NEWSLETTER

April, 1980

Golf Course Superintendents Association

OF NEW ENGLAND, INC.

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The Snowless Winter

Several weeks ago, they wheeled the patient into the laboratory at Rutgers University. There, Dr.Spencer Davis was waiting to make his diagnosis.

'Hmmmmm." Dr. Davis looked over his results. "Severe swelling here, no signs of life there. However, there just might be a spark left to save them."

What Dr.Davis — actually a pathologist but serving as a turf diagnostician at the time — was examining was a number of plug samples gathered from the Metropolitan New York golfing area. The examination was inspired by the unusually low snow cover this winter in virtually the whole Northeast section of the country.

"Dr. Davis' findings are most interesting," offered Stan Zontek during his visit to last month's UMass Turf Conference. "He put those plugs in a growth chamber and observed the growth process, if any. There definitely was swelling in the roots and some of the grasses were victims of dessication. But enough survived to overpower the desiccation."

So, Zontek found some hope for the immediate future of grasses on courses which were deprived of valuable snow cover. "I'm not trying to sound like a cockeyed optimist," the Northeastern Director for the USGA Green Section said. "But I'm hopeful the damage won't be as devastating as some fear. It is a cause for concern. However, it is not a cause for panic. And there is something the superintendent can do about it."

Zontek strongly suggests loading greens with water. "Of course, the ideal situation would be a full measure of rain in late winter and early spring," he told. "But the superintendent can use spray tanks to keep his greens moist. That's where most of the stress is expected. The limited nature of spraying water without use of the regular irrigation system should make it obvious that concentration be on the greens."

This application will serve the conditioning purpose of the golf course and the mental outlook of the superintendent. "First, it might help those grasses not hit by dessication to survive and eventually flourish," Zontek explained. "Second, it will give the superintendent a certain feeling of peace of mind. He won't want to find himself saying, 'I should have done it' if he has major problems. He will have covered all bases with a heavy watering program."

Zontek advises supers to let nature have its way in regard to the spring recovery of fairways.. "Mother Nature has been in control of this situation for too many years," he laughed. "The superintendent realizes that all of us are pawns of Mother Nature, anyway. So, keeping his fingers crossed probably is his best bet in hoping that his fairways spring back to normal."

There had been other fears attached to the snowless conditions. One, feared most by farmers, was the windswept open fields and loss of top soil there. "They have every right to worry about this problem," Zontek referred to the farmers. But I don't think this should bother the superintendent.

"There is little or no loss of top soil because of the makeup of golf turf. It holds the top soil together. I think we've made a study of this and the loss was minimal. . .something like four pounds per acre per year. So, we don't get hit there."

This was an unkind winter, though. "Similár to the winter of 1968—69," Zontek reminded. "We had an open season with no snow. There was plenty of dessication, as I recall. And the ice was a factor. That was rough. When the thaw that year finally came, it was very harmful. Most of the water in the frozen state went from solid to vapor. In other words, the ice thawed without going through the liquid state. This was the cause of severe dessication."

Zontek termed the six weeks between the first of March and the 15th of April as very critical, weatherwise. "We will be looking for moisture in the form of rain," he said. "But, this is when the golf course superintendent might have to rely on his own source of gètting moisture to the plant. I have every confidence in the world that the superintendent will give it his all in trying to overcome the unfavorable winter we've experienced."

Snowless winter it was. Rainless spring it shouldn't be. Whatever, the superintendent has his job cut out for him. Mother Nature strikes again!

Gerry Finn

NEXT MEETING

April 7, 1980
New Seebury C.C.

Directors Meeting	10:00 a.m.
Regular Meeting	11:00 a.m.
Lunch	12:00 Noon
Golf After Lunch	

Note**
We still need a course for August meeting. If yours is available contact Ken Mooradian.

Golf Course Superintendents Association

Important Decisions Ahead

The Golf Course Superintendents of Association of New England has some mighty important decisions coming up... whether certain of its members think they're necessary or not.

"We are going to put it to the membership," NEGCSA president Ron Kirkman emphasizes. "We're not trying to shove anything down anybody's throat. This association belongs to the members. So, they will have to do some high-powered thinking on this thing."

"This thing," as Kirkman kicks over the outlook of the association, is a review and possible rewrite of the NEGCSA's bylaws. They haven't been touched in 13 years. Meanwhile, there have been a number of changes in the structure and philosophy of the profession. What was the applicable strain of bylaws 13 years ago may not be today.

