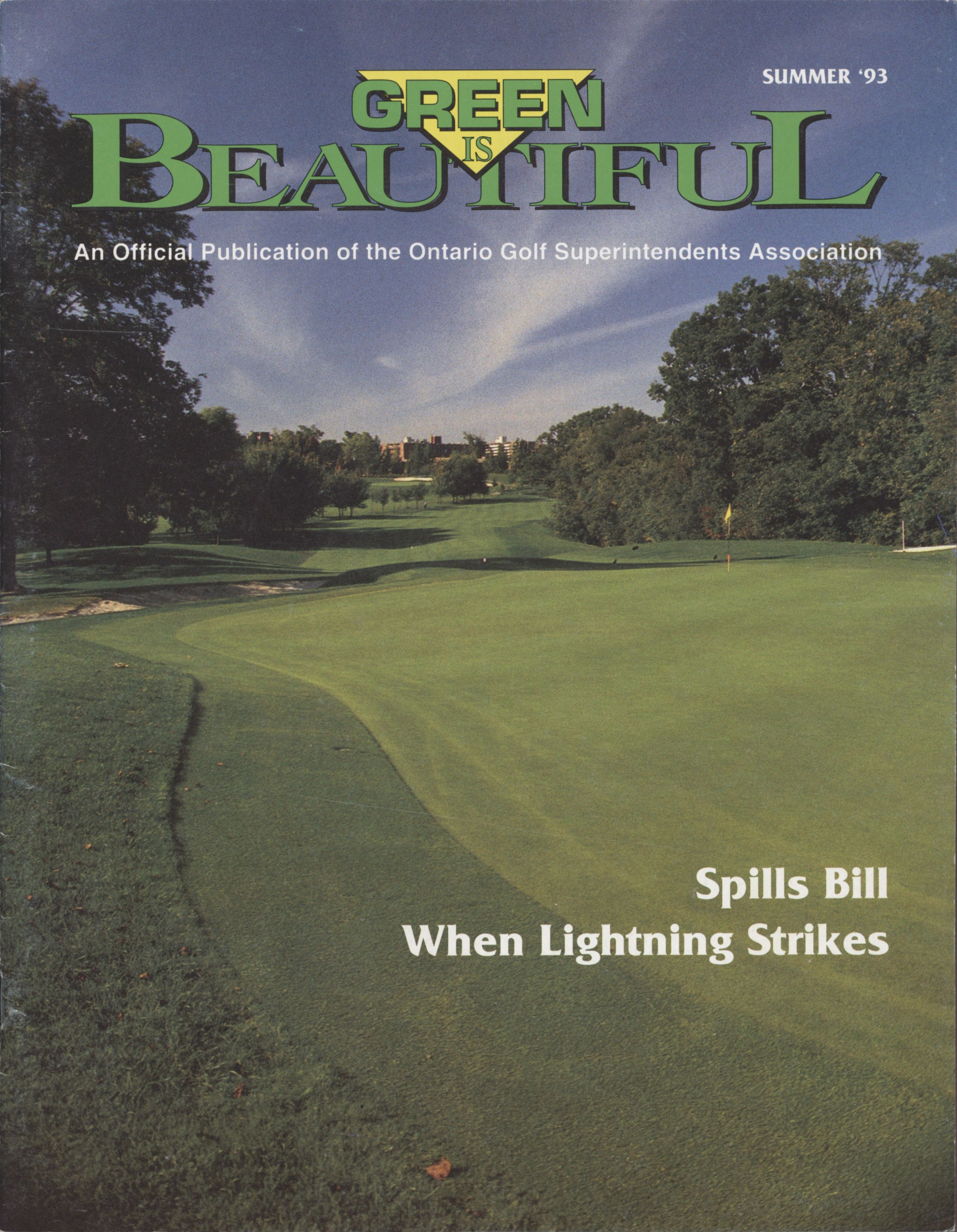


SUMMER '93

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