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Trees, Trees Everywhere

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Cover Photo:
Trees, trees everywhere.

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A few well placed trees bestow depth and perspective to a golf hole. The sixth hole at Cypress Point, California.

Trees, Trees Everywhere

by JAMES T. SNOW
Director, Northeastern Region, USGA Green Section

WE ALWAYS HAVE FADS. In the 1950s it was hula hoops, ducktail haircuts, and souped-up cars. The 60s saw long hair, the Beatles, miniskirts, and fast food. The 70s produced small cars, health food, punk rock, and ecology movements. Now we are in the 80s and it's computers, aerobics, video games, and planting trees on golf courses.

Golf course superintendents and officials alike have developed a tree consciousness in recent years, it seems, and thousands of trees are being planted. The reasons are clear enough; trees provide a great deal of beauty and strategic interest to a golf course, and they can serve a variety of other important functions as well.

For example, well placed trees serve architecturally by:

- Increasing the challenge of golf holes. They guard doglegs and entrances to greens. They form chutes through which shots must be played, and force players to choose between routes of play or shot types.
- Indicating and controlling the line of play.
- Providing targets, especially where landing areas or greens are out of sight.
- Better defining targets, such as greens, that, without trees, would have only sky as a backdrop.
- Preventing errant shots from leaving the course property.
- Improving visibility of balls in flight, setting them off against a tall green backdrop.
- Providing reference points to help locate balls that have strayed from the ideal line of flight.
- Assisting golfers in judging distance by providing depth perception and proportion cues.

Trees also help to achieve aesthetic objectives, such as:

- Breaking up the monotony of green turf and preventing a barren look.
- Screening out disruptive sights.
- Connecting different course features by drawing lines of sight.
- Tying the course to the surrounding space by shaping that space, framing it, providing emphasis for pleasing focal points, and giving a sense of proper proportion.
- Decorating the landscape with plantings that provide variety, contrast and seasonal interest.

In addition, trees have several important engineering uses. They include:

- Influencing the normal flow of traffic and, where necessary, positively controlling it.
- Providing other golfers and adjacent properties a greater measure of safety from errant shots.
- Modifying environmental forces with windbreaks and shady places.
- Providing erosion control and preserving wildlife habitat.

Despite their many benefits, trees can turn out to be a real liability if they're used incorrectly and without much forethought. Poor species selection, improper placement on the course, and neglectful maintenance are three common errors seen on golf courses throughout the country.

Regretfully, there are no exacting, easy-to-follow specifications for selecting trees and placing them on the course. Because of the artistic nature of landscape design, good taste and good judgement are prerequisites for positive results. A thorough knowledge of tree characteristics and the proper application of design principles are also essential.

In the planning stages, however, knowing what *not* to do can provide a solid basis for beginning a tree planting program. Thus, the following paragraphs reveal some of the most common "do's" and "don'ts" of using trees on golf courses, based on past efforts.

Species Selection

- Avoid using too many "trash trees." Such trees might be characterized by weak wood, excessive litter, shallow rooting habit, susceptibility to insects and disease, susceptibility to storm damage, producing heavy shade, and having a short life span. Trees with several of these characteristics should be particularly avoided. Such trees as willows, poplars, silver maples, Norway maples, Siberian elm, horse chestnut, most birches and certain eucalyptus species should be used sparingly, unless good alternatives are not available in a particular region. Check with your state university, county cooperative extension office, or a reputable local nursery for further information.
- Use a variety of species in the planting program. If only one or two tree species are used, the equivalent of a Dutch elm disease could destroy your efforts in short order.
- At the same time, avoid planting too many species in a single viewing area (e.g., on a single hole). Too many shapes, colors and textures distract the eye and detract from the continuity of the course.
- Avoid using naturally low branching species, such as spruce and beech in play areas. They are difficult to mow around and their low branches are unpopular with golfers. Pruning up their lower branches ruins their appearance.
- Don't use shrubs in play areas, especially as 150-yard markers located close to the fairway. Shrubs are out of scale in an area as large as a golf course. They are difficult to maintain and awkward to mow around, and they produce an unfair penalty to a golfer who happens to miss the fairway by only a few feet (when used as 150-yard markers). If shrubs must be used as 150-yard markers, place them as far away from the edge of the fairway as possible. A better marker choice would be the use of stakes, markers on trees, irrigation heads, flat markers placed in fairways, and markings on the score card as yardage indicators.

