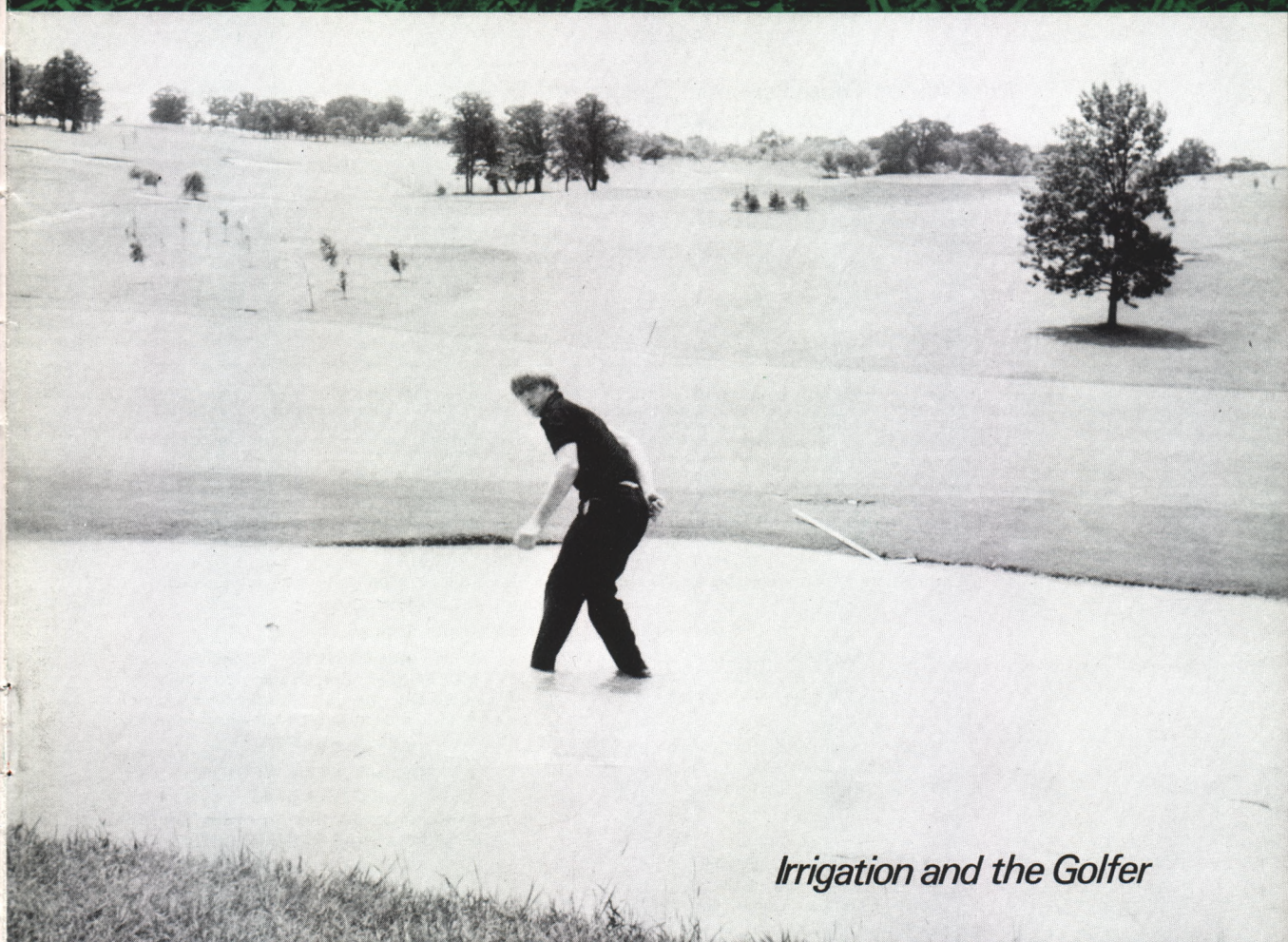
JULY 1974

USGA GREEN SECTION RECORD

A Publication on Turf Management
by the United States Golf Association



Irrigation and the Golfer

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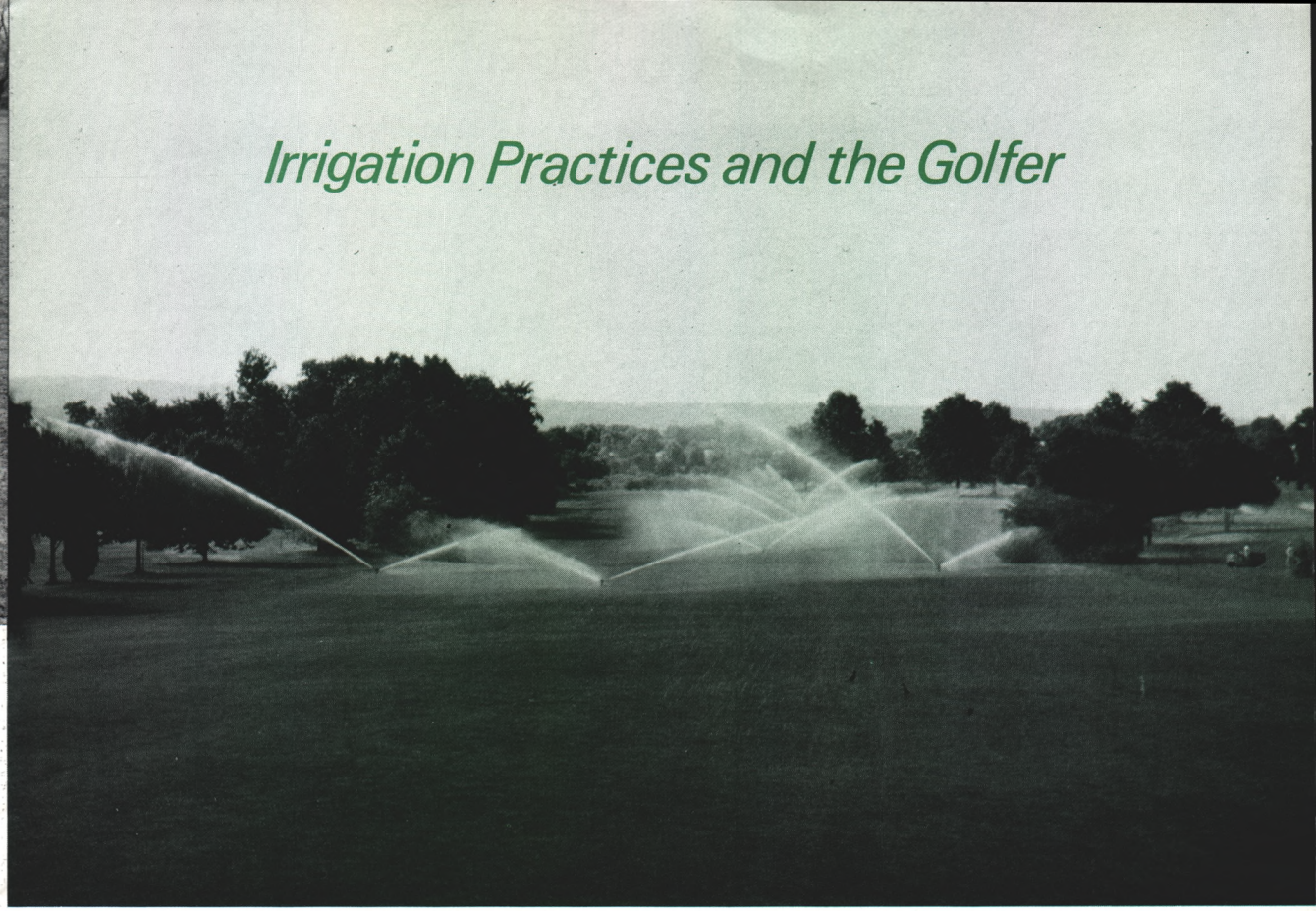
Irrigation Practices and the Golfer



