through the shade.

Bentgrass is a wonderful fairway turf, but as a rough grass it's probably the worst. The challenge of keeping bentgrass out of our roughs is especially difficult by virtue of the fact that it's stoloniferous and inclined to spread outwards from the fairway edges.

In the future we will be able to apply a chemical to remove bentgrass from rough, but experimentation of the formulations is still in research and development. For now, the only effective way of removing bentgrass from our roughs is to physically remove it with a sod cutter.

In summary, my rough improvement program is predicated on the reconditioning of poorly drained and compacted soils. Starting first with a drainage system that will evacuate water as quickly as possible, thus reducing the compacting effect of traffic over saturated soils, followed by an aeration program for opening up the soil, and finally a fertility and herbicide program that's customized to give various zones what they need, no more and no less.

If these programs are not equal to the wear and tear of golf carts, then the only remaining alternative is asphalt paths. Now we're dealing with human nature which presents a new set of problems. **LM**
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