(Opposite page) Sometimes fewer is better! Planting trees on this hole would do nothing but diminish the panorama of golf. Shinnecock Hills, New York.

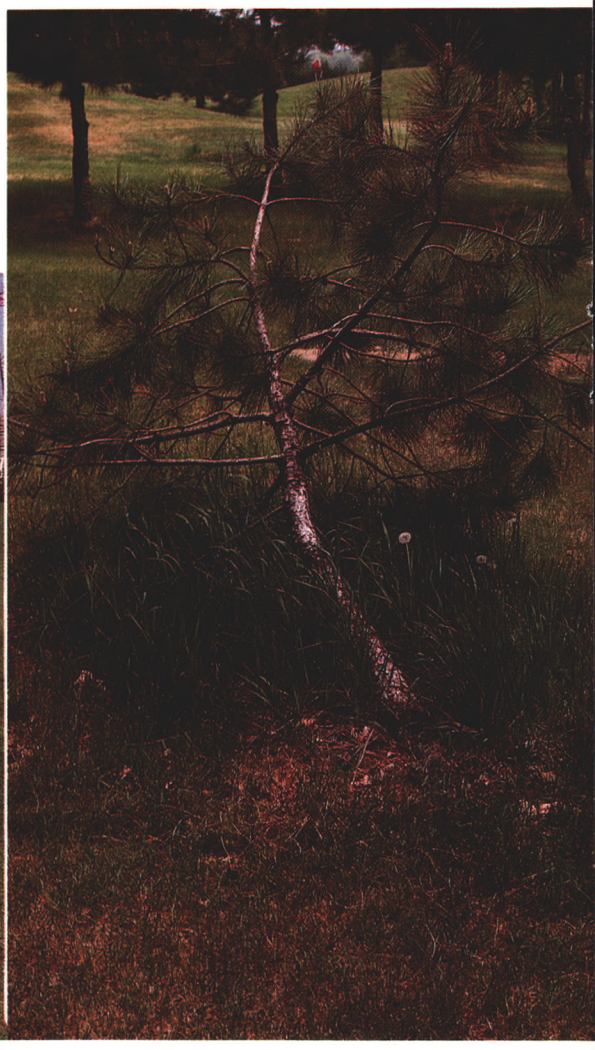
(Left) This 150-yard marker shrub looks out of place and comes into play frequently on the corner of the dogleg hole. If a 150-yard shrub MUST be used, be sure to plant it in an inconspicuous place and away from play as much as possible.

(Below) Sooner or later, dead, dying and decaying trees must be removed. Sooner is safer.

Placing Trees on the Course

- Rather than overplanting trees for temporary effect, it often pays to plant only the number of trees ultimately required in an area. At most courses, it takes an act of Congress to move an established tree, so avoid overplanting *unless* the club will be willing to move or remove some of them when they become larger.
- When planting trees, use larger nursery stock that can be staked and protected and that will provide a faster effect. Small or seedling trees are hard to maintain around and usually end up being trampled by maintenance equipment or golf carts. There is also a tendency to plant small trees too close together.
- If hundreds or thousands of trees will be needed, as on a new course, it may be worthwhile establishing a tree nursery on site. If only small numbers of trees are needed, it is often more cost effective to simply purchase good quality stock from a reputable nursery. Personnel at most golf courses have neither the time nor the expertise to establish and properly maintain a tree nursery.
- Allow enough distance between trees in a planting. Maintenance equipment, particularly tractors pulling five- or seven-gang mowers, should have room enough to operate, and the trees should have enough space to fill out and develop some individual form.
- Avoid planting trees in straight lines or rows. It only takes three trees to do it. People enjoy golf courses for their natural appeal, and straight lines are not natural. Instead, plant trees in groupings and clumps, placing the individual trees and the clumps at unequal spacings to avoid an artificial look.
- Don't ring the back of a green with a semi-circle of trees. This appears artificial and contrived. Rather, offset the trees and place them in groupings with unequal spacings.
- Keep newly planted trees away from greens, tees and fairways. When planted too close, shade problems, poor air circulation and tree root competition often result. The edge of the crown of a mature tree should be no closer than 35

Seedlings and small trees are most susceptible to mower and cart blight.



feet from the edge of a green, so plant accordingly.

