

prizes this year, and raise the entry fee to \$2.00 per member and guest. The entry fee for competitive putting will be \$1.00.

It has also been decided by the Golf Committee that in order to qualify for the Midwest golf team in California next year, a minimum of three rounds must be played. By doing this, at the end of the season we will know who our most competitive and better golfers are, and their best three rounds will be selected. This method of choosing our representatives for the annual Superintendents Tournament will be fair to everyone, and will do away with the player who shows up once a year, and shoots a hot round at our Fall Tournament in October.

Respectfully submitted,
Paul N. Voykin, Chairman

EDITORIAL

ICE SHEET DAMAGE

We are presently attempting to survive the damage of a most severe winter. Damage to turf is perhaps more extensive than at first realized. Reports are still coming in about damage on the various courses. It appears that this past winter will go down in history as one of the worst winters in Chicago. In some areas of the Chicago district there was snow and ice on the greens for over 100 days. Where an ice sheet was formed on the greens either from freezing rain or melting snow, which was the case on the South side of Chicago in early December, the damage seems to be more extensive than on the North side where they had more snow and no ice.

There are courses on the South side where entire greens are lost as compared to some on the North side where the damage seems to be localized in the lower areas of the greens where ice was formed during the melting of the snow.

We have seen several cases where clubs were adjacent to each other and one course was severely damaged and the other made it through the winter remarkably well. The first thing the Superintendent will do is try to analyze differences in maintenance procedures. He will compare fertilizer materials used and their method of application as well as time of application. He will compare mowing techniques, watering practices, soil structure and strains of grass, trying to find an answer for what happened. This is good. As you know we all learn from errors. However, this time I feel that no one can blame the conditions on poor maintenance.

Several courses reporting the use of Corn Gluten were hit badly, others using the same product at the same time of year and at the same rate were not affected in the least. We have observed adjoining courses where maintenance practices were identical, again one course survived beautifully and one did not.

Two factors remain whereby we feel that there might be an answer. Where the soils are of the Sandy Loam nature they seemed to come through the winter far better than those that were constructed of the heavier soils. The new USGA greens seemed to fair very well.

The Toronto bents and the Penncross bents survived far better than some of the older types of bent. Seaside had its usual Snow Mold but little damage from the ice.

Let's examine the problem a little closer.

If you will remember late last fall we had an over abundance of rain that caused our soils to become super saturated and water logged. This was accompanied with freezing of the soil in early December. The soil had very little air space due to the large amounts of water. Along came a sheet of ice and sealed the air off completely from the plants. The leaves and stolons of the bents were actually incased in ice. Plants continue to respire even in temperatures of -1 to -4 degrees Centigrade. This means that there is Carbon Dioxide gas produced and it could not escape because of the ice sheet. Extensive damage was caused at this time. Another step that follows this CO² production is the absence of Oxygen. It could not penetrate the ice nor was there any available in the soil, (except the sandier soils.) An anaerobic condition was produced and the plants manufactured alcohols instead of sugars and starches. The thatch actually fermented along with the dead plant tissue. This is what caused the terrific odor immediately after the ice sheet melted. Many of the plants at first looked healthy, this was because the Chlorophyll had not decomposed. As soon as air hit the plants they turned dark and in some cases even turned black.

If this sounds bad just remember what happened the first few days after the ice melted. We had days when the humidity was below twenty percent and the temperatures in the low forties with winds up to thirty miles per hour. This all added to the damage already produced by the ice. The few living plants died of wind damage.

We must distinguish between Ice Damage and Ice Sheet Damage at this time. Ice Damage refers to actual ice crystals being formed inside plant tissue. This destroys the plant tissue and it dies.

Ice Sheet Damage refers to a sheet of ice covering or incasing a plant so there is no air movement in or out.

In brief, then, we feel that the following maintenance practices had little or no effect on the condition of the turf after the ice melted;

1. Fertilization
2. Watering practices
3. Snow Mold treatment
4. Mowing practices
5. The use of arsenicals; as was suspected during the winter of 1959 when we had our last ice sheet damage.

Only two factors seem to be responsible for the damage:

1. Compaction of heavy soils. The sandy greens had lateral air movement under the ice as well as more air storage available due to particle size.
2. Strain of grass. Some definitely are more tolerant than others.