A sight the golfer hates to see . . . if he's golfing.

by LEE RECORD, Mid-Continent Director, USGA Green Section

In the title of this article lie two fundamental, yet entirely different philosophies. First, from the golfer's point of view, "Why is it every time I come out to play the water system is on?" The second, from the golf course superintendent, "Irrigation is one of the fundamental requirements of any plant. If we are to have good turf, we must have an effective irrigation program."

Most members want a green, uniformly well-turfed golf course without any water standing on it and certainly no irrigation interference while they are playing. Since there are but 24 hours in each day, the golf course superintendent must fit the irrigation schedule into this time frame and, when the need arises, also use the irrigation system for syringing, watering in fertilizers, etc. With a golf membership of 300 or more, someone is bound to be inconvenienced occasionally by irrigation practices.

Perhaps the problem boils down to one word: "communication." Perhaps the problem can best be described in two words: "communication and understanding." Either way, the requirements and timing of irrigation too often become an irritant between the membership and course maintenance personnel.

A not untypical irrigation story begins when the golf course superintendent decides an automatic irrigation system is needed and convinces his Green Committee Chairman, the Board of Directors and the Membership that this is the path to follow. Yes, club officials and members have been to other golf courses where automatic irrigation is in use and they are aware that it has advantages. Soon the superintendent is told, "go ahead, learn the details; let's see what it will cost." He already has the answer. "$150,000 plus, but I know this automatic irrigation system will meet our requirements and will be flexible enough to develop a cultural program that will give us the best-conditioned golf course in town." In other words, irrigation is to be the answer and perhaps the salvation for this superintendent and his membership.

Alert management is necessary to avoid serious damage to fairways if a leak develops.

In a short while the first trench is dug and the installation is underway. The change from one irrigation program to another also has begun and the superintendent, his maintenance crew and the membership must now adapt to the new approach to irrigation.

Water, as we all know, is perhaps the most misunderstood phase of turf management programs. Through the years more jobs have been lost to faulty irrigation than because of any other phase of turf management. From many members' points of view, it is the superintendent who requested the "necessary evil" and he must live or die by it. The day the new irrigation system is misused by applying too little or too much water and turf is lost, the person responsible for operating the system is in trouble.

Manual irrigation systems in fairways presented a few problems. The member or caddie would occasionally turn the sprinklers off after they had been placed, and it was just a matter of time to find out which sprinkler wasn't turning and then send someone over to turn it back on, not knowing for how long that sprinkler had been inoperative. The automatic system solves this problem. But new ones develop. Now the superintendent has the responsibility to travel throughout the course and judge what areas need what amount of water. In the past the night waterman (with his talented foot) made the decision if another five minutes was needed or not.

Years ago an automatic irrigation system was installed at an eastern golf course. The superintendent had all the controllers placed in his maintenance building; from that point he could control all the valves without any hesitation or question. I was with the superintendent one day and he said, "I want to show you all the fine innovations I have with my new automatic irrigation system," and he began flipping the switches and turning the dials and they did their thing. At least we thought they were. We were still inside the maintenance building getting ready to walk over to the fairway to watch the sprinklers in operation when suddenly one of the employees came running into the building screaming, "turn it off, turn it off!" A group of lady players had become trapped in a curtain of water. Well, from that day on, the automatic irrigation system was not a one-man show controlled by turning dials in the maintenance building and letting the system do its thing. It became a two-man show; one man in the field with 2-way communications to the main office.

On another occasion I couldn't help but notice that a particular superintendent was very upset. I asked what was wrong and he told his story.

"I just returned from the clubhouse and I almost lost my job because of an irrigation mistake. Last night there was quite a party going on around the patio, and someone had not changed the setting on the clock to have the irrigation sprinklers come on during the early morning hours, rather than the early evening hours when they normally come on to water the grounds around the clubhouse. You guessed it; the music was playing, the ladies looked glamourous in their gowns with not a hair out of place, yet when the sprinklers came on it was bedlam! It was an accident, but it was also poor management and poor communication on my part to those responsible for changing

the settings on the irrigation clocks. I knew the party was going to be held, but what I didn't know was how much would be taken out of my paycheck for dry cleaning those gowns!"

In turf management, the irrigation program is essential if adequate playing surfaces are to be developed on greens, tees and fairways. One must be very careful with the use of water; how it is applied, when it is applied and the reason why it is applied.

Let's go back to the early part of the golf season. The course has just come out of the late winter months, everyone has been cooped up and members are eager to get out and play that first round. It's most unfortunate when the first thing you must say is, "The course won't be ready for play for another week or so. The ground is too wet and we will seriously damage our greens if we put them in play now." Your decision may be a correct one, but it is not the popular one. The members do not understand the problem at hand.

As the late winter turns to spring you find that there has been a great deal of winter desiccation or damage of some type to the greens and it will take a lot of hard work and constant syringing to bring the playing surfaces back to life. And so the golfer, finally on the course, begins his season by staring at a man holding a hose or watching four or five sprinklers pop up around the green just as he is making his approach shot. Right here we can say the golfer has been "psyched out" with a long season ahead and water his enemy. We write about *"Poa annua*, Friend or Foe." Perhaps we should look at irrigation with the perspective of the golfer, "Water, Friend or Foe."