- Remember what the ultimate size of a selected tree will be, both in height and width. Most people have a hard time picturing just what a tree will eventually do to the landscape. Many trees are planted that ultimately block the use of a tee, or block off a reasonable approach shot from a fairway.
- Don't plant trees that obstruct views and scenes across the course. Many courses lend themselves to beautiful vistas. A reasonable number of trees can add depth to a scene, while too many trees can block it completely.
- Avoid planting trees that will block the view of sand bunkers from the tee or fairway, or that will block the shot out of a bunker toward the green. Most golfers have enough trouble climbing from a fairway sand bunker without having to negotiate a large tree, too. If a tree hazard is preferred to a sand hazard, then remove the bunker when the trees become larger.
- Some of the most beautiful scenes on a golf course are the views from tee to green. Avoid planting trees that will someday obstruct the view of the play of a hole unless it is absolutely necessary. This occurs most commonly on dogleg holes, where trees are planted as hazards. If a hole presents a picturesque scene, try instead to use sand bunkers or ponds as hazards.
- Keep trees far enough away from irrigation heads to avoid disfiguring the tree and creating gaps in irrigation coverage.
- It is not necessary to try to fill every void and open space on a golf course with trees. A mixture of trees and open space bestows depth to the landscape and provides the framework for beautiful vistas. Planting trees in every open space is initially expensive, is expensive to maintain, and robs the course of depth and perspective. Also, too many trees can be very frustrating for the average golfer, who knows that there's more to the crown of a tree than 90 percent air!

It should be remembered, too, that many trees produce many leaves, which can be a significant maintenance headache and a real nuisance to the golfer. A key word for tree planting on golf courses should be "moderation."

Dealing With Existing Trees

- Don't allow weed trees to continue growing in critical areas just because they become established there naturally. Prune out choke cherries, mulberries and other weed species as soon as they appear. They usually contribute nothing to the course and can become a real nuisance if allowed to become well established.
- Consider removing established trees if they obstruct beautiful views of the course, of sand bunkers or the play of a hole. There is nothing sacred about a tree that does a disservice to the beauty of a course or the play of a hole.
- Remember to maintain trees properly. Trees are considered valuable assets

on most golf courses, and they will live a long time if they're given some attention. Money should be set aside in the budget each year for pruning, pest control, fertilization, lightning protection, irrigation, and other tree maintenance.

- Perhaps most importantly, remove dead, dying, and decayed trees immediately. Allowed to remain, they are a real threat to people and property. So don't wait until after the lawsuit to remove these trees.

A recent statement by Frank Hannigan, Senior Executive Director of the USGA, sums up the feelings of many with respect to trees and golf courses:

"We've become victims of the arboretum syndrome. There are too many trees on golf courses and too many trees in the wrong places.

"By wrong places, I mean approximate to targets. There's something very wrong in suffering an unplayable lie under a blue spruce when you miss the green on a 440-yard par-4 by 30 feet.

"Besides, too many trees tend to obscure the beauty of the game. They block out the sky, they rob us of the perspective of the roll and pitch of the land itself, they interfere with what were intended to be uninterupted vistas from way out on the course back up to a stately clubhouse — they diminish the panorama of golf.

"The contemporary and mindless appeal of trees is remarkable. Any golf course superintendent could walk into the men's grill at one of your courses on Wednesday at lunch time and announce that he was taking up a collection for one of his men whose left leg had been nearly severed at the knee that morning by a chainsaw. The reaction, at best, is going to be mild annoyance. One member, probably a doctor, since it's Wednesday, is likely to suggest that your guy should walk it off.

"But he could go into the same grill and say that he can get a terrific deal on 100 moraine locusts and people will throw money at him.

"Green committees over the years have treated courses like organic crossword puzzles by filling in all the blank spaces with trees. So I hope we'll be a little more careful about trees in the future."

Trees, Trees, Everywhere
drop
Leaves, Leaves Everywhere

Does Lime Control Japanese Beetle Grubs in Turf?

by DR. P.J. VITTUM, University of Massachusetts,
Suburban Experiment Station, Waltham, Massachusetts

SOME GOLF COURSE superintendents in the Northeast and Midwest have claimed recently that applications of limestone reduced Japanese beetle grub populations on their golf courses. The reports we have seen of the reduction of grub populations with lime applications apparently involved large areas of turf, all uniformly treated with lime and no untreated areas for comparison. Since insecticide costs are rising steadily and homeowners are always looking for materials that have insecticidal activity but are safe for people to handle, we decided to conduct some tests to see whether applications of limestone would reduce grub populations in eastern Massachusetts.

