GCSA Convention Speeches

Member Sees Supt. As An Expert in His Field

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What are the ingredients of a capable supt? Although outward appearances differ, nearly all successful and outstanding supts. have many characteristics in common.

What are these characteristics?

1. They enjoy their work.
2. They have confidence in themselves.
3. They are constantly striving to learn more about their job.
4. They have developed imagination.
5. They have a working plan to which they adhere.
6. They have developed the knack of building goodwill, both with their staff and members of their club.
7. They keep full and complete records daily.

It is obvious that the day's work must be planned ahead in order to get the most out of your men and out of your budget. An unplanned, unregulated day means disorganized and undirected work. I can remember the days when the only important job of the supt. was maintaining the greens in perfect condition.

Today members demand that maintenance of fairways, the rough, traps, tees, disease control, drainage, water supply, equipment care, management of help and keeping records are included among duties that fall upon the supt.

Seen As An Expert

The members regard the supt. as an expert in every phase of agronomy and horticulture. In order for him to maintain that impression, he has to study and keep up with developments in an industry that has made tremendous progress in the last decade.

Someone said, "That the day we cease our efforts to learn, we die mentally." and to quote another philosopher who said, "Alas for our hero — too busy to read — he was also too busy, it proved to succeed."

Study and mix with fellows in your profession. Not one of you by yourself can know all the answers — for as James A. Reid wrote: "No Club can 'afford' the cost of new ideas, new weed controls, new fertilizers, new equipment." The USGA green section, colleges, commercial houses, chemical firms are experimenting and are releasing their findings in conferences, books and monthly magazines and papers. One is lucky to be around today when so much is being uncovered in the science of dealing with grasses and the art of dealing with people.

The keeping of records is an onerous job. You undoubtedly ask yourself if it is really necessary. Just ask Taylor Boyd, of the Camargo Club, Cincinnati, one of America's outstanding course executives, how vital keeping daily records is to your job. The records kept at Woodmont by Bob Shields, our capable supt., has enabled me, as liaison man between the maintenance dept. and the board, to present the actual budget requirements which are based on accurate figures.

There is no guesswork when you have dependable records which take about 15 to 20 minutes a day to keep. The budget committee then sees facts that have been faithfully accumulated showing how every dollar has been spent. Thus the budget committee shares responsibility for the way in which the course and grounds can be maintained.

The budget committee and members of the Board should be made to understand the original big investment the club already has in the course, that it must be maintained with great care. To accomplish this, we must have a staff that understands its job, is devoted and loyal to the interests of the club. It is the job of the chmn. of the green committee to continually educate and impress upon officials the fact that they cannot relax for one moment in the proper care and maintenance of the course around which every other activity in the club must revolve.

South Shall Rise Again - With Turfgrass

By JAMES M. LATHAM
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Demand of the golfing public for better playing conditions and the desire of the supt. for more easily-maintained turf have been the driving forces behind the development of improved grasses. These same groups are responsible for their use. Not too long ago there was quite a division grass-wise between the North and South — bent, bluegrass and fescue for the North; Bermuda, centipede, carpet and St. Augustine for the South. The crabgrass belt from St. Louis to Washington was a no-man's land, not fit for any desirable grass. Mostly, this area depended unsuccessfully upon cool-season grasses. This situation certainly is changing today.

The old cry, "The South will rise again," is certainly true with turfgrasses. U-3 Bermuda is one of the greatest things to happen to golf in the crabgrass belt with summer problems. Al Linkogel started working with it in 1947 in St. Louis, Eb Steiniger at Pine Valley, Clementon, N. J., has been using U-3 Bermuda for fairway turf. Several other northeastern courses have found it useful as a turfgrass. Certainly U-3 is not the only Bermuda adapted to this area, but it is the only one which has been widely tested and approved. Among newer

(*Continued on page 77*)

GCSA Convention Speeches

(*Continued from page 46*)

varieties showing promise as being resistant to winterkill are Sunturf, Urganda, and Tifgreen. These grasses begin growth earlier than the U-3.

Bent Moves South

Improved bentgrasses are being used farther and farther south for permanent turf. Bents have been used for a number of years in the Southwest. The Southeast, however, has had more problems to overcome, the solutions to which rest primarily on the individual supt. In 1951 Alex McKay planted Arlington and Old Orchard bents on the Chattanooga greens. The same year Charlie Danner in Nashville began working with bents. Both areas have been quite successful. Ellis Maples planted bent at the Pine Hollow in Winston-Salem, N. C., in 1954. Last year greens at the Cherokee CC in Atlanta were planted to bent. There is also strong indication of more extensive use of tall fescue in low maintenance areas in the upper South.