The winter damage to the greens has now been corrected, summer is here and another problem confronts you. The day is warm, the wind begins to blow, the course is located on a very sandy loam soil, drainage is beautiful and the major crop is *Poa annua*. You know what comes next. To hold the turf, you have to water, and you water regardless of the time of day or degree of play. Unfortunately the member, whose round has just been interrupted by water, has no idea what is going on.

A few weeks later, temperatures soar, you have just finished watering to hold the turf for another day, a dramatic thunderstorm erupts with two or three inches of unwanted water, puddles begin to show throughout the course, golf carts have been restricted and you suddenly find it is time to go out and syringe greens again as summer scald appears. As the unhappy members gaze out of the clubhouse windows and watch you water those already wet greens, they shake their heads in disbelief; "what is he

There is a difference between syringing and flooding.

up to now?"

On and on it goes. You try to explain. But there apparently is no satisfactory answer for the member who has planned and looked forward to playing golf on Wednesday and now finds the course closed. He has tuned out your answers. He is not interested in the reasons.

What is the answer to this problem that faces the superintendent and the member. Certainly one approach is through a well-organized turf management program in relation to water needs. For example, fertilizers are often applied on Mondays or Tuesdays. By the time the weekend comes around, the grass is growing profusely and the ragged turf is in need of supplemental water. You haven't solved anything, but you have created an irrigation need perhaps on Saturday and Sunday, the two most heavily played days of the week. With this perspective, you may say, "If I have to apply a fertilizer, why not do it on Thursday or Friday and not worry about the weekend; worry about the beginning of the following week when play is not as heavy and more water can be applied." It is best to keep all areas of the course on the reasonably firm and dry side because dry turf can be healthier, with less disease and will withstand traffic better. Altering this one phase of the turf management program can change the attitude of your membership to a point where it will come to understand turf management practices.

Golfers simply do not like to get their feet wet. Further, more turf will be lost by applying an excessive amount of water than by not applying enough water. You can always add it, but it is a difficult commodity to remove, especially if there are drainage problems. Too often I see tees watered on Friday night that are not dry enough for Saturday or even Sunday play. These are the days when traffic is heaviest and management should be at its best. Irrigation timing must always be examined closely if you're to soothe the needs of a golfing membership. The decision rests with the superintendent. His objective must be to give the plant what it wants while giving the golfer what he wants.

Education and communication are the keys to a successful relationship between the superintendent and a golfing membership, not only in the understanding of necessary irrigation practices, but also in improved cooperation in all phases of a turf management program for a well conditioned golf course.

A difficult approach shot.

FAIRWAYS
TEES
GREENS

Some Thoughts on Bentgrass Management

by **ALEXANDER M. RADKO,** Eastern Director, USGA Green Section

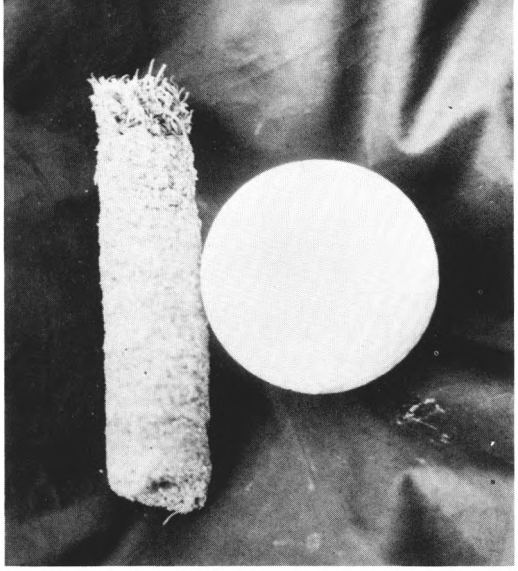
Bentgrasses comprise the major turf component of many golf courses in the cooler regions. Bentgrass is a versatile turfgrass, one that is used for greens, collars, tees and fairways. It can be mowed at heights of less than 3/16's of one inch to more than three inches and it will make a good turf cover. With proper management it forms a superior putting surface, excellent collars, tees and fairways—but a poor rough.

Bentgrasses can be propagated by vegetative means (also referred to as stolons, cuttings or runners) or by seed. Vegetative propagation provides the means for introduction of superior select strains of bentgrass into fairways. Large acreage of vegetative plantings are rare, but it may become more attractive now in view of the rapid increase in the cost of seed. This has been one of the neglected areas of fairway improvement for too long and we predict more interest in this area in the future.

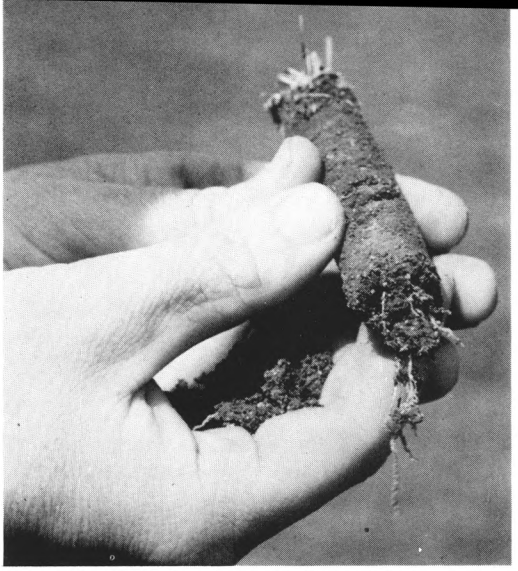
Every trufgrass variety has its own special management requirements. The same program doesn't work for all grasses. The starting point for all, however, is good drainage. Without it, turf excellence is not possible and good playing conditions become too dependent upon good weather.

Bentgrass management differs for each area use concerned. Greens and tees require more intensive maintenance than fairways. This means careful study of nutrient, irrigation, chemical, and other requirements. While a program for fairways is less intense, it is not any less exacting. Everything involved with growing fine turfgrasses for golf requires careful study and precise execution. Turfgrass enemies quickly strike when weaknesses develop. These include various diseases, weeds, and insects, but there is one thing certain—more problems develop if the turf is on the soft, succulent side than if kept on the hungry side. The late Prof. L.S. Dickinson, founder of the University of Massachusetts turf school program and the 1962 recipient of the USGA Green Section Award, was one of the first who preached the doctrine of moderation. He often said, "Don't force the grass plant to grow . . . *let it grow*!" He principally referred to nitrogen application and watering programs as the cause for major problems. If excessive, they upset program balance, insects revel in lush turf, thatch problems increase, diseases run

Drainage correction is the first step to good turfgrass cover.