Two small test areas were set out in the summer. In each area we marked out a series of 10-foot plots, four plots wide and five plots long. Ten pounds of finely ground dolomitic limestone was applied to each plot (roughly a 2 ton per acre rate) on one of four dates (each plot received lime only once) or, in one plot per row, applied no limestone at all. Thus, there were four application dates and a no-limestone check to compare. Each application or check was repeated 4 times. In both of these tests, grub populations in all lime-treated plots were not significantly different from populations in the untreated check.

In the following spring, we set up two tests similar to the earlier ones. Five applications were made, at one-week intervals, beginning on April 20. We used ground dolomitic limestone at 10 pounds per plot *or* hydrated lime at ½-pound per plot. Each application, or check, was replicated five times. Dolomitic limestone was applied by hand, using jars with perforated tops

Figure 1. Applying dolomitic limestone with a hand shaker.

Figure 2.
Counting grubs in a one square-foot sample.

(*Fig. 1*). Hydrated lime was applied with watering cans, using 18 gallons of water per plot (equivalent to 180 gallons per 1,000 square feet), to reduce the chance of burning the grass chemically. In late June a count was made of the grubs in one square foot cut from the center of each plot (*Fig. 2*). *Table 1* summarizes the results from one of these tests. In both of the spring tests, the grub population in the untreated plots was not significantly different from the population in any of the lime treated plots. So, while there was a range of grub population, this range was the result of random distribution and not the result of application of lime.

ANOTHER SERIES of lime trials was conducted in the late summer, this time repeating the trial in three locations and applying lime on six dates at one-week intervals, beginning on July 15. Dolomitic limestone was used at 10 pounds per plot, but this time we applied hydrated lime at one pound per plot, again applying with 18 gallons of water per plot. Again each treatment or check was replicated five times. At no time was any burning or weakening of turf observed in the limed or check areas. In late September another count was made of the number of grubs in one square foot taken from the center of each plot. *Table 2* summarizes the results from one of these tests. None of the treatments or the check in any of the three summer tests was significantly different from any other treatment. Again, while there was a range of grub populations in the test area, this range was a result of random distribution, not a result of lime applications.

In the past 18 months we have conducted seven trials in which unlimed turf was compared with turf on which lime was applied on a range of dates. In all seven of these tests there was no statistically significant difference in grub populations between unlimed plots and any of the limed plots, regardless

TABLE 1
Lime Trials — Spring
Weston Country Club, Weston, Massachusetts

Formulation	Rate (Lbs./1,000 Sq. Ft.)	Date Applied	Ave. Grubs Per Sq. Ft.*
Hydrated	5	4 May	9.6 A
Dolomitic	100	11 May	5.4 AB
Dolomitic	100	4 May	4.2 AB
Hydrated	5	18 May	2.6 AB
Check	0	—	2.6 AB
Dolomitic	100	18 May	1.0 B
Hydrated	5	27 April	0.8 B
Dolomitic	100	20 April	0.4 B
Hydrated	5	11 May	0.4 B
Dolomitic	100	27 April	0.0 B

* Numbers followed by the same letter are not significantly different at the 95 percent level (Duncans Multiple Range Test).

TABLE 2
Lime Trials — Summer
The International Golf Club, Bolton, Massachusetts

Formulation	Rate (Lbs./1,000 Sq. Ft.)	Date Applied	Ave. Grubs Per Sq. Ft.*
Hydrated	10	17 August	18.6
Hydrated	10	27 July	18.4
Dolomitic	100	3 August	16.2
Hydrated	10	15 July	15.2
Dolomitic	100	10 August	12.0
Dolomitic	100	17 August	12.0
Check	0	—	12.0
Hydrated	10	3 August	11.2
Dolomitic	100	27 July	9.6
Hydrated	10	10 August	9.4
Dolomitic	100	21 July	8.8
Hydrated	10	21 July	5.6
Dolomitic	100	15 July	4.8

* None of the treatments was significantly different from any of the others at the 95 percent level (Duncans Multiple Range Test).

of the kind of lime or the treatment date. It appears, therefore, that the application of lime alone does not provide a satisfactory means of controlling Japanese beetle grubs in eastern Massachusetts.