What can be done once it is determined that the grass is dead or almost dead?

We can overseed with Seaside or Penncross seed. Some prefer to mix these with Redtop for quicker germination. I doubt very much whether Redtop will germinate faster than Seaside or Penncross, after all it is also a bent. Redtop is not a permanent grass and will probably die during the heat of July and August.

After overseeding, an attempt should be made to topdress the seed for a good seedbed. This can be done by aerification and breaking up the plugs for your supply of topsoil, or you may use the Aero Thatch machine to accomplish the same thing. Actual topdress-

ing unless it is very pure, will only add to the weed population.

Next we must keep the seed bed damp at all times. This often requires handwatering several times a day if it is a little windy and dry. Some Supts. have used plastic coverings with very good results. If your damage is not severe enough to overseed you probably will only need to plug out the bad spots. If they look like they might make it by themselves you should guard against a disease attack by using your normal fungicides at half strength. An occasional light fertilization with liquid fertilizers will also be beneficial.

RECOMMENDATION:

Do your damndest to grow grass.

Information for this article was obtained from Dr. Mike Britton, Jim Holmes and a text book entitled "Introduction To Plant Physiology" by Curtis and Clark.

SPRING DINNER DANCE

On Saturday, April 14, the Midwest Association of Golf Course Supts. held its annual Spring Dinner Dance at the St. Andrews Country Club. Over 100 people attended the function in the newly constructed portion of the Clubhouse. The food and music as arranged by Bill Brady, and his Entertainment Committee, was out of this world. Amos Lapp and John Ebel and their wives were very gracious hosts.

Door prizes were awarded to the lucky people with the right tickets. They were: Mrs. John Ebel, Mrs. Frank Dinelli, Mrs. Frank Kohler, Mrs. Al Hinst and Mrs. Bob Duguid. Other prizes were won by Mrs. Pasco, Mrs. Wally Walmeldorf, Mrs. Russ Reed, Mrs. Ed Stewart, and Mrs. Frank Krueger. Still other door prizes were presented to Mrs. Carlson, Mrs. Warren Bidwell, Fay Lucas, and Mrs. George Dalman.

We would like to thank the various Distributors for their wonderful gifts for the door prizes.

MEMBERSHIP IN THE GCSAA

Class A Charter	23
Class AA	28
Class A	1387
Class B	187
Class C	30
Class D	41
Class E	165
Class F	74
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THE ADEQUATE MAN

The need of the world is the adequate man, the man who is ready, who knows, and who can; the man who can rise to the need of the hour and meet it with courage and knowledge and power. The man with a mission, the man with grace to fill without flinching his God-given place; the man with a conscience; the man with a mind - kind enough to be strong, strong enough to be kind. The man who is master of what he must do, with the will and endurance to follow it through; the man who is fearless his pathway to plod, because he is consciously walking with God. The man with the wisdom to choose and decide with a justice unflinching, a sympathy wide; the man with a vision, the man with a plan - the need of the world is the adequate man.

LIME IN THE LIFE OF THE PLANT (Cont'd)

O. J. Noer

There are other notable examples where lime helped grass retain color during the early stages of drought notably at Brookline in Massachusetts where the benefit showed in June 1954 from an application made during the same month of 1934, exactly 20 years to the month. Just before the National Open Tournament a lime line was placed around each green to show spectators where to stop. The grass was better along the lime line in 1955, despite an overall application of lime after the striking results were noticed in 1954.

The use of lime to correct soil acidity is stressed most. Acid soils develop in humid regions where the annual rain fall is 20 inches, or more. As water percolates down through the soil it leaches calcium, magnesium, sodium and potassium in that order. Yet sea water contains sodium chloride mostly, 35,000 parts per million, or 3-1/2 percent. Calcium and magnesium are used to build shells by crustacea. Otherwise sea water would have a milky, opalescent appearance.

Carbonic acid in the percolating water is the principal solvent. The calcium becomes calcium bicarbonate. Its solubility is definite but low. When calcium, and the other bases are displaced from the exchange complex, hydrogen takes its place to produce an insoluble acid capable of releasing acid hydrogen.

Soil acidity is expressed as pH (potential hydrogen) with 7 as the neutral point. Figures below that denote increasing acidity. It is a geometric progression, so 6 is 10 times, 5 is 100 and 4 is 1,000 times more acid

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