Severe thatch development in bentgrass turf. Thatch this deep compounds all other management problems.



Deep roots in summer is the goal. Management practices have strong bearing on whether they are deep or shallow.

rampant and our perennial nemesis *Poa annua* thrives!

Water and fertilizer requirements vary for different soils and locations, even within the boundaries of an individual course. For this reason it is impossible to attempt to define needs precisely for all courses within a region. However, we can make two definite statements concerning all situations. First, new turf planted on new soil will require more water and fertilizer than mature turf for the first two or three years. Secondly, established turf constantly performs better if it is watered and fertilized **on the low side.** Grasses should not always be a vivid green color. Grasses have their ups and downs due to weather fluctuations, traffic, time of year, soil conditions and can't be uniformly bright green at all times. The primary criteria to judge by is the turf fullness and playing quality, not its color. The statement, "golf is played on grass, not color!" has often been used by many an agronomist in reply to a member's question. Somehow members have the mistaken notion that a deeper green means a healthier turf.

Another difficult practice to define is turf irrigation. The same program doesn't apply for all for obvious reasons of terrain, soils, type of irrigation system, kinds of grasses, amount of water the system can deliver, and other considerations. The rule of thumb is to water infrequently but deeply, but you must first be certain that your soils accept the water readily and uniformly. If not, then it is necessary to adjust. On many soils, frequent, light irrigations work out best. During stress periods it's difficult to water properly because of heavy play and because some clubs will not allow watering during play. The golf course superintendent has to work out the best possible program of irrigation that his conditions allow. If his turf contains a predominance of bentgrass with a minimum of *Poa annua*, his watering problems will be far less serious than if the reverse is true. Ten to fifteen per cent *Poa annua*, is acceptable in a fine bentgrass turf cover and minimal irrigation and fertilizer applications better insure this balance will be kept.

Mowing height and frequency of cut are other important factors in bentgrass management. Normally most bentgrass fairways are mowed between ½ and 1 inch. Because of the soft texture of bentgrass, the closer to ½ inch, the better. Bentgrasses will not build up thatch so readily when mowed closer. They grow healthier when thatch is minimal and they will play better. Beard *et al* found *Poa annua* to be most competitive at one inch cut. These are strong points in favor of mowing bentgrasses as close as terrain will allow. The rule for frequency of cut for most grasses is to mow as often as required to keep from removing more than one-third of the blade surface. With golf turf, however, more frequent mowing is advised. Under favorable conditions, this can mean three to four mowings weekly most of the season on fairways. Fertilizer and irrigation practices have an important bearing on the number of mowings required weekly.

This is the starting point of all successful bentgrass programs—first good drainage, then select the right bentgrasses for your conditions, next don't force the grasses, and finally, mow frequently and as close as terrain permits. All other management requirements will then fall into place. Insects, disease, weeds, aeration, renovation and other programs should be minimal under such a program. **Letting the grass grow, not forcing it to grow is the key to better golf turf!**

What About Those Perennial Ryegrasses?

by VICTOR A. GIBEAULT, EDWARD JOHNSON, JOHN VAN DAM, KEN GOWANS AND DEAN DONALDSON*

Perennial ryegrass *(Lolium perenne L.)* is a cool season species that in the past has been established in regions characterized by mild winters and cool moist summers. In these areas ryegrass was used where quick establishment was needed and/or a fairly coarse texture could be tolerated. Recently, plant selection and breeding within the species has resulted in several improved plant types for turf use. These varieties, or cultivars, have resulted in an increased adaptation range and usage potential for the species.

Before getting into a discussion of California trials on varietal performance, it is important to understand the species in the context of growth responses. It is from this understanding that decisions on grass selection and management can be made.

Growth Response

Optimum germination will be achieved at moderate temperatures, however perennial ryegrass is characterized by a fairly wide temperature range under which the seed will germinate. Under ideal conditions, seedling emergence can be expected in three to five days. The rapid emergence and stand maturation may account for the often observed suppression of annual bluegrass *(Poa annua)* and other weeds common to newly established turfgrass swards. This will be discussed in some detail later.

The optimum temperature for top growth of perennial ryegrass is between 68 and 77 degrees Fahrenheit. Significant top growth can occur at relatively low temperatures, however growth slow down and potential injury usually occur above 90 degrees. The growth rate responses, based on the temperatures given, will determine the mowing frequency required. Mowing of the older ryegrass varieties in general is difficult because of extensive fibers in the leaves. High temperatures increase the amount of these fibrous tissues, thereby increasing the toughness and mowing difficulty.

The top growth of perennial ryegrass, like all other turfgrass species, is greatest in full sunlight. Ryegrass is comparable to Kentucky bluegrass in both light requirement and shade tolerance. The shade tolerance of turfgrass species is as follows:

SHADE TOLERANCE

Shade ↓ Sun

- Red fescue
- Zoysia
- St. Augustine
- Dichondra
- Colonial bentgrass
- Tall fescue
- Creeping bentgrass
- Meadow fescue
- Kentucky bluegrass
- Perennial ryegrass
- Improved bermudas
- Common bermuda

Tiller production of perennial ryegrass is similar to other cool season species. Maximum tillering occurs when moderate day lengths and cool temperatures of spring and fall prevail. Negligible tillering occurs in the summer months. Tillering is increased following nitrogen applications in the fall and spring. However, this management practice will not improve tillering during the summer.

Optimum soil temperature for root growth is 50 to 60 degrees Fahrenheit. Rate of root growth decreases rapidly as temperatures increase above the optimum.

Perennial ryegrass is moderately tolerant to soil salinity, showing little reduction of growth at salt levels below 8 mmhos. The accompanying list shows the relative position of perennial ryegrass in comparison with other commonly used turfgrass species regarding salinity tolerance.