Earlier laboratory studies, conducted in 1979, indicated that soil pHs from 5.5 to 7.3 (roughly comparable to the range preferred by most turfgrasses) did not affect grub survival. The pHs of the soils in our trials were only changed a few tenths of a unit during the course of the trial, and it generally remained in the 6's. Thus, the insecticidal effect of lime claimed by various turf managers does not appear to be pH related.

During the late-summer applications of lime to trials areas, we observed Japanese beetle adults flying around the area. These beetles often would approach turf that had just been treated with dolomitic limestone or hydrated lime and would change flight patterns so as to land in an area that had not been treated that day. These beetles probably were avoiding the residue of the dolomitic limestone, which may provide a temporary physical or chemical barrier to the beetle, or were avoiding the wet surfaces, where hydrated lime had just been applied. Within a day or two after lime was applied, however, there usually was no apparent difference in any of the plots, because rain, dew, or irrigation had washed in any residue. This one- or two-day period during which egg-laying beetles may have avoided the treated plots was not significant compared to the six-week long period during which egg-laying beetles were active in the area.

FROM THE TESTS it appears that single applications of lime do not affect grub populations in eastern Massachusetts. In fact, lime applications were, in some tests, just as likely to have more grubs than the check as they were likely to have fewer grubs. Further tests will be conducted comparing different rates of hydrated lime and dolomitic limestone, perhaps involving multiple applications on some plots. However, at this time it appears that the logistics of applying the rates of lime (and, in some cases, water) being considered would be prohibitive for the golf course superintendent.

The Turf Advisory Service — You Are Our Best Salesmen

BLACKHAWK Country Club

3606 BLACKHAWK DR. · MADISON, WISCONSIN 53705

November 4, 1983

Mr. William H. Bengeyfield, Director
United States Golf Association
19461 Sierra Luna Drive
Irvine, California 92715

Dear Mr. Bengeyfield:

This autumn is the one when I'm setting my procrastination aside and writing this letter, a letter I've intended to write for many years. I suspect my ambition to finally get this in the mail has been inspired to a great extent by a very difficult season in 1983. The recollections of it are still vivid in my memory as is the sense that survival was made a great deal easier by the good advice of our Green Section Agronomist. My hope is that other Golf Course Superintendents have been more dutiful in corresponding with you than I — I know scores of them share my thoughts.

There is no better way of expressing my feelings than extending to you and the USGA Green Section Staff a simple but sincere "thank you." The influence of the USGA on golf courses and their management across the world, wherever the game is played, is well founded and appreciated in a very general way. But to me, talking to the Green Section Agronomist face to face on one's own golf course is the only way to really understand what a positive and constructive impact the Association has. It is always a distinct privilege to have Stan Zontek visit our Club, both for me and for Club officials. It has often struck me that somehow a meeting that is so productive and intense shouldn't be as enjoyable as it is, but we all look forward, weeks in advance, to Stan's visit. That is to his credit, no doubt. But in the larger view, the USGA itself deserves a lion's share of the recognition given — for initiating the program years ago, for encouraging participation on the part of member golf courses, and for hiring premier agronomists like Stan Zontek. A tip of my hat to you!

These words of gratitude are a long time in coming. But I do want you to know that many of us have worked hard over the years in repaying the debt we feel to the USGA by sharing our good experiences from the Green Section Visit with our colleagues and peers. I firmly believe that we are your best salesmen. It is the least we can do.

So again, please accept these heartfelt thanks for a job well done.

Sincerely,

Monroe S. Miller

Monroe S. Miller
Golf Course Superintendent

Porcupine Damage?

by LEON STROIKE
Superintendent, Oaks Country Club, Tulsa, Oklahoma

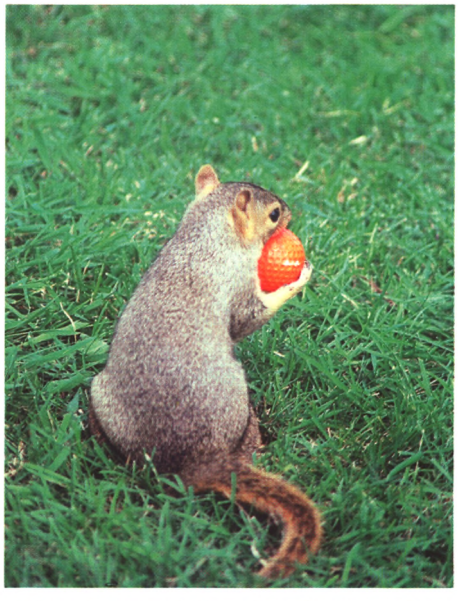
AT THE OAKS COUNTRY Club we've had several trees damaged and even killed by what we were led to believe was porcupine damage. Although the porcupine is very rare in this section of the country, a reputable local expert assured us this animal was the culprit.

