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President's Message

by Dave Meyer

Editor's note: The President's Message may appear next month, maybe ...

Director's Column



When Will They Ever Learn?

by Bruce R. Williams, CGCS Vice President

There seem to be a number of situations that we deal with at our golf courses that golfers will never understand. Many of us might turn blue in the face repeating comments at our clubs but there are several situations that never seem to be understood. It reminds me of the lyrics in a Peter, Paul, & Mary song, "When will they ever learn".

Carts are not good for the golf course. There is no doubt that carts are good for the golfer and good for profits. This does not address the fact that compaction is caused by increased usage of golf carts. The more compaction we have the weaker the turf quality and subsequently the need for more aerification. Golf carts are a strong part of the game and we must take that into consideration when designing a golf course and establishing maintenance procedures. Twenty years ago we didn't have the problems created by carts. There were no cart paths, no curbs, no need for ropes, and no need for directional cart signs. When you consider the cost of cart paths, including installation, maintenance, and replacement, it is not an inexpensive proposition. We also have the added costs of sodding and seeding areas damaged by carts as well as increased daily maintenance costs. Possibly the profits of golf carts are not as great as we think when you take all things into consideration.

(cont'd. next page)

Monday golf has a negative effect on the condition of the golf course. It's not hard to understand that course conditions are not helped by opening golf courses for play on Mondays. Many courses are opening for outings. Some are open to employees, caddies, and invited guests. Some golf courses will have more rounds played on a Monday than any other day of the week. One day a week the golf course needs a rest whether or not the golfers do. Monday is a day to accomplish a number of projects important to the upkeep of the golf course. Many of these tasks need to be accomplished without the interference of players. New regulations for re-entry periods after pesticide applications may dictate that courses will be closed by law on Mondays.

All golf courses are not created equal. Each and every golf course has been designed and built differently. There are many factors to consider including soils, topography, and turf types. It is very difficult to compare the budgets of golf courses without knowing the specifics of each club. Each club has a different philosophy for the maintenance of the course and the budget should reflect the standards set forth by the club. When it comes to golf course conditions and budgets to compare is a mistake.

We have been preaching about these same topics for years with our sermons falling on deaf ears. In the best interest of the game of golf let us hope that clubs no longer use the philosophy of "tell me what I want to hear". As golf course superintendents, we are charged with the responsibility of providing pleasurable playing conditions at our golf courses. If clubs start to listen to what their superintendents are saying then they will begin to learn what is truly for their golf course.

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Enthusiasm for Golf Continues Across Nation

JUPITER, Fla. — The popularity of golf in America continues to grow at a remarkable rate, according to the latest National Golf Foundation report.

The report, Golf Participation in the U.S./1989 Edition, also shows that six states lead the nation in enthusiasm for the game.

According to the report, the number of golfers nationwide increased in 1988 from 21.7 million to 23.4 million — a 7.8 percent rise. This is the third straight year that the number of golfers increased by more than 7 percent.

Also, the national golf partipation rate (i.e. the percentage of the U.S. population which plays golf) climbed from 9.7 to 10.4 percent. This is the first time this rate has ever exceeded 10 percent.

Nowhere is golf fever more apparent than in Wisconsin and Minnesota, which lead the nation in participation. Nearly 16 percent of the residents of both these states play golf. Next are Utah, Iowa, Michigan and North Dakota, where more than 14 percent of the population are golfers.

Michigan also is one of seven states to boast more than a million golfers. California is the leader with 2.4 million, followed by New York, 1.7 million; Texas, 1.6 million; Illinois, 1.5 million; Ohio, 1.4 million; Michigan, 1.3 million; and Florida, 1.2 million.

Dr. Gordon Benson, the Foundation's Vice President of Research, says the NGF will be watching this growth in the popularity of golf very closely.

"A recent study report by McKinsey & Co. and the NGF projects that the number of golfers could reach 30 million by the year 2000," he says, "and this is based on a modest 2 percent increase each year between now and the turn of the century.