SALINITY TOLERANCE

High ↓ Low

- Improved bermudas
- Common bermuda
- Creeping bentgrass
- Zoysia
- St. Augustine
- Tall fescue
- Perennial ryegrass
- Meadow fescue
- Red fescue
- Kentucky bluegrass
- Colonial bentgrass
- Dichondra

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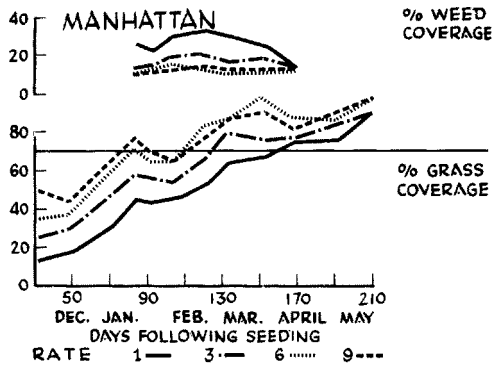


Figure 1.

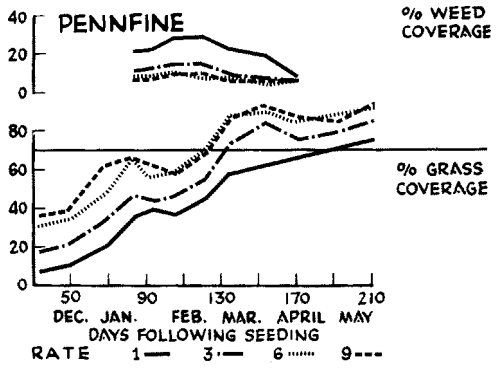


Figure 2.

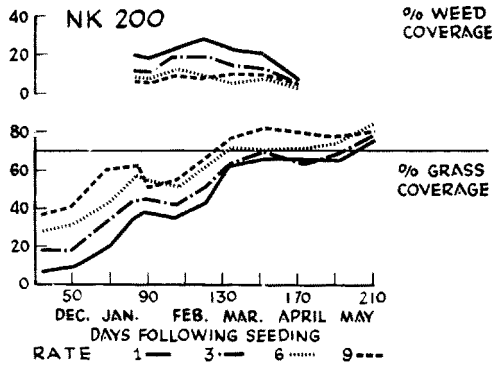


Figure 3.

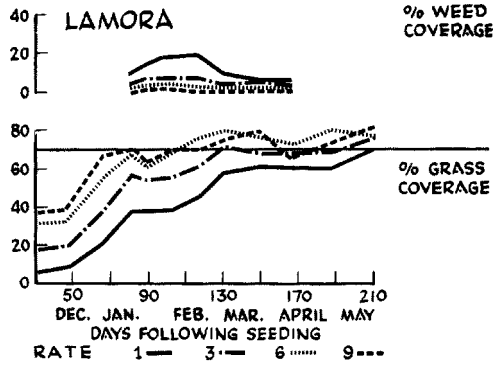


Figure 4.

It has been the objective of a series of California trials to evaluate the performance characteristics of the turf-type perennial ryegrass cultivars. For purposes of this discussion, the results obtained relative to seeding rate, cutting quality, and overseeding will be presented.

Seeding Rate Study

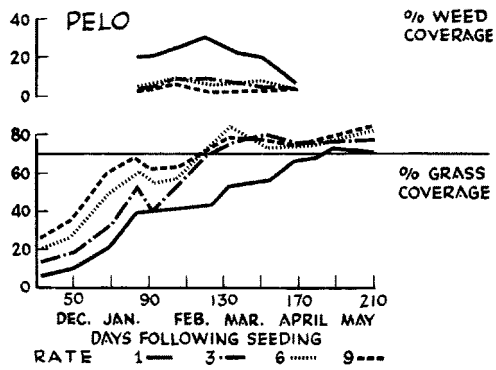
Currently, the seeding rate for all varieties of perennial ryegrass is suggested in the 6 to 12 pounds per 1,000 square foot range. Observation of stands of the newer varieties indicate that a lesser seeding rate, with considerable economic implications, may be in order. Unfortunately, observations in this regard are the only information available at present. Therefore, a trial was established at the University of California Deciduous Fruit Field Station, San Jose, in the fall of 1972. It was the objective of this study to evaluate seeding rates of 1, 3, 6 and 9 pounds per 1,000 square feet of the varieties Manhattan, Pennfine, Pelo, NK-100, NK-200, Lamora and Common.

The site at the field station was prepared in the normal manner for turf establishment. The soil was a loam with pH 7.3 and had a low electrical conductivity reading. Phosphorus and potassium levels were adequate. Each variety at each seeding rate was hand sown to 5 by 20 foot plots and the plots were replicated four times. Maintenance following establishment consisted of mowing (at 1½ inches), irrigation (to maintain an adequate water balance), and monthly fertilization with ammonium sulfate.

The most important measurements taken to realize the objectives of this trial included per cent turfgrass cover and per cent weed invasions at regular intervals. The results obtained are presented in Figures 1-7. Each graph illustrates the per cent grass and weed coverage over time. The horizontal line at 70 per cent grass coverage indicates a mature, fully useable turf sward.

Regarding time to 70 per cent grass coverage, it can be noted that at the higher seeding rates, NK-100, Lamora and Common were the fastest varieties to establish. With all varieties, there was little difference between the 6 and 9 pound rate. With most varieties, the 3 pound rate established slower than the 6 and 9 pounds treatment and the 1 pound rate was slower than the 3 pound seeding rate.

The results of the 1 pound seeding rate are best noted in the per cent weed readings. As is shown, there was a considerably greater weed stand in all varieties seeded at the 1 pound rate. The weed amount decreased significantly with the 3, 6 and 9 pound rates (note exception NK-200 at 3 pounds).



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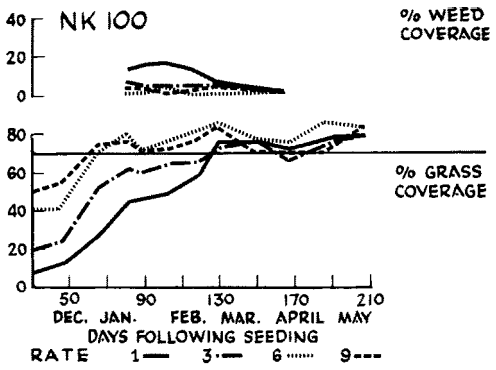


Figure 6.

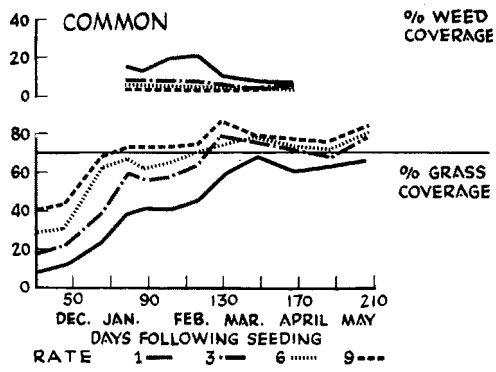


Figure 7.