Many of the new varieties are special purpose grasses. Improved bents are primarily used on greens and aprons. Merion has been used largely on tees and lawns.

Fescues have long been the workhorses. Tall fescues such as Alta and Kentucky 31 are widely used for low maintenance areas such as steep banks, deep shade and rough areas. The new fine-leaf fescues are basically used for lawn or fairway turf where irrigation is not used.

Has Great Variability

Probably Bermuda is used for more turf purposes than any other grass genus. In the South, common Bermuda is successfully used for athletic fields, golf greens, tees and fairways, home lawns and other unshaded areas. Its extreme variability and relative ease of hybridization have made fine-leaf types commonplace. Examples of this are Tifgreen, Everglades I, Bayshore, Tiffine, Texturf 1F and Sunturf, which are primarily used for putting greens.

Tifflawn Bermuda, originally designed for lawns and golf courses, has been used principally for tees and athletic fields, due to its toughness. Texturf 10 is also used for these purposes. Ormond makes very good fairway and lawn turf but is coarser than desired for greens. U-3 has found wide use on tees and fairways due to winterhardiness and wear resistance.

Zoysias Have Slow Growth

The Zoysias have not been as useful for golf as was originally thought, due to slow growth. Meyer and Emerald are improved varieties from breeding programs.

In the South they do well in moderate shade and may be used in areas in which Bermudas do not grow. Slowness of growth, however, means that damage from golf clubs will be long in healing, so their use in areas subject to such damage is questionable.

Improved grasses, both cool and warm-sea-

son, have been found to be unsatisfactory in many instances. Certainly no amount of testing at an experiment station can approximate the trial on a course. Traffic, weather, soil, and management conditions cannot be standardized on a course. The final judgment of a grass, then, is up to the men who use it — supts. and golfers.

Consider, then, the prime topic of course maintenance cost. In the Southeast quite a bit of interest is being shown in improved Bermudas for fairway use. What will this practice do to operating costs? They'll probably increase. Mowing equipment must be kept sharper and better adjusted than for common Bermuda. Damage from insects or diseases will be more easily seen due to greater sod density. A closer cut will be asked; therefore more water may be needed. The needs of fertilizer should not change, but fertilizer "burns" will be more noticeable. More frequent mowing probably will be needed. It will be more difficult to obtain a stand of ryegrass in the fall. Be that as it may, if proper grass is chosen a beautiful surface will be obtained. This means that a more careful program is required to give th· golfers the things they want without great budget increases. The new grasses are better known than those which went before but will require a new management program.

Putting green management costs should be less with improved grasses than wtih the older types. Arlington, Congressional and Penncross

are probably the most popular bentgrasses at this time. Their management costs have not been greater than that of their predecessors. The previously mentioned putting green Bermudas should not increase management costs, either.

Ureaform Fertilization on Putting Green Turf

By J. A. DEFRANCE

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The advent of ureaform has opened the door to a whole new era in turfgrass fertilization. Because of the critical importance of nitrogen in the development and maintenance of turf areas, research work has been initiated with respect to the relatively new methylene urea compounds commonly referred to as ureaforms. Fuller and Clark, Yee and Love, and McCool did much of the pioneering work on the breakdown and availability of the ureaform materials. In general, their early studies showed that ureaform materials, if properly formulated, were effective slow-releasing nitrogen sources.

It remained to be determined just how effective ureaform fertilizers would be as a source of nitrogen for putting-green turf where grass clippings are removed. An experiment was started in 1956 to evaluate the effectiveness of ureaform fertilizers as nitrogen sources on putting green turf. This paper summarizes the results of this study as observed throughout the 1957 growing season.

Methods and Materials

The investigation was conducted at the turf plots of the R. I. Agricultural experiment station on a soil classifed as Bridgehampton silt loam of pH 6.2. Experimental plots were each 50 sq. ft. in area and were replicated three times. Plots were located on three separate areas, each a different species of green turf, namely Piper velvet bent, R. I. Colonial and Seaside. All were mowed at one-quarter in. and maintained to simulate putting green conditions as nearly as possible.

Three commercially available ureaform fertilizers, Borden's "38", Nitroform, and Uramite, each containing 38 per cent nitrogen, were applied at the rates of 2, 4, 6, and 8 lbs. of nitrogen per 1,000 sq. ft. in a single application. In addition, these same fertilizers were applied at the rates of 4, 8 and 12 lbs. as split applications. Since no appreciable variation in response was observed from the three ureaform materials used at the same rate, the turf scores of all three materials were averaged and are reported as ureaform here.