Since the porcupine is a nocturnal animal, a nighttime hunting routine was established. It had no success. Either our porcupine was very smart, or we were hunting the wrong kind of animal.

The damage occurred strictly on younger pin oaks 12 to 14 feet tall. Over 40 trees were gnawed where limbs were attached to the trunk. Others were completely girdled around the main leader 10 to 15 feet high into the tree. Needless to say, the trees that were completely girdled died at the top.

All the trees that were damaged received prompt attention. Wounds were cleaned of all jagged and torn bark edges. Where possible, a diamond shape cut was made to enhance speedier recovery.

During an inspection of damage one morning, my assistant and I noticed a red squirrel laying on a limb ripping the bark off in small strips with his teeth. This answered a lot of questions and immediately acquitted the poor porcupine that never existed.



(Above) Squirrels have been known to bury nuts in greens. And some have been known to steal golf balls.

(Below, left) Porcupine or squirrel damage. How can you tell?

(Below, right) All dead limbs are not caused by lightning, disease, insects or wind damage. A squirrel did this!

To solve the problem, I thinned out the population of squirrels on the golf course by using a 410 gauge shotgun when the course was closed. Every safety precaution was taken and I was fully aware of the location of all employees before shooting. All the squirrels were immediately cleaned and frozen by a couple of employees for later consumption.

The reasons for the squirrel's odd behavior were blamed on:

1. Overpopulation.
2. Poor acorn and hickory nut crop the previous year.
3. Using the strips of bark for their summer nests.

The population was thinned to over 50 percent. A close watch will be maintained on our trees next year to observe any new damage. Thinning the squirrel population has drastically improved our situation here at the Oaks Country Club. We haven't seen any new porcupines either!

Limestone and Algae Control At Bill Bryant Lake

by **ROBERT P. GAYLORD**
Industry Hills, California

ON ROLLING HILLS that overlook the San Gabriel Valley and in view of snow covered mountains farther to the north, the City of Industry, California, created a convention and recreation center about five years ago. It is called, appropriately enough, Industry Hills. This 600-acre complex includes not only a large convention center and golf clubhouse, but also 36 holes of golf, 17 tennis courts, Olympic-size swimming and warmup pools, gardens, an equestrian center leading to seven miles of bridle trails, a number of other associated facilities, and a 300-room hotel with many restaurants. My story centers on a relatively small, conspicuous, ornamental lake at the base of the 14-story hotel, next to a practice putting green. This lake has recently been renamed the Bill Bryant Memorial Fountain and Lake. Bill was the first general manager of this huge complex.

The lake has a serpentine shape, 110 feet long with a maximum width of 55 feet. The depth varies from 0 to 26 inches, with an average depth of 14 inches. The water volume is 100,000 gallons. The lake bottom is concrete and large, 3-inch varicolored stones were set in shallow areas for artistic effect.

Limestone Buildup

One of my first problems at the memorial lake was a buildup of calcium deposits on the decorative stones and lake bottom. Our water has a high calcium content, and it is, therefore, very hard. The gradual accumulation of calcium dulled the finish of the stones, cancelled much of their original effect, and actually turned an attractive idea into a not-so-attractive scene.

After a number of unsuccessful efforts and periodic scrubbing of the stones and lake bottom with heavy fiber brooms, we discovered a new technique that was said to eliminate calcium deposits in irrigation lines. While we were dubious of it at first, we found this technique effective in earlier tests on several of our irrigation pump screens and valves. The technique calls for installation of a series of magnets manufactured for this specific purpose by a local company. The proper magnets were fitted to all pumps and fill lines associated with the lake. Within a short period of time, the limestone problem disappeared. It has been completely controlled ever since by the use of magnets. They have been very effective under our conditions in all our irrigation operations.

The Algae Problem

The size of the lake, its shallow depth, and our warm climate created my next problem. Conditions were ideal for algae development, and this single-celled plant took full advantage. Algae control problems were made more difficult by landscape plantings around the lake — a grove of white birch trees that clustered by one shore, star jasmine, hebe, *Viburnum tinus,* and other shrubbery including hundreds of daffodils along the shoreline.