Following maturation of the above described seeding rate study, visual observations were made during early summer, 1973, on the cutting quality of the seven varieties at the four seeding rates. The results of a June reading are given in Table 1. The rating is based on a 0 to 10 scale with 0 representing poor cutting quality (severe shredding of leaf blades) and 10 representing a clean leaf cut.

It should be noted that environmental conditions (high temperature) and management practices (rotary mower, relatively low nitrogen rates), accentuated the cutting quality observations that are reported.

As Table 1 indicates, the seeding rate had no effect on the cutting quality of the varieties Manhattan, Pennfine, NK-200 and Common. Common perennial ryegrass consistently showed poor cutting quality. The cutting quality of Lamora, NK-100 and Pelo improved as seeding rate increased.

To summarize these results, it was found that: 1) There is little reason to seed the perennial ryegrass varieties at a rate greater than 6 pounds per 1,000 square feet for optimum establishment; 2) A 3 pound seeding rate will result in a good sward with adequate weed competition, however, the turf will take longer to mature (note exception of NK-200 which would require 6 pounds per 1,000); 3) The 1 pound seeding rate appears inadequate unless a slow maturing, weedy, possibly "bunchy" turf can be tolerated; 4) The cutting quality of Manhattan, Pennfine, Lamora and Common is not influenced by seeding rate whereas the seeding rate does influence the appearance following mowing with Lamora, NK-100 and Pelo.

Overseeding Study

In areas of California where common bermuda grass is used, an overseeding with a cool season species (usually annual ryegrass) is a common practice to enchance winter appearance. Recently, an increased use of perennial ryegrass has occurred, mainly because of the availability of the newer varieties. Unfortunately, little quantitative information is available for the new varieties, especially regarding their persistance past the first overseeding season as influenced by high summer temperatures.

Table 1. Cutting Quality of Seven Perennial Ryegrass Varieties at Four Seeding Rates (0 = Very Poor; 10 = Excellent)

Seeding Rate	Varieties						
lbs./1000 sq. ft.	Manhattan	Pennfine	Lamora	NK-100	NK-200	Pelo	Common
1	6.25 N.S.**	7.00 N.S.	3.75 Z*	1.25 Z	6.00 N.S.	3.00 Z	1.75 N.S.
3	7.00	8.25	4.75 YZ	3.00 Y	7.00	4.25 YZ	1.00
6	6.50	8.50	6.25 X	4.00 XY	6.50	4.25 YX	2.00
9	6.50	8.50	6.00 XY	5.25 X	6.25	5.25 Y	1.75

* Values followed by the same letter are not significantly different at the 5% level.

** Not significant.

Therefore, a trial was conducted on a lawn area at Cal-Tech, Pasadena; summer temperatures in this area frequently exceed 95 degrees for extended periods.

Six commercially available and two experimental perennial ryegrass varieties (as given in Table 2) were overseeded to a common bermudagrass sward that had been moderately scalped, verticut and swept clean of debris. Seeding was performed on October 30, 1970. Except for the checks which were not seeded, each 5 feet by 10 feet plot was seeded at the rate equivalent to 10 pounds per 1,000 square feet. Each variety treatment was replicated four times and the plots were arranged in a completely randomized design. The experimental area was irrigated frequently until initial establishment of the ryegrasses was complete; thereafter the normal irrigation schedule for the campus turf areas was followed. A month following establishment the plot area was fertilized with a 16-8-8 fertilizer (1 pound N/1,000 square feet) and then fertilized on a three-times-a-year schedule. The area was mowed at regular intervals at a cutting height of approximately 1¾ inches. No other primary or secondary management practice was given for the duration of the test.

The plots were observed periodically for general turf appearance and per cent ryegrass. The turf score rating is a visual score based on appearance of the sward. A 0 represents a completely dead turf while 10 represents an ideal turf stand of uniform density, texture, color, etc., of the desired species mixture. Those plots considered dormant because of little or no ryegrass present are so indicated.

As is shown in Table 2, all varieties gave good cover the first overseeding season and there was little difference in appearance. Following the first summer, the per cent stand in the winter of '71-'72, of K9-123, K9-124, NK-100, NK-200, Pelo and Common decreased as did the turf scores. Manhattan and Pennfine continued as desirable overseeded grasses. The same trend was observed in the winter of '72-'73. By the winter of '73-'74, all varieties, with the exception of Manhattan and Pennfine, had decreased to the level that they had no aesthetic value. Manhattan and Pennfine continued to give good cover as is shown in Table 2. It was concluded from this study that the varieties Manhattan and Pennfine were better able to uniformly survive high temperature stress and bermudagrass competition for an extended period of time.

Conclusions

The release of new turf type perennial ryegrass varieties offers a greater use potential for this species both as a primary turf and for overseeding purposes. The improved texture, density, color and cutting quality assures a desirable turfgrass sward in areas where the species/variety is adapted and where it is managed correctly. The trial results presented herein indicate that a 6 pound per 1,000 square feet seeding rate is adequate for all varieties; that a 3 pound rate can be used with good weed competition (except NK-200) but the turf will take longer to mature; that the cutting quality of Manhattan, Pennfine, Lamora, and Common is not influenced by seeding rate whereas the seeding rate does influence the appearance following mowing with Lamora, NK-100 and Pelo; and the varieties Manhattan and Pennfine seem better able to tolerate high summer temperatures and bermudagrass competition to give a more permanent cool season-warm season species mixture.

Appreciation

Appreciation is extended to Northrum King and Company, Berger and Plate Company, and Germains Incorporated for the seed donated for these trials. The cooperation of the personnel at Cal Tech, Pasadena, and the San Jose Field Station is also appreciated.

Table 2. The per cent perennial ryegrass and turf scores of eight varieties at three observation dates following an October, 1970, overseeding.

