oxygen and soil) and can change the pH, etc. The more we understand interactions the easier it will be to manage turfgrasses.

6. "There is an accumulation affect associated with constant or regular treatment applications".

If we constantly mow elite Kentucky bluegrasses at the normal height for common Kentucky bluegrass, the effect will likely be to accumulate excessive organic matter, thatch. If we continually apply lime when it is not needed it will accumulate a higher pH which may lead to reduced availability of some nutrients. If we regularly mow a putting green at the lower limit of tolerance, the effect will likely be to accumulate a continuing reduction in not only top growth, but also root growth and consequently accumulate an increased susceptability to drought and wear damage.

7. "One shot treatments do not accumulate affects but tend to move things off center only briefly. Usually the tendency is for the situation to return to the original condition".

It is comforting to remember that nature is forgiving in many ways (just don't make the same mistake twice) and grass often grows in spite of us. Application of this principle allows us, for example, to mow shorter than is desired occassionally, say for overseeding, without doing a great deal of lasting damage. Conversely we must realize that in order to really change things we usually need to establish a program for continuing application of the change factor.

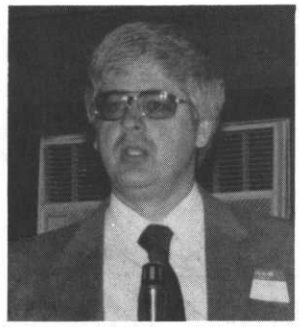
8. "When things are not going right, an effective strategy is to identify the factor or condition furthest from the optimum and correct it first".

This is a very important principle because it adds incentive to learn the others and occassionally allows us to perform seemingly magical things. The reason is that all factors interact and when the furthest from the optimum is corrected it usually interacts to shift responses to all the other factors closer to the optimum.

There are several more principles that are applicable to turf management situations. Maybe the best one to end with is 9) "If things are working well, don't fix them".

Best wishes for a good year in turf.

SOME COMMENTS ON THE SPRING OF 1984



by Dr. Donald White and
Dr. Ward Stienstra

This has been (still is for that matter) another typical Minnesota winter unlike any of the other recent ones.

Snow before freeze-up meant little or no frost in the soil all winter long. Lots of snow covered the ground longer than in many other years. This is the second of the last three years we have experienced rain in a thunderstorm during February.

On December 1 Dr. Don Baker's records showed that the soil temperature at 1/2 inch was 38.2; at 8 inches it was 39.8; and at 16 inches it was 42.4°F. On February 15 the soil temperatures reported are 33.6°F at 1/2 inch; 33.3°F at 2 inches and 4 inches; 33.7°F at 8 inches; and 35°F at 16 inches. They recorded only 1 to 2 inches of frost during the severe cold spell in January but it did not stay long. Normally we have around 40 inches of frost at this time in February. It has been a very mild winter under all the snow setting us up for cold temperature diseases. Maybe more importantly, it has allowed the melt water to penetrate the soil so that we have had little or no free water on the surface. Checking the soil situation in several places myself, I found no frost or standing water. The melt water seems to be moving right into the soil and at 2 inches the soil temperatures varied from 33°F to 36°F in our readings.

Our cold tolerance evaluations show that Poa annua did not develop as much hardiness as expected. But it should tolerate normal spring situations. It does indicate that the longer we keep the snow cover the better it will be for the grass, particularly if

continued on Page 7

severely cold weather returns. If you covered your greens last fall you may want to watch the grass carefully and not be in any great hurry to remove them until daytime temperatures result in growth. It is also important to check under the covers regularly for disease activity.

The Poa annua should be reasonably safe as long as the grass does not sit in free water at the soil surface while it is exposed to freezing and thawing. The secret is to make sure that the melt water can run off if it is not absorbed directly into the soil. As winter continues we need to be sure that drainageways are free from obstructions so that water can move freely as the snow melts. Be sure to check for ice dams in water ways and be alert to free standing water.

It also looks like it could be a banner year for snow molds. Dr. Stienstra suggests that everyone should be alert for snow mold activity and that it would be prudent to be prepared to apply 1 oz. of 1991; or 4 oz. of Daconil; or 1/2 oz. of Calo-Clor per 1000 square feet if you observe much activity. Don't hesitate to call if any of those treatments don't work or if you see unexpected things and you think we can help.

Best wishes for a good "normal" year.

THE GREEN COMMITTEE AND THE SUPERINTENDENT

by KEITH SCOTT
Superintendent
Oak Ridge Country Club

As the superintendent at the Oak Ridge Country Club for the past 13 years I have had the opportunity to work with many fine green committees. I would like to share with you some of the procedures we adhere to.

The green committee is one of the most valuable and necessary working bodies in a country club. The way it functions can hold the key to success or failure for a superintendent.

Analyzing this committee could be broken down into three main areas:

1. How is the committee chosen?
2. What are its responsibilities and duties?
3. How does the committee work?

The most effective and successful green committees should be made up of a cross section of members with particular emphasis placed on low to high handicappers and young to older members. If women's play is a dominant factor at your club the ladies should also be represented. Members of this committee should be people who can communicate extremely well and whose judgement will be respected by the general membership.

Continuity is another factor in keeping a good green committee from year to year. Since I arrived 13 years ago people like Eli Budd and Charles Rubenstein have been involved on this committee. They keep the committee at 5-7 members per year, make sure that there is a board member on the committee and each year discuss committee appointments with myself. It goes without saying that these two gentlemen have been very instrumental in developing the golf course to where it is today.

The major responsibility of the green committee is to see that the objectives and the desires of the membership are carried out in terms of the maintenance and development of the course. Accomplishing the afore mentioned can be eased greatly by hiring a competent turf grass manager whose qualifications conform to the club's basic objectives. At the Oak Ridge Country Club an uninterrupted flow of communication is kept up between the general membership, the Board of Directors, the Superintendent, the General Manager and all other departments that may affect the golf course operation. This I find to be a key element in the working of a good green committee.

It is felt that meetings of the green committee are usually scheduled as need arises, rather than on a regular basis. We generally have four meetings a year - winter, spring, summer and fall. The winter