The water in the lake was originally designed to be treated as if it were in a swimming pool. The machinery and equipment consists of a 20 HP pump circulating 300 gallons per minute at a maximum head of 65 feet. Water is pumped through three large filters taking suction from six skimmers and also from the bottom of the lake. A 50 HP turbine pump is located in a separate pump room. This pump delivers 3,000 gpm at a maximum head of 50 feet to a multiple jet serpentine fountain that sprays water upward to a height of 15 to 20 feet.

The original intention was to treat the water with liquid chlorine by means of an injection pump in the filter pump room. This room, however, was also designed to house all electrical controls for the lake operation. Needless to say, the electrical components were soon adversely affected by the chlorine fumes. Furthermore, the spray from the lake fountain occasionally drifted into the trees and shrubbery around the lake. This set up the fear, later realized, of adverse effects to the surrounding greenery.

It was agreed that the chlorine concentration should be limited to two percent. The concentration is checked daily. In order to eliminate the electrical

(Above) The lake nearing completion.

(Left) Filamentous Algae blooms in the sunlight and warm temperatures.

problems, we decided to use chlorine tablets in the skimmers, and this kept the algae under control for several weeks. As the weather warmed, however, the algae bloomed and soon took over.

Our next step was manually to add liquid chlorine to the lake daily while still limiting the concentration to two percent. The algae gradually and eventually took over again. After every such takeover, the lake was drained, scrubbed, cleaned, and the bottom treated with Diquat.

Finally, we tried combining the chlorine treatment with commercial algicides. We selected Cutrine, which had helped us earlier in our irrigation lakes, and Endothall. As a start, we injected one quart of Cutrine (2.5 ppm) every other day and one-third pint Endothall (0.4 ppm) on alternate days. First tried in the heat of mid-summer, this method solved our algae problem. As cooler weather arrived, we were able to lower the concentration of both chlorine and algicides.

After several months we began to suspect that the Endothall was affecting the nearby birch tree leaves, and so we settled on a daily program using the commercial algicide and eliminating the Endothall. As of now, we have had eight months of clear, pretty water. The lake that is a memorial to Bill Bryant is now an attraction rather than the grey-green eyesore it once was.

The lake at night.

THE USGA RESEARCH COMMITTEE (left to right): Dr. Paul E. Rieke, James G. Prusa, George M. Bard, Alexander M. Radko, James B. Moncrief, Dr. James R. Watson, Charles W. Smith, Dr. Marvin H. Ferguson, William H. Bengeyfield.

Update on the Green Section's Turfgrass Research Committee

by WILLIAM H. BENGEYFIELD
National Director, USGA Green Section

ORGANIZED IN January, 1982, the Green Section Turfgrass Research Advisory Committee has had a short but very active career. In 1983 alone, the Committee met four times for a total of 12 days. Its purpose is to develop and guide the USGA's multi-million dollar turfgrass research efforts over the next 10 or more years. The goal is development of Minimal Maintenance Turfgrasses for Golf.

Never before has such an intensive and extensive turfgrass research project been undertaken. In the spring of 1982, turfgrass researchers throughout the nation were invited to express their views and interests in research needs. Gradually, a long range plan evolved from the Committee's work, objectives were established and guidelines carefully drawn. The USGA Fund Raising Campaign, inaugurated in 1983, moved into full swing.

Last September, the USGA Executive Committee approved the Research Committee's recommendations and an initial funding of $330,000 for 1984 was established. Again, turfgrass scientists around the country were asked to submit outlines and proposals for specific projects. Over 55 papers were received. In mid-November, 1983, the Committee met for three days in Dallas, Texas, and reviewed each proposal in detail. Finally, 20 were selected for initial funding in 1984. They include:

A. A Turfgrass Research-Computer Data Base Library.

B. A study of Physiological Plant Stress Mechanisms.

C. Breeding Projects in:

Zoysiagrass and Kikuyugrass

Native Grasses (Buffalograss, Crested Wheatgrass, Saltgrass, Paspalum, others)

Poa annua

Bluegrass/Ryegrass

Bermudagrass (Seeded Forms and Stolonized Forms)

Bentgrass (Creeping and Colonial)

D. Cultural Practices — Management

E. Cultural Practices — Water

F. Cultural Practices — Pathology

Most of the projects will require two or more years of funding. Some of the breeding projects and almost all of the cultural studies will require increasing funding in succeeding years. Additionally, new projects are anticipated and will be added as funds become available. It is the most comprehensive and substantially funded turfgrass research effort in the history of agriculture.