Kirkman has assembled a crackerjack group of supers to serve as a bylaws committee with Bob Grant of Brae Burn as chairman. Working with Bob are Don Hearn of Weston, Norm Mucciarone of Woodlawn, Bob Mucciarone of Dedham and Tom Schofield of Wellesley.

"I think we might have a pretty good cross—section of opinion in those people," Kirkman offers. "And they'll probably have a lot of battles of their own before they come to the membership with their findings. It just might be that they'll leave things as they are. I can't express my feelings. I'm really an observer in this matter."

Although no one is pressing to present it, the waiting period of five years for full membership privileges for new members appears to be a possible key issue. Presently, a newcomer to the association is accepted as an associate member. He/she has the right to contribute input at monthly meetings and the like but there is no voting rights allowed until the members has been active for five years.

In effect, the new super on the block becomes a lame—duck member in that he/she can pay dues, make suggestions, discuss similar on—the—job problems with others but be left out when it comes time to make decisions affecting the organization. Some superintendents believe this to be unfair. Others think the waiting time weeds out the fly—by—night intruders to the profession.

Some partial observers trace the relatively small membership total to this so—called "second class citizen" label a new member wears for five years.

Presently, there are 150 members in the NEGCSA. Of these, about 130 are employed by public and private courses in Massachusetts. "Dr. Troll (UMass professor of agronomy) tells me there are something like 300 courses in Massachusetts," Kirkman remarks. "That means we don't even have half of their superintendents as members. Something must be wrong somewhere. We should be getting more new members."

Kirkman stresses the point that he is not placing himself in the position of influencing the bylaws committee or the general membership which might be asked to vote on the "five—year—gag rule." "I am only trying to make everyone aware of a unique situation," he adds, "and I think it's unique when we have less than half of the working supers in the state as members."

Conversely, there is a section of the present membership which retains an outlook of selectivity in bringing about the complete making of an association member. One super, who asked not to be identified, thinks the five— year waiting period has been effective in keeping "job hoppers" out of the very important membership function of contributing to major decisions.

"I can name a number of guys who have been in and out of the profession in a matter of a couple of years," he charges. "I even know a few who have made U—turns, regularly. That has to tell you something about the value of our voting franchise. If we didn't have restrictions, we could see our association run by a bunch of transients."

That's the kind of banter — pro and con — which will be flying around the committee's listening and ladling sessions and on into the decisive membership meeting to determine if changes are warranted. Of course, there could be other items — including the super—owner membership restriction — on the committee's agenda. At the present time, only its members know what's cooking.

Regardless, the project will come to a head with the vote by the membership. "I hope all our members keep abreast of this situation," Kirkman concluded. "It will be to their advantage and the good of the association if they do. This is very important to all of us and the future of the New England superintendent's group."

Gerry Finn

He's Our Guy

The NEGCSA is button—popping proud these days over the appointment of Guy Tedesco to the executive committee of the Massachusetts Golf Association.

This marks the first time that the MGA has seen fit to include a golf course superintendent on this very influential committee and the NEGCSA views it as another sign of advanced recognition for the profession.

Guy Tedesco is the golf director at New Seabury and one of the most respected superintendents in the country. His leadership qualities and knowledge of his work field have been hailed by one and all.

"I'm most happy to serve on the MGA committee," Tedesco commented while soaking up the UMass Turf Conference festivities. "And I'll be in there pitching for the golf course superintendent. What I hope to do is make all golfers aware of the magnitude of our job as superintendents on the basis of things over which he has no control. I'd like to change all of that."

Congratulations are in order for one of our own. He's our "Guy" and we're mighty proud of him.

Congratulations to
Bob Connolly for winning
his Flight at the National
Golf Tournament.

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Winter Injury

Turfgrass injury and kill during the winter are major problems for the northern turfgrass manager. It also may be a problem in some southern areas where temperatures drop below freezing for prolonged periods.

Winter injury or winterkill, as it is most commonly referred to, can be caused by one or more factors working together or individually. However, one will usually be more dominant in a particular turf area and since the control measures vary for each type, they should be distinguished according to cause.