"However, he adds, "if we should average 5 percent per year, we could see 40 million golfers by the year 2000."

To accommodate such an increase in the total number of golfers, NGF researchers project that 400 additional courses a year will be needed between now and the year 2000. This is approximately one a day by the turn of the century. Currently, the national average is only about 125 new courses a year.

In addition to the rise in the numbers of golfers nationwide, total rounds played increased as well, from 434 to 487 million rounds.

Fueling this growth in rounds played, Dr. Benson says, is the extraordinary increase in the number of frequent golfers ... those who play 25 rounds or more a year.

"The number of frequent golfers grew from 4.8 million to 5.6 million ... a 16 percent rise," he notes. "This is a sharp departure from the previous year, when frequent golfers showed no increase in numbers.

"The importance of these frequent golfers is underscored by the fact that although they represent only 24 percent of the golfing population, they play 75 percent of the total rounds."

Nearly half of these frequent golfers are over the age of 50. Although they represent only 25 percent of the total golfing population, golfers over 50 average 43 rounds of golf a year ... three times that of younger golfers.

The report also shows that half of all golfers are in their 20s and 30s. Despite their great numbers, they play only 29 percent of the rounds.





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Sulfur Use on Greens

Dr. Norm Hummel Cornell University

Soil reaction, or pH, is an important consideration in managing fine turfgrass areas. The pH is a measure of the hydrogen ion concentration in the soil solution. While most turfgrass species tolerate a wide range of soil pHs, optimum growing conditions exist in a pH range of 6.0 to 7.0. At excessively low pHs, the solubility of aluminum and manganese increase to a point where these elements can reach toxic levels in the soil. Excessive alkalinity, or very high pH, can result in deficiencies of several micronutrients.

Throughout much of New York State, calcareous sands are used to topdress goif course greens. Managing the pH on greens topdressed with these sands has been a major concern of superintendents. Applications of elemental sulfur are frequently used on an annual or biannual basis to reduce the pH of greens to a optimum range. Sulfur is an effective acidifying amendment thanks to the action of *Thiobacillus* bacteria that live in the soil. The bacteria obtain their energy from sulfur by oxidizing it into the sulfate form. A by-product of this oxidation process are hydrogen ions that reduce the soil pH.

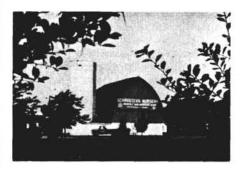
Recently, isolated reports of damage from sulfur applications have surfaced. The symptoms have varied from what looks like an incurable infestation of dollarspot to a general discoloration. Damage has resulted from granular, flowable, and wettable powder forms of sulfur. The dollarspot-type damage caused by granular sulfur may not occur until several months after application.

While sulfur still remains a recommended acidifying material perhaps some caution should be exercised when using it. The following are suggested guidelines for using sulfur on bentgrass greens:

- 1. Do not use sulfur unless soil pH is above 7.5. Believe it or not, you can grow beautiful bentgrass greens on slightly alkaline soils. The use of micronutrients may be necessary as the pH rises much above 7.0. As an alternative to sulfur, acidifying nitrogen fertilizers such as ammonium sulfate may be used.
- 2. Apply no more than 2 pounds of sulfur per 1,000 square feet per application.
- 3. Only apply sulfur when temperatures are expected to be cool, preferably spring and fall.
- 4. Use a sulfur product the way it was intended to be used. For example, a wettable powder should be sprayed, not broadcast and watered in. Read the label.
- A wettable powder or flowable sulfur material can be applied more uniformly than granular sulfur.
- If damage occurs, do not aerify. Aerification will increase microbial activity, including the oxidation of sulfur by Thiobacillus bacteria. Aerification may actually increase damage.
- 7. Once damage occurs, there is nothing known to counteract the symptoms. If you feel compelled to do something a light application (2 lb./1,000 sq. ft.) of hydrated lime may or may not alleviate the problem. Fortunately, damage is not permanent and recover should be rapid.