It is the hope of the Research Committee that other organizations, now or in the future, having an interest in and raising money for turfgrass research will consider coordinating their projects and efforts with those of the Green Section's Advisory Committee. Through cooperation and communication, all turfgrass research funds will thereby be used to maximum advantage. Too often in the past, scarce monies have been spent on repetition and duplication of research. Too many new and potentially worthwhile projects have been abandoned or, at best, poorly supported. Turfgrass interests can no longer afford this wastefulness of scientific talent and resources. Only through cooperative efforts can waste be stopped.

AMONG THE Green Section's Turfgrass Research Advisory Committee are some of the nation's leading turfgrass experts. Comprising the Committee are Dr. Marvin H. Ferguson, Research Director, American Society of Golf Course Architects; Dr. Paul E. Rieke, Associate Professor, Michigan State University; Dr. James R. Watson, Vice-President, The Toro Company; James G. Prusa, Assistant Executive Director, Golf Course Superintendents Association of America; George M. Bard, Chairman, USGA Green Section Committee; Frank Hannigan, USGA Senior Executive Director; Charles W. Smith, USGA Director, Administration and Services; James B. Moncrief, former Director, USGA Green Section's Southeastern Region; William H. Bengeyfield, USGA Green Section National Director. The members serve without compensation and at the pleasure of the USGA Executive Committee.

It is the Research Committee's intention to bring a greater sense of direction, cost effectiveness, and concentration to the vital areas of turfgrass research for golf. It further intends to establish specific agreements, monitor expenditures, set certain expectations, insure proper progress and to be accountable to those providing funds. The Committee's entire purpose is to establish a sound program, closely follow its progress and achieve the objectives it has before it. Individuals or organizations interested in supporting turfgrass research may wish to contact Mr. Don Spencer, USGA Golf House, Far Hills, New Jersey 07931 for further details.

Future updating of research projects and progress will be reported in the RECORD. The turfgrass industry is obviously preparing itself to move into the 21st Century.

TURF TWISTERS

OLD BUT NEW ADVICE

Question: I am involved with the building of a new golf course this spring. Do you have any guidelines or general recommendations for us to follow? (Missouri)

Answer: You may not believe this, but the same question was asked nearly 60 years ago in *The Bulletin* of the USGA Green Section. The answer hasn't changed one bit! We can only think of two general guidelines to keep in mind:

"**A.** Be sure to use good common sense and good judgement in every job undertaken.

"**B.** Provide good drainage throughout the property and on every green, tee and fairway.

"Now, if you find there is not very much of 'A' on the job; better provide that much more of 'B'!"

FOR THE TURF MANAGEMENT TEAM

Question: I've recently been appointed to the Green Committee at my club. If I am going to serve on this committee (I'm a businessman), I want to do the best job possible. How do I prepare for it? (California)

Answer: First, introduce yourself to your golf course superintendent. Get to know him and his problems on a friendly and first-hand basis. What he will value most on the Green Committee is an understanding associate willing to do his part on the turf management team. That part is well described in a Green Section publication, "A Guide for Green Committee Members of Golf Clubs." It is available, free, from Golf House or from any of the Green Section regional offices, as shown on the inside front cover. And — oh yes, good to remember: most golf course superintendents already have 300 (or more) bosses at the club.

TO CONTROL ALGAE

Question: Several years ago I began a sand topdressing program on my greens. The program has performed beautifully, increasing the overall health and playability of the greens. However, I have noticed that in the past few summers I have picked up algae, which was never really a problem on my greens before. Is it my imagination? (Wisconsin)

Answer: Common sense would indicate that sand topdressed greens should have less of an algae problem than the older style topsoil materials because the surface should be more dry. But you say more algae is now noticeable. Algae must have sunlight and moisture to survive. Perhaps the sand topdressings are too heavy, or the rapid accumulation of sand from a light and frequent topdressing program is causing a thinner, more open turf. More sunlight reaches the sand surface, and light summertime irrigations present the right conditions for algae development. Of course any number of other possibilities also exist: lower cutting height, more frequent vertical mowing, heavy traffic, etc. But if it is not culturally possible to reduce the amount of sunlight and moisture at the surface, then the use of an effective and low cost algicide seems the answer. They will do the job easily and economically.