For comparison the fertilizer used for general turfgrass purposes and designated as standard R. I. 8-6-2 turf fertilizer was used in this experiment. This fertilizer, which was based on previous experimentation, derives 30 per cent of its total nitrogen from natural organic

sources; the remaining 70 per cent is from quickly available nitrogen sources. In addition, an activated sludge, Milorganite, with analysis of 5.5-4.0-0 was applied in split applications at the rates of 4 and 8 lbs of nitrogen per 1000 sq. ft. Phosphorus and potash for all the fertilizer plots were adjusted to 3 and 1 lbs, respectively, per 1000 sq. ft. including the check plots which received no nitrogen. All materials were applied uniformly with a mechanical spreader.

Scoring Explained

Supplemental irrigation water was applied when needed, or about every 4 to 5 days. Turf quality ratings based upon density, color, uniformity, vigor, and general appearance were taken every two weeks throughout the growing season and are designated as turf score.

The R. I. turf scoring system is scaled from 0 to 100. A breakdown of this system is as follows: 0 to 49 is poor quality, 50-59 fair, 60-69 fairly good, 70-79 good, and 80 or above excellent.

The first fertilizer treatment was applied May 3, following the recording of the first turf scores for the 1957 season. The second application was on Aug. 2. During 1956, single and split applications were applied to the same plots, Apr. 27 and June 20.

Results and Discussion

When applied at the rate of 12 lbs. of nitrogen per 1,000 sq. ft. as a split application there was no apparent difference between the three ureaform materials as measured by the resulting turf quality. There was a large difference between the treated plots and the check during the first week. This was especially true when ureaform was used at higher rates. This difference in turf quality, recorded the day before the fertilizer treatments were applied, is due apparently to a considerable holdover in residual nitrogen from ureaform applied the previous year. An average of all turf quality ratings shows all three ureaform fertilizers produced excellent quality turf throughout the entire growing season at the 12-lb. split application rate.

As for results of using a split application of 8 lbs. of nitrogen per 1,000 sq. ft. from ureaform materials, R. I. 8-6-2 turfgrass fertilizer, and activated sludge (Milorganite), the standard 8-6-2 turf fertilizer, containing largely water-soluble nitrogen, gave a quick growth response and produced a fairly good turf in a short period of time. However, turf quality steadily declined until the second application in early Aug. Following the second application the same general response was noted as was observed after the first application. Milorganite required a month's time to produce a fairly good turf which then declined until second application. After the second treatment, Milorganite produced an excellent quality turf during the months of Aug. and Sept. and declined in Oct. to fairly good turf.

Ureaform as a split application of 8 lbs of nitrogen per 1,000 sq. ft. produced fairly good turf during May, June and July. Following the second application on Aug. 2, the turf quality improved to excellent during the months of Aug. and Sept.

An average of all turf scores throughout the growing season at the 8 lb. split application level of nitrogen shows that ureaform produced good quality turf rated at 72 per cent whereas the standard 8-6-2 rated 67 per cent and the activated sludge rated 68.8 per cent. A study of data indicates that the turf quality resulting from a split application of 8 lbs. of ureaform nitrogen although showing some variation, does not have the wide fluctuation as does the R. I. 8-6-2 fertilizer and Milorganite. The ureaform fertilizers appeared to undergo a more gradual nitrogen release thereby providing a longer feeding period throughout the growing season. In addition, the split application of 8 lbs. of nitrogen per 1,000 sq. ft. from either activated sludge or water soluble fertilizers is not advisable since high nitrogen levels necessitate extremely large quantities of fertilizer, and the application of such large quantities is likely to cause turf injury. Ureaform fertilizers, although containing 38 per cent nitrogen, may be applied at high nitrogen rates without danger of turf injury, because of controlled nitrogen availability.

Single vs. Split Application

Comparative value of single versus split application of ureaform at the 8-pound nitrogen rate shows that the differences are small. Those plots receiving the split application had an average turf score of 72 per cent as compared to 75 per cent for those plots receiving a single treatment. No appreciable benefit was obtained

by splitting the treatment into two applications when using the 8-lb. level of nitrogen.

Quality Fluctuation

In a comparison of ureaform, the standard R. I. 8-6-2 turf fertilizer, and Milorganite using a split application of 4 pounds of nitrogen per 1000 square feet, the R. I. 8-2 once again produced turf which fluctuated in quality throughout the growing season. Milorganite was slow to produce a growth response until the advent of warm weather. Ureaform produced a turf which improved steadily as the growing season progressed. An average turf score for ureaform was 60 per cent, for the 8-6-2, 59 per cent and for Milorganite, 62 per cent. This shows that all three of these fertilizer materials produced only fairly good turf, indicating that 4 lbs of nitrogen is inadequate.