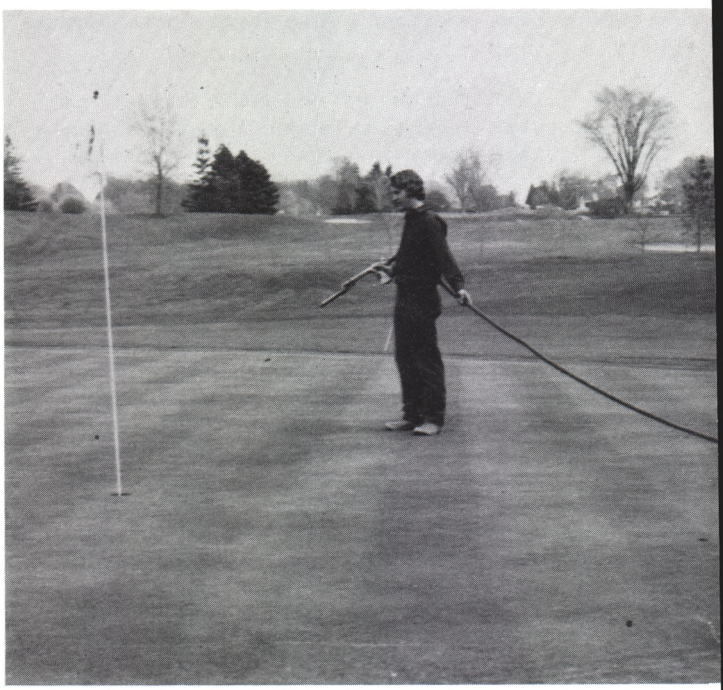
	Per cent Ryegrass			Turf Scores		
Cultivar	3-17-71	2-16-72	12-12-73	3-17-71	2-16-72	12-12-73
K9-123	↑	38 a*	22 b	7.1 bc	3.5 ab	3.9
K9-124		48 abc	2 a	7.1 bc	5.0 bc	Dormant
NK-100		50 abc	18 ab	7.6 bc	5.7 c	4.0
NK-200		60 bc	6 ab	7.2 bc	6.2 c	Dormant
Pelo		44 ab	16 ab	6.8 bc	4.5 abc	3.9
Manhattan		88 c	79 c	7.7 c	9.0 d	7.1
Pennfine		82 d	83 c	7.2 bc	8.0 d	6.5
Common	↓	64 c	20 a	6.7 b	5.0 bc	4.2
Check	90% cover	-	-	Dormant	Dormant	Dormant

* Values followed by the same letter are not statistically different at the 5 per cent level.

The Assistant Superintendent: Gaining in Stature

by JAMES W. TIMMERMAN,

Superintendent, Orchard Lake Country Club, Orchard Lake, Mich.



Application of chemicals should be a prime duty of a good assistant superintendent.

Many superintendents must, at some time, face the decision of whether to hire a young assistant superintendent, or make the foreman the second in command. Certainly, both job classifications have merit under today's operating procedures.

The scope of the green superintendent's responsibilities is on the rise. Today, he is asked to oversee maintenance procedures for tennis and paddle tennis courts, swimming pools, skeet shooting ranges, boating facilities, and various other operations, as well as the golf course itself. These expanded duties are demanding more and more of his time and ability to see that all operations are maintained adequately. This is the area, I feel, where the role of the assistant superintendent or foreman is gaining in stature. The assistant or foreman can be of tremendous help in ensuring that the varied facilities of a club are maintained properly.

The question of whether to hire a young assistant superintendent, who may only be with you a few years, or a permanent foreman is not an easy one to answer. Personal preference on the part of the superintendent and the type of maintenance performed will, to some degree, determine the type of individual needed.

If yours is a small club with a limited budget, a foreman who can also double as a mechanic may be most advantageous. However, if your operation has numerous facilities that require day to day checking, an assistant superintendent plus a mechanic may be the wisest choice. Today, many clubs are beginning to use their own mechanics for maintenance of clubhouse facilities rather than calling on outside servicemen. Minor electrical, plumbing, and other repairs can successfully be handled by the golf course mechanic at a big saving to the club. It may be too much to ask of a mechanic to also double as a foreman. Under this type of situation, both an assistant and a mechanic seem highly desirable.

There are certainly advantages and disadvantages for both the assistant and foreman. Some of the common disadvantages of hiring an assistant are:

1) They will be with you only a few years and then leave for their own head job.

2) They are inexperienced and unsure of themselves.

3) They are out after your job.

While some of these may be valid reasons, I feel they are not true in the majority of cases. Personally, I have had two assistants and one foreman and have been more rewarded by hiring the young assistant.

The superintendent must carefully weigh the advantages and disadvantages of both job classifications, and then, based on the club's needs, decide which is the best classification under the

circumstances.

When hiring an assistant superintendent, certain qualifications should be considered. Following are those I have found to be most desirable:

1) Education and experience: Some formal college training is helpful. There are many colleges today with two-year and four-year programs in turf management. Many fine young men are available each year from this source. These individuals have had technical training in practically all phases of turf management and they can be almost of instant help.

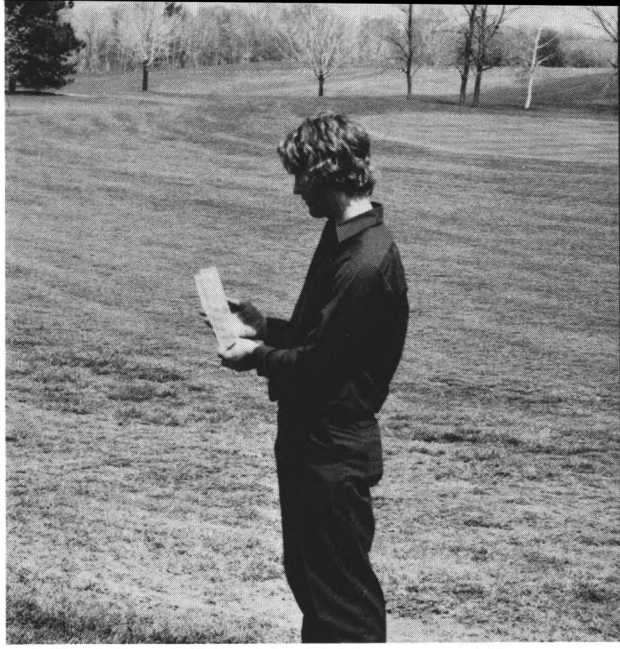
Experience is also essential. Many of these students have worked on golf courses as part of their training programs and are familiar with the management problems faced by the superintendent. Many have also worked on university turf research plots and have benefitted greatly from this type of experience. The more experience a young man has the better, but this should not be the deciding factor if the individual considered has other outstanding abilities.

2) Enthusiasm and interest: These two qualities can go a long way toward making up for what a young man may lack in experience. More has been accomplished by people who show enthusiasm and interest in their work than by paying high salaries to other people with less interest. It has always been a pleasure for me to see how much my assistant gets done just because he is enthusiastic about what he is doing.