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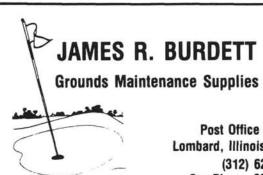
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The Maintenance Zone

by Bob Lohmann

While attending the GCSAA International Golf Course Conference and Show in San Francisco, I had a chance to sneak away and visit the Monterey Peninsula. The AT&T golf tournament was on and I was able to walk the Cypress Point Club and Pebble Beach golf courses. Talk about a spectacular golf course; I have seen photos and television shots of both courses, but neither can do them justice.

The terrain on Cypress Point varies in the most exciting way. The 3rd through 7th holes are wooded hillside holes, and the 8th through 12th are inland in character. The 13th, 14th, and 18th are seaside holes, and the 15th, 16th, and 17th are spectacular clifftop golf holes.

The common denominator of all the holes is the intense maintenance style practiced on the greens, tees, fairway landing areas, and sand bunkers adjacent to the target areas. These features were in excellent shape and provided the golfers with ideal playing conditions. The intense maintained areas were not small targets, but were adequate spaces that allowed the golfers some error in their golf shots.

On the majority of the holes, the golfer has an avenue for advancing the ball toward the green without being forced to carry a hazard. Because Cypress Point is a private club with limited membership and is also a championship course, the forced carries on the oceanside holes are not only acceptable, but make the golf course unique and memorable. The remainder of the golf course is traditional and strategic. It is a relatively short playing course of between 6300 and 6500 yards and has greens that are small, contoured, and well bunkered.

Most impressive to me was the stark contrast between the golf course playing area and the adjacent property, which was attractive and defined the target areas of the golf course.

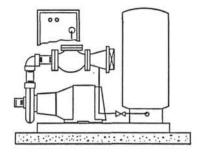
These sandy dunes and rough grasses adjacent to the highly maintained playing area had far less maintenance attention and in some areas had none at all. This unmanicured style amplified the intense maintenance practices on the playing areas and made the subtle design features more noticeable.

No doubt, in this case, the site was an aid in developing an outstanding golf course. But the design of the architect, Dr. Mackenzie, and the current maintenance style have made the golf course somewhat of a spectacle.

This maintenance style could be adopted by many private clubs whose maintenance budgets are unmanageable. With proper consideration for the club superintendent, its members, and other golfers, the course should be examined for areas that require less maintenance. Any money saved from using less water, fertilizer, fungicides, or labor could be applied toward the maintenance of the playing areas on the golf course. This shift in maintenance style would not save much money initially because of the costs associated with developing the native habitat. But the minimum amount of maintenance required once the course was established would result in significant cost savings as well as a classic golf environment.

"Natural look" golf courses are often talked about today. They can offer diversity, variety, and distinction if properly designed and maintained. The basic premise is to work with the existing features of the land. The architect and superintendent must capitalize on the natural advantages of the landscape to adopt this style successfully and make it acceptable to the members.

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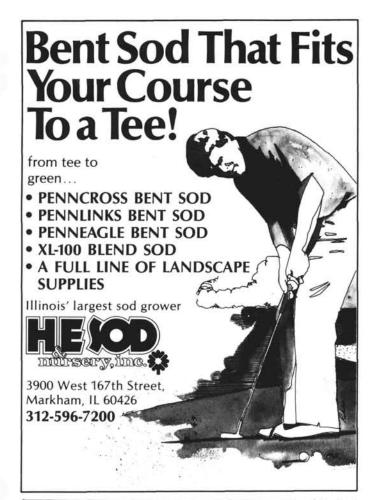
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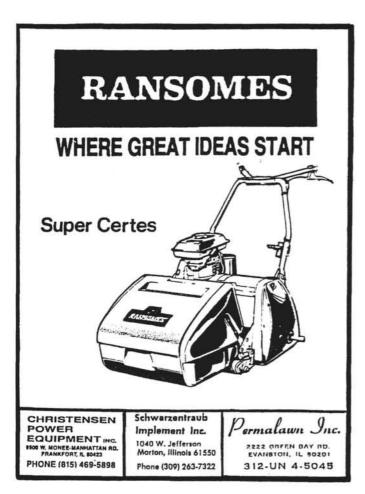




