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ABOUT THE COVER

Jennifer L. Samerdyke has created a cover illustrating GCSAA's Old Tom Morris sculpture to recognize the organization's 75th anniversary celebration that culminated at the GCSAA Conference and Show in February. This is Ms. Samerdyke's second cover featuring our patriarch Old Tom.

*"When day dawned with unusual light,
Hedges in snow stood half their height.
And in the white-paved village street
Children were walking without feet.
But now by their own breath kept warm,
Muck-heaps are naked at the farm.
And even through the shrinking snow
Dead bents and thistles start to grow."*

SUDDEN THAW
By Andrew Young

THE GRASS ROOTS

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Surviving A Recession

By David Brandenburg, Golf Course Superintendent, Rolling Meadows Golf Course



Spring is around the corner and it may be an early one based on the forecasts. The new season brings new ideas and a renewal of commitment to our profession. On the downside, many WGCSA and GCSAA members are seeing budget reductions. In Wisconsin, a poor weather year coupled with a nationwide recession has

many clubs scrambling for income. Layoffs and reductions of capital purchases were common discussion at the Orlando Conference and Show.

Many superintendents are already doing more with less in order to provide our customers or members the best product. We take pride in what we can do with the resources we have. It is very difficult when the golfers we have been working for ask us to cut back expenses but not quality on the property.

How do we survive budget cuts in our operations? Do we fight and raise our voices or just whimper away feeling bad? Preparations for this scenario should have started years ago with proper record keeping and good communication between the superintendent and the manager or board.

I am guilty of being lax with the record keeping the past few years. I used to track man-hours for each person in the maintenance program, and repair costs for each piece of equipment. With man-hour reports, we can quickly show what jobs will not be done when asked to cut labor costs. In addition, we can justify a more efficient piece of equipment that will save labor hours. Capital purchases are often first hit for cuts. Proper maintenance records can show a current unit is costing more in repairs than the cost of a new machine depreciated out over time.

Communication is essential before, during and after a budget tightening. If you have communicated with your managers before a crisis, you will have gained their faith in your judgment. Remember we were hired to be experts in our field and we need to act like it. In

a good relationship, management will come to the superintendent to ask what can be done, rather than dictating what should be done.

For me, it is possible Rolling Meadows will be asked to contribute more profit to our county's general fund. As an enterprise fund, we produce revenue that may be needed as municipalities are seeing less revenue sharing from the state. As an exercise (for now), we were asked to provide cuts of 4, 7 and 10 percent to our budget. It was an eye-opening experience that I would suggest everyone try. A 4 percent cut was not that hard, but 7 and 10 percent cuts affected some very valuable items. Playing conditions affect customer satisfaction, so fertilizers, chemicals, topdressing and labor cannot be cut that much. Other items like utilities, insurance and repairs to equipment or irrigation are automatic expenses and difficult to reduce.

No matter what type of club we are at, many of us will be asked to make serious budget cuts at some point in our careers. If the income is not there, expenses need to be cut. By being prepared, we can present sound logical arguments on how cuts to labor and products will affect the golf course and the bottom line. By being proactive, we can recommend reductions in areas that will have the least effect on our employees' job satisfaction and the conditions we produce for our clubs.

Good luck in the coming year, and remember to take time off for family and fun. ♣



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A Kingdom of Fairways

The 1st Fine Fescue Symposium at GCSAA

By Dr. John Stier, Departments of Horticulture, University of Wisconsin-Madison

Mike Lee from the Kohler courses has taken a farsighted initiative to define the future of golf course management. At this year's GCSAA conference in Orlando, Mike assembled a hodgepodge of roughly 35 superintendents, researchers, and golf course architects for the First Annual Fescue Symposium. Mike had an ambitious goal: to set parameters for managing fine fescue turfs on golf courses in the U.S. Best of all, he invited superintendents from some of Europe's most prestigious golf clubs such as Eddie Adams of St. Andrews, Colin Irvine of Muirfield,

and others to give their impression of fine fescue use and management.

During the 20th century Americans developed increasingly more sculpted and labor-intensive golf courses, some of which, like Augusta National, are instantly recognizable worldwide. But what goes around comes around. While Americans were crafting exotic courses, the United Kingdom (UK) continued to do business more or less as usual. Topdressing was done by hand. Heather was used to line bunkers and as yardage markers. Irrigation and fertilization were minimal, and golf courses remained

reliant on fine fescues for roughs, fairways, and often greens. Now some developers in America are heeding a call to return to these "links" style courses.