3) Self-confidence: An individual must have self-confidence if he is to succeed. Your assistant will be asked to supervise men older than he and make decisions when you're not around. If he lacks the confidence to do so, he will be of little help to you. Even though he may not always be correct, he should possess the ability to act on his own.

4) Self-control: As any good superintendent knows, there are many daily frustrations and interruptions that must be faced. Furthermore, there are personnel problems with members, crew, and other department heads that can be very taxing. A superintendent must be able to control his temper and think things through when difficulties arise. A good assistant must also exhibit these qualities.

I'm sure one could list many more qualities, but these are the ones I find to be the most beneficial. Once you have decided to hire an assistant superintendent, what should his duties be? The most obvious one is that he is in control when you are not there. It should be made clear to the crew that he has the authority as well as the responsibility when you are gone.



Checking rainfall and recording weather observations is valuable experience for the assistant superintendent.

Following is a list of the most helpful duties my assistant performs that has eased my load greatly:

1) Trains part-time summer help in the art of grooming the golf course.
2) Keeps records on weather, gasoline consumption, and other critical areas.
3) Applies all fertilizers and sprays all chemicals.
4) Attends Green Committee meetings and takes the minutes.
5) Assists the mechanic in repairs and maintenance of equipment.
6) Aids in the planning and implementation of all major construction and renovation projects.

I would like to stress two additional points that cause me to favor an assistant superintendent over a foreman. The first is that these young men are eager to learn. They are full of questions about turf management and their questions force me to keep current. Consequently, my interest in turf is constantly stimulated.

Finally, we superintendents of today have an obligation to train the superintendents of tomorrow. They may receive the basics in college, but we must teach the practical application of what they learn. There are many intricacies about this profession and the future superintendent can only learn about them through experience. They can learn about them with our help, and, in so doing, be of tremendous assistance to our operation.

The Turfgrass Service of the USGA Green Section

Direct turfgrass advisory visits to USGA Member Clubs started in June, 1952. In the 22 years since then, the Green Section Staff has increased to eight specialists, and it has made over 25,000 golf course visits! Every USGA Member Club should be a subscriber, for you have information other clubs need and can use. Why not put this highly trained team to work for you on your course?

Every club subscribing to the Green Section Turfgrass Service receives the following benefits yearly:

1—Several direct conferences with a Green Section agronomist, in this manner:

A—A scheduled half-day, on-the-course consultation, followed by a written report from the agronomist to the Course Superintendent and Green Committee Chairman or club representative. Second visits are available at reduced cost if requested.

B—Consultation with the agronomist at local group meetings and turf conferences.

2—Assistance by correspondence and telephone.

3—A subscription to the USGA *Green Section Record*, dealing with golf turf affairs, six times a year, addressed to the Golf Course Superintendent. (This is in addition to the subscription sent to the Green Committee Chairman in connection with USGA Membership.)

4—A voice in the direction of turf research whose results benefit golf courses. The subscription fee covers all services and expenses; there are no extra charges for travel. (The fee for the Green Section Turfgrass Service is additional to dues for USGA Membership). A list of regional Green Section offices can be found inside the front cover.

APPLICATION FOR TURFGRASS SERVICE OF USGA GREEN SECTION

(Open to USGA Members only)

Date _____, 19_____

Full Name of Club or Course _____

Permanent Mail Address (street or box) _____

Post office _____, State _____ Zip_____

Application authorized by: _____ Title _____

Course Superintendent _____

We hereby apply for the Turfgrass Service of the United States Golf Association Green Section and certify that we are eligible for the class checked below.

We enclose the fee (see schedule below) for the current year ending December 31. The USGA *Green Section Record* is to be addressed to our Golf Course Superintendent (this is in addition to the subscription sent to our Green Committee Chairman in connection with USGA Membership).

This application is automatically continuous from year to year unless interrupted by advance resignation.

Check Proper Class:

_____ Less than 18 holes $250
_____ 18 to 27 holes $300

More than 27 holes:

_____ 36 holes $325
_____ Per regulation course in addition to 36 holes . . . . . $ 75

Please send receipted invoice

Requests to agronomists for second visits will entail an additional charge of $100. For the third or more requested visits within the year, an additional charge of $200 each will be made. Clubs will be billed in October for all additional visits during the year.

USGA GREEN SECTION RECORD
JULY 1974

TURF TWISTERS

NIGHT OR DAY?

Question: What time, day or night, is best for watering greens? (S.C.)

Answer: My preference is late evening or night, although for various reasons many successful superintendents water at other times. I prefer night watering because it gives the moisture a chance to penetrate into the soil before traffic and hot sunshine have a chance to combine with the excess surface moisture and make for real problems such as scald, wet wilt and the messy condition resulting when the turf is simply mashed or trampled into mud. Disease from night watering is negligible when a good fungicide program is used and water loss through evaporation is reduced, making for better moisture economy. Factually, the best time to water turf is when it needs it, but with all the factors added up, night watering seems to come out ahead.

WET OR DRY?

Question: Short of spending a tremendous amount of money for systemic fungicides, which my budget can't stand, are there any management practices that can be performed to reduce the effects of the *Fusarium roseum* disease on my Kentucky bluegrass fairways and tees? (R.I.)

Answer: Yes. The Fusarium blight disease is more severe on areas with high fertility and excessive thatch. The fertilizer and thatch (we speculate) are a cause and effect relationship, so anything that can be done to reduce the fertilizer applied should also help reduce the thatch. Mechanical slicing and dethatching may also be a help in the physical removal of the thatch and its natural decomposition. Keeping the thatch damp with more frequent, lighter applications of water may also help because this disease is more severe on droughty areas that go through continuous wet-dry-wet-dry cycles.

YOU ARE THE ONE!

Question: We are planning to rebuild several greens to the Green Section Specifications. As Green Committee Chairman I had heard that the sand layer was no longer necessary in their construction. Our Greens Superintendent disagrees . . . who is right? (N.Y.)

Answer: The Green Section Specifications for Putting Green Construction are an exacting, scientific method of building a golf green. All parts of these Specs are well studied and tested, and all must be included as outlined until such time as our staff and our researchers tell us otherwise. If not, then the green is not a Green Section Specification green and its performance may not be good. It is therefore essential that all steps in the procedure be followed, including that of the coarse sand layer between the drainage stone and the topsoil mixture. Who is right? . . . your superintendent.