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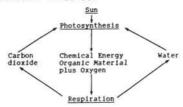


Let Growth Cycle Dictate Fertilization Cycle

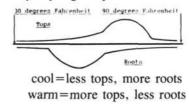
by Dr. John Dunn, Univ. of MO

Dr. John Dunn has been studying growth cycles of various grasses as they relate to fertilization cycles during the year. Here he presents some relationships worthy of consideration. The example used is Kentucky bluegrass.

- Kentucky bluegrass has a rhizomatous growth habit.
- Fall days get shorter and soils cool at this time of year.
- More rhizomes, more shoots, plants emerge and produce more tillers at this time. White rhizomes form; a thickening process and a healing process within plant development takes place.
- With patience, these rhizomes will heal in summer thinning.
- Fall fertilization involving nitrogen makes leaves green, gets tillering started, as long as the fertilizer is adjusted to apply sufficient phosphorus and potassium.
- In the fall, use of vertical mowers to de-thatch will do the job well and any injury to grass plants will heal readily. At this time, the grass can be mown closer so as to form a tighter turf cover.
- · The basic reaction involves:



- The net effect of these reactions in the fall will be increased root growth including rhizomes.
- Then, in early spring, tillering will start again following winter dormancy. Spring temperature influences growth:



- · Spring mowing height is better at a higher level.
- High nitrogen in the spring makes less roots. The response can be drastic.
- Medium nitrogen causes less root development as temperatures increase.
- Low nitrogen causes less root development because foliar growth is affected at a time when higher temperatures increase respiration and decrease energy reserves.
- The result of this spring growth is often disease increases. Fertilizer applications based on turf responses at this time can be hazardous to the plants.
- The question is asked, "Why promote turf growth?" The answer includes:
 - · recovery from injury;
 - replace lost nutrients;
 - · maintain density;
 - · encourage early growth.

Note: green color is not a justifiable reason. The two more important reasons are replacement of nutrients removed in clipping and lost in leaching.



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Winter Covers, Let's Look Again

by Roger A. Stewart, Jr., CGCS

This past winter proved to be an excellent evaluation of winter green covers used on bentgrass greens that were in various stages of establishment. The stages of development at Stonebridge ranged from greens that were about 85% established to greens that were overseeded in mid October with little or no germination prior to December 1.

As a result we were able to see the effects covers on all these situations. The most dramatic effect was on the more established turf. The covers helped increase the stand by 5-10%. That may not seem like much but on new greens it is pretty dramatic. Probably not as dramatic to the eye was the effect on the greens that were seeded later in the year around the end of September or beginning of October. These greens had some germination but were considerably thinner than those previously mentioned. The covers did a good job of protecting these very young plants from dessicating during the winter and enabled us to get those plants going this spring with a little shot of fertilizer. The greens that were seeded last in the second week of October had little or no germination before covers were applied in late November. Those greens showed no improvement with the use of covers. That just tells me that if you haven't got some growth in the fall don't waste your time and money on covers. We still have little or no germination on those same greens and it is the beginning of May. Obviously "dormant seeding" is also very suspect. I didn't believe it would work before and I don't believe it will work now. All in all I have found that with germination and some growth prior to cover application there are some very good benefits to be had.

One piece of advice I must strongly issue is the meticulous use of fungicide for snowmold protection prior to covering and the daily inspection under the covers in the spring to avoid disease problems. Disease is more prevalent under covers and fungicide application prior to covering is absolutely necessary. I didn't have a sprayer last fall so fungicide was applied with a granular carrier and every area where the overlap was insufficient or coverage was poor snowmold was a problem. Pythium can creep up on you under the covers in the early spring, especially when dealing with new seedlings and daily inspections are a necessity.

I hope some of these experiences can help you avoid some of the same problems and provide you with excellent results from the use of winter green covers.

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