Major types of winter turf injury are:

DIRECT LOW TEMPERATURES
INJURY
WINTER DESICCATION
LOW TEMPERATURE FUNGI
HEAVING
SMOTHERING
INJURY FROM TRAFFIC

Before considering winter injuries and some of the cultural practices to minimize damage, it is important to understand how the grass plant can protect itself.

Most cool season grasses have the unique capability of achieving certain stages of low level hardiness. This hardiness is attained through changes which occur in the protoplasm of cells, causing the water content of the plant tissue to be reduced. This condition, called "hardening," happens under the low temperatures and shorter days of late fall.

Morphological, as well as physiological, changes can be associated with the degree of cold hardiness, such as cell size, type of protein, amount of water in the tissue and carbohydrate level in the crown and roots. The plants become a darker green, have reduced leaf area and remain prostrate and less succulent.

Plant tissues composed of closely packed, thin—walled cells generally have a higher hardiness level and cell size decreases with hardening. Young leaves are generally more hardy than older leaves, while stems and roots are less sensitive to injury. Young grass seedlings are extremely sensitive to low temperature injury, so new growth should be well established before cold weather.

Day length and temperature are major factors which influence cold hardiness. With decreasing temperatures and shorter days, hardening develops quite rapidly. When temperatures stay between 35 and 40 degrees F for a two to four week period, shoot growth ceases and carbohydrates are broken down into sugar which accumulates in the cell. Therefore, there is a net reduction in the water content of the cell, which allows the tissue to become low—temperature hardy. Water content is reduced 60—80 percent. Day length most likely triggers the hardening process while temperatures determine the level.

Direct Low—Temperature Injury

Direct low—temperature injury is caused by ice crystal formations, either intracellular or extracellular

Intracellular (within the cell) freezing occurs because of a high level of water in tissues. These ice crystals cause disruption of the cells and eventually death of the tissue. This ice formation is usually very rapid.

In extracellular (the area between and around the cells) freezing, ice forms and because of the lower vapor pressure of the ice compared to the liquid of the cell, water is drawn from within the cell to the extracellular regions. This causes contraction and dehydration of the cell. Injury may also occur during the thaw period when cell walls expand faster than the protoplast, creating tension and possible rupture.

Southern grasses can be damaged from prolonged cold weather, not necessarily freezing.

Desiccation

Desiccation injury occurs if there is an excessive water loss from the plant tissue that cannot readily be replaced from the soil. Desiccation occurs on windswept open turf and seldom occurs when the area has a protective snow cover. Winter desiccation is usually most severe on elevated sites, areas exposed to wind and areas of high surface runoff.

Low—Temperature Fungi

Some disease may build up under snow or at the margins of melting snow. These include both pink and gray snow mold, which can be minimized with the use of grasses which are somewhat resistant, through cultural practices and with the use of fungicides.

Heaving

Heaving occurs most often on fine—textured soils when the surface layer has a high moisture content. Temperatures fluctuate above and below freezing and the soil surface is not insulated by snow or plant residues. Ice crystals formed during the night actually cause the plants to be pushed upward, resulting in broken roots.

Ice melts during the day and allows plants to be exposed to desiccation or dehydration. Moisture lost during the day is not capable of being replaced because of root injury. This condition will exist until new roots form or the grass is lightly rolled, or heavily watered to renew soil contact. Heaving seldom occurs on established turf, except on muck sod fields or an occasional golf green. Young grass plants with a root system of one inch or less may be lifted completely out of the ground.

Smothering

Smothering occurs when ice sheets form on the soil and remain for a period of time. Ice sheets most commonly form in areas of poor drainage, where water collects and soils are frozen. Plants may become encased and injured by the ice layer, or completely smothered.Smothering injury results from a lack of oxygen or a buildup of toxic by—products such as carbon dioxide. The accumulation of toxic gases is most probable.

Rhizomatous grasses may escape being killed because the underground stems are below the ice layer, where oxygen remains in the soil.

Ice cover injury has not been shown to be a major cause of winter injury compared to desiccation, direct kill or fungi.

Injury from Traffic

Human or vehicular damage on frozen turf seldom results in permanent damage. This is because new growth starts from the crown and not old blades. Damage can be avoided by diverting traffic from areas when leaf tissue is frozen. Light water applications will thaw tissue when the soil is not frozen and air temperature is above freezing.

Traffic over slush—covered turf can cause injury to leaves, crowns, rhizomes and stolons. Thus, all forms of traffic should be withheld when wet, slushy conditions exist.

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