Average Turf Score

In comparison of turf quality following the single applications of 2, 4, 6, and 8 lbs. of nitrogen per 1000 sq. ft. from ureaform sources, the average turf score for the 2-lb. rate was 54.2 per cent; 4 lb. rate 64.9 per cent; 6-lb rate 68.2 per cent; and 8-pound rate 75.1 per cent. The single application of 8 lbs. produced a good quality turf throughout the growing season, and the 4 and 6-lb. rates gave a steady response. The 2-lb. rate was unsatisfactory since it produced only fair quality turf throughout the six months of observation.

The check plots improved slightly in turf quality as the season progressed but the quality of these plots was far below that of the treated plots.

Conclusion

The results of this study indicate that ureaform fertilizers are well adapted for fertilizing green turf. Although ureaform fertilizers gave slower response than fertilizers which are largely water soluble, they gave a quicker response than the activated sludge. In addition, ureaform materials have been demonstrated to provide long seasonal feeding and have shown a residual holdover of nitrogen to the following year. Such fertilizer as the R. I. 8-6-2 and Milorganite did not possess these qualities and must be applied at lower rates of nitrogen more often throughout the growing season.

Something's Wrong Here

In the report of the GCSA convention that appeared in March GOLFDOM it was stated that dallisgrass was controlled at a Houston club with an application of 10 lbs. of DSMA per 200 gals. of water and cost of eradication was $40 per hole. K. D. Flanders, supt. of Brae Burn CC, has corrected our scorecard on this. The cost was $40 per acre and 21 lbs of DSMA per 200 gals. of water were used.

It appears that the most desirable rate of ureaform nitrogen application for putting-green turf is between 8 and 12 lbs. per 1,000 sq. ft. It is doubtful if the five per cent increase in turf score of the 12 over the 8-lb. rate justifies use of the higher rate. However, it appears that for best results ureaform fertilizers should be applied at not less than 8 lbs. of nitrogen per 1,000 square feet on green turf. There was no advantage in applying ureaform fertilizers in split applications.

Improving Your Fairway Irrigation System

By ROY W. NELSON

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When I was at Golden Valley CC in Minneapolis, I wasn't very happy with the fairway irrigation system because I thought it was inadequate. So, after some negotiation with my green committee, I got the go-ahead to improve it.

I didn't rush into the thing. I checked with other supts. to find out how their systems were set up and I talked to as many local irrigation men as I could to determine what would be the best approach to improving our setup.

Keep Budget in Mind

What I found out, came down to this: The first thing to do was to determine the capabilities and limitations of our existing facilities.

That meant studying water supply, distribution and application. Then, I had to find out to what extent improvements could be made considering the amount of money I had to work with.

The fact that I finally got the system installed the way I wanted it isn't important. What is more interesting are the things a supt. should consider if he is going to put in a complete new system or renovate an old one.

Here are some of the things he should take into account:

A very simple improvement might be a better balanced nozzle size in sprinkler heads.

A more ambitious improvement would be the replacement of the sprinklers. Or, perhaps, larger and more efficient hose would come under this heading.

Another consideration might be an increase in the water supply; or, in line with this, an increase in size and efficiency of the pipe distribution system.

Finally, the supt. might want an entire new hoseless layout with quick coupling valves.

You can't find out too much about how water operates. You have to learn something about pressure at which water can be delivered to a sprinkler head. This involves knowledge of friction loss in pipes and some grasp of information contained in the precipitation charts furnished by various sprinkler manufacturers.

Fundamental is application of water in the easiest and most efficient manner. You have to determine optimum application of water to a given area in say a week's time. This involves knowledge of soil structure and turf with which you are working. You have to decide how many sprinklers a man can tend at night, either by walking or by motorized transportation. Finally, you have to determine how to scatter your sprinklers and what velocity demand there is to keep them operating as you wish.

Theory May Not Apply

At Golden Valley, we used 16 large guns at a time. Our 12-in. well and 60 hp booster system delivered 1,200 gpm at 115 lbs. pressure at the pump. There are 180 valves on the fairway proper, located about 90 ft. apart. With this system, theoretically it should take 11 hours to apply one-half in. of water to the fairways, but as it worked out, it took from 14 to 16 hours. Usually, theory doesn't apply in irrigation as it should. I suppose it is because of soil structure and turf and possibly because of terrain. You have to do some experimenting to get the results you're after.