Golf course architects and developers are starting to use more fine fescues on American golf courses. Often the fescues are used as a primary component of roughs in order to reduce nutrient and irrigation requirements. Permitting becomes easier when a rough mixture is billed as a "native" mix—dependent largely or entirely on fine fescues, regardless if they are truly native to the U.S.

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Most interesting though is the new propensity to use fine fescues for fairways. This seems to be done for two reasons: 1) To produce a true "links" style golf course, and 2) To provide a more environmentally-friendly golf course. Advocates have preached fine fescues for years—after all, they have worked for centuries on the relatively low-maintenance courses in Scotland and the rest of the UK. In the last few years the U.S. has seen Whistling Straights, Roaring Fork, Brandon Dunes, Sand Hills, and the Vineyard Golf Club plant fairways to fine fescue. It was superintendents from these courses who were most keenly interested in what their counterparts from across the ocean had to say about fine fescues.

Irrigation, drainage, and soil type

Water is vital for many turf functions, particularly growth, but fine

fescues have relatively slow growth rates compared to other cool-season grasses. During my trips to England in 1993 and 1998 I noticed very few courses had fairway irrigation. Our fine fescue fairways plots at the O.J. Noer are irrigated once weekly to replenish 50% of the estimated evapotranspiration (ET) rate (basing irrigation on ET allows us to adjust for rainfall and avoid overwatering). The lack of discussion on the topic indicated irrigation was of minor importance.

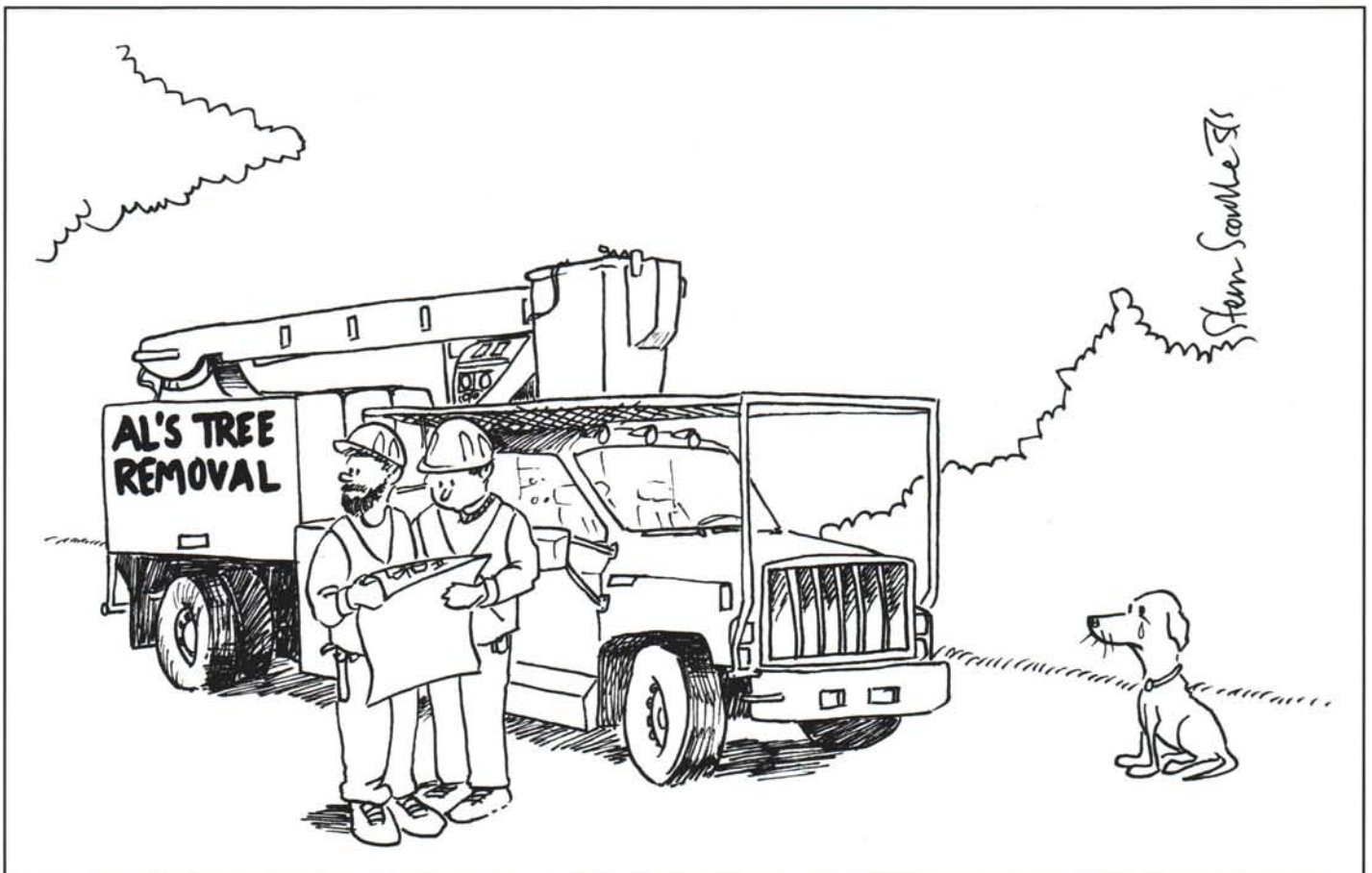
All the superintendents agreed the most important soil aspect for fine fescue management was good drainage. Wherever drainage was poor, people agreed fine fescues performed poorly. Traffic tolerance was especially reduced in wet soils. The most likely reason for poor performance in wet soils is lack of oxygen in the root zone. If so, grasses which perform better in wet soils

may provide a source of genes to develop fine fescues which more efficiently utilize oxygen for root growth.

Dogma has it that fine fescues prefer low pH soils. Comments from the UK superintendents suggest fine fescues can tolerate pH above 7 just fine. Soil type also seemed irrelevant. Some of the UK superintendents maintain sand based greens with turf composed partially of fine fescues. The same superintendents said fine fescues performed well on clay based fairways and roughs as long as drainage was sufficient.

Mowing

Mowing heights in the U.S. and the UK have declined during the past 20 years. Everyone will agree fine fescues can be ideal for unmowed, low maintenance roughs. But can they persist in closely mown fairways? Eddie Adams of St. Andrews mows their



fairways between 8-12 mm (approximately 5/16" to 0.5"). Greens are mowed at 5 mm (approximately 3/16"). Stuart McCown at Kings Barnes in the UK mows his greens at 6 mm and is able to maintain green speeds of 10-11 ft. Golfers like the upright lie provided by the stiff blades. The U.S. superintendents at the symposium maintain their fescue fairways at a range of heights from 0.4 to 0.8 inches.

Fertility

Fine fescues are deemed environmentally desirable partially because their slow growth rate requires little fertility. Their slow growth rate, though, may cost them some traffic tolerance. In our fairway NTEP evaluation at the O.J. Noer Facility, we've been fertilizing with 0.5 lb N/1000 ft² each growing month, approximately 3 lb N/1000

ft² each year. One of the superintendents from the UK, who has fine fescues on a sand-based green, said he applies only 0.75 lb N/1000 ft² per year, part of it from ammonia sulfate and the rest from dried blood. The nutrition is supplemented by seaweed extract-containing products. The topdressing mix is 80:20 with the organic fraction composed of "fen" soil. Fen soil is the top soil layer from peat bogs. Such an enriched medium likely adds additional nutrients for turf growth.

On fairways as well as roughs, though, most UK superintendents agreed they are likely to use no fertilizer once the turf is fully established. Full establishment of some fine fescue swards can take up to five years. While some UK courses may have only 50 rounds per day, others have a more American-like 25,000 rounds per year. This lack of

fertilizer is in sharp contrast to our habits of routine fertilization.

Traffic tolerance

When I was in college my professors gave fine fescue short thrift, teaching us that while fine fescues were low maintenance grasses they could not withstand short cutting heights and traffic. Dan Lucas of the Kingsley Club in Michigan feels the fine fescue on his golf course handles foot traffic just fine, but cannot tolerate cart traffic. Dr. Bill Meyer (Rutgers University) reported hard fescue can show traffic effects one year later, while strong creeping red fescues have the best recovery. The recovery rate of Chewings fescue is in between that of hard and strong creeping red fescues. Bill further noted that traffic tolerance is especially compromised by hot, humid conditions. Mike Lee said the Chewings fescue at Whistling



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Straights has acceptable traffic tolerance—what it lacks is recuperative ability once it is worn out. What needs to be determined is if there is a specific level of nutrient inputs that will enhance traffic tolerance. Traffic tolerance is likely also dependent on species and even cultivar type. Dr. Leah Brillman (Seed Research of Oregon, Inc.) noted that some of the experimental lines of hard and creeping red fescue have superior heat and wear tolerance, but aren't being released commercially due to poor profit margins.

Cultivation

Despite their slow foliar growth fine fescue turfs may need regular cultivation. At St. Andrews thatch production is a problem on old greens. Greens are typically aerified twice during the winter with 0.75 inch tines. Other UK superintendents use solid tines when *Poa annua* is dormant (November through April) or slit-tine at 14-day intervals. It is no surprise the rhizomatous creeping red fescues can develop thatch, but Dr. Meyer concurred that even Chewings fescue can develop thatch in some cases. Various types of aerification are useful to improve drainage, mix soil layers, and prevent thatch buildup. At St. Andrews, the deep-tine aerification may help in producing their 12-14" root depths.

Diseases

One of the main strengths of fine fescues is their relatively good disease resistance. Dollar spot is rare. Snow mold is of little consequence. Leaf spot can be harmful but can be controlled with resistant varieties and good water management. Red thread, a cosmetic disease during periods of cool, moist weather, is considered an indicator of "good" (lean) nitrogen levels by UK superintendents. One of the UK superintendents reported using a fungicide only three times in the past four years. Troy

Russell of Brandon Dunes has not used a fungicide in two years.

Weeds

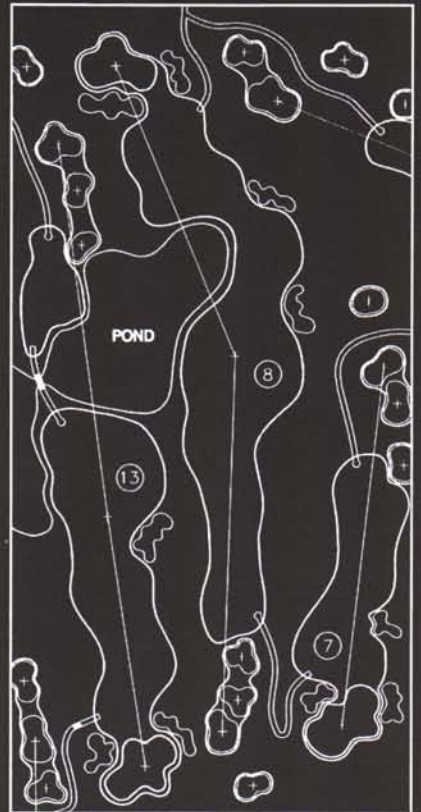
Herbicide options in fine fescue turf are similar to those for other cool-season turfgrasses. The main weed problem in fine fescue turf, both in the UK and the U.S., is *P. annua*. Unfortunately there are still few herbicide options for selective removal of *P. annua* from cool-season turfgrasses. The best option is to maintain a dense turf to prevent the establishment of *P. annua*.

Fine fescue and colonial bentgrass mixtures may be the best thing since sliced bread

Fine fescues are often mixed with colonial bentgrass for fairways in the UK. This approach has been followed by Jeff Carlson at the Vineyard Golf Club in the U.S. Superintendents in the UK say the bentgrass/fescue combination provides better results than either species alone. Depending on the time of year and climatic conditions one species will predominate over the other, and the relationship changes again with conditions. The traditional seed mix is 80% fine fescue, 20% colonial bentgrass by weight (because of the difference in seed size the result is a nearly equivalent amount of both species). Brandon Dunes in the U.S. used such a mixture for their fairways which are now entering their fourth year of play.

Our own research at UW-Madison agrees with the UK experience. Jeff Gregos' M.S. project has shown fine fescues have excellent snow mold tolerance, while even colonial bentgrass has better snow mold tolerance than creeping bentgrass. Fine fescue by itself, though, is prone to *P. annua* invasion, a problem noted both by UK and U.S. superintendents in their fine fescue fairways. Dr. Brillman pointed out that both species are much less susceptible to dollar spot than creeping bentgrass. She also suggested the

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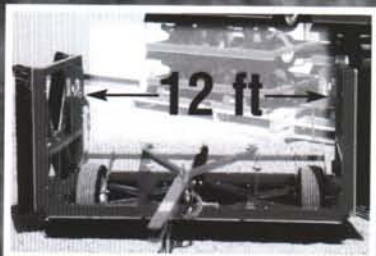
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