No-Mow Rough Management

Converting a portion of the managed rough to unmown turf can reduce overall maintenance costs at any golf facility, but several timely management practices are required to prevent an eye-catching playing area from becoming an eyesore.

BY MARK G. GRUNDMAN

While the concept of reducing maintenance inputs in golf course roughs is nothing new, it really picked up momentum in the early 1980s with the increased use of fine fescues and native grasses. Native grasses are those that originated as a true native grass to each region, while fine fescues are those originating from other regions of the world and adapted to a given growing environment. These grasses can reduce, albeit not eliminate, maintenance costs for unmowed roughs. When the right turfgrass species and management structure are in place, the end result can produce a playing surface desired by both superintendents and golfers.

Optimal growth for each species requires specific soil types and growing conditions. The first step is to test the soil for nutrients and pH. Once this information is reviewed, deficiencies can be corrected and specific grasses or forbs can be selected that have the ability to thrive at your course. For example, a number of grasses can tolerate high levels of calcium and pH (e.g., Audubon creeping red fescue), while others are more tolerant of excessive drought conditions (e.g., Inferno tall fescue or Rush II Kentucky bluegrass).

When considering native areas for roughs, growing conditions such as mesic, xeric, wetland, or woodland growing environments will determine the seed formulations used. Seeding with natives should be done on a PLS (pure live seed) basis only. Height of the grasses and whether or not you can regularly burn the site should also be considered. Without proper management, areas planted to native grasses tend to be too dense, weedy, and aggressive. I find that when used properly, burning can control these con-

(Above) A 50/50 mixture of sheep and hard fescue along the perimeter of a bunker can produce a look that accents the hazard without compromising the playability of turf in the surrounds.

(Left) Fine-leaf fescues, such as this 50/50 mixture of sheep and hard fescue, can stabilize steep slopes, especially those that are beyond the reach of irrigation coverage.

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Fine-fescue roughs will struggle to compete with other grasses under wet soil conditions. Note the increased density and encroachment of undesirable grasses around the outfall of a tile that drains an adjacent housing development.

Most golfers desire a thin, wispy unmowed rough that provides an opportunity to find an errant shot and advance the ball either toward the hole or back into the fairway. Proper grass selection and management can produce turf that meets these expectations.

cerns. If burning is not a viable option, other species should be considered.

If the rough area at your course is under new construction or reconstruction and has not been disturbed for a number of years, the possibility of using existing native or fine fescue grasses does exist. If native or fine fescues still exist on site and have built up a seed bank in the soil, propagation should be done to bring these grasses back. If, after a period of time, the desired grasses do not return, interseeding with appropriate equipment can be done to supplement the existing base of natives and fine fescues.

A combination of fine fescues and native grasses or a combination of fine fescues can be utilized to achieve the same results as native-only roughs. Fine fescues do extremely well under low to medium management programs. With proper seeding rates, fertilization, and timely irrigation during establishment, fine fescues can be the answer to reducing maintenance costs in the more out-of-play areas of the course. A mixture of sheep, hard, Chewings, and creeping red fescues seeded at 125 to 250 pounds per acre can provide a functional, low-maintenance rough with the visual "wow factor" golfers desire. This same combination can also help control erosion on severe slopes

If lower-growing grasses are desired, especially in primary roughs that are in play, in front of tees, or on the banks of tees or greens, a combination of hard and sheep fescues would be a good choice to help reduce overall maintenance inputs. This same combination can be utilized in areas where ball retrieval in roughs is of high priority. Seed this blend of grasses at a rate between 30 and 90 pounds to the acre. The addition of slender creeping red fescue to the blend of hard and sheep fescue will improve wear tolerance, especially in sites that are rarely mowed or irrigated.

Fine fescues require a regimented, albeit low-maintenance, management program. Mow these roughs once every one to three years to prevent the undesirable accumulation of plant debris. Mowing also stresses the plants and pushes them into a reproductive cycle to produce seed heads for the upcoming season. A thin, uniform crop of seedheads is one of the most desired effects of fine fescues.

Remove as much of the plant debris as possible after mowing. Do not burn fine fescues as an alternative to mowing because it can adversely affect the stand of turf. The green growth from the crown of the plant slows combustion, causing a slow burn instead of a fast burn. This slow burn can damage the crown tissue and kill fine fescue plants, which often results in rapid weed encroachment.

Once the area is free from excess plant debris, fertilize the roughs with a program of low nitrogen and moderate

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Natural areas need to be scalped down at appropriate intervals to prevent the excessive accumulation of plant debris that can provide a haven for insect pests and eventually smother the stand of turf. Removing plant debris after mowing multiple acres of rough is a time-consuming task that can be performed more efficiently by using farm implements.

amounts of phosphorus and potassium. This is also the perfect time to correct soil micronutrient deficiencies. Soil compaction can be a problem in unmown roughs. If this is the case, use the time after mowing to deep-tine or core-aerate the soils and perhaps seed improved cultivars of turf into the roughs.

Sod webworms, cutworms, armyworms, and other insect pests can become a concern in low-maintenance roughs, especially sites affected by excessive organic matter debris accumulation and water. Again, removing debris after mowing can help address this issue. Monitor roughs for insect pests throughout the season and apply appropriate plant protectants when necessary.

Fine fescues compete with other grass species best on dry soils with high sand content and limited compaction. On soils with higher organic matter, thistle, phragmites, and other broadleaf weeds can be serious competitors and a herbicide program will need to be developed.

Evaluate herbicide programs on a small area of the rough to determine the ideal combination needed to control specific weeds on your site. Herbicides such as 2,4-D, quinclorac (Drive), fluazifop-P-butyl (Fusilade II), triclopyr, and sethoxydim (Segment) are just a few herbicides that are utilized to selectively control unwanted grassy and broadleaf weeds in fescue roughs. However, midsummer applications of classic three-way products may have an adverse effect on fine fescues, so only use these materials during the mild weather of spring or fall. Occasional hand removal of some weeds may be necessary despite a sound herbicide program.

One last thought on using fine fescues at your golf course. There are three things that fine fescues do not tolerate well: compacted soils, high traffic, and standing water. If these conditions exist, the stand may be excessively thin and wispy in the unmown roughs and the turf can be highly susceptible to weed encroachment. For compacted soil, I suggest aggressive core cultivation along with reseeding. Incorporate slender creeping red fescue into high-traffic sites and redtop (*Agrostis gigantea*) into wet areas of roughs.

Natural roughs are a dream at some golf facilities and a nightmare at others. Pay attention to soil type, soil compaction, and nutrient management when choosing a combination of grass types to employ as a rough. Timely weed control along with a consistent program of mowing and plant debris management will set your roughs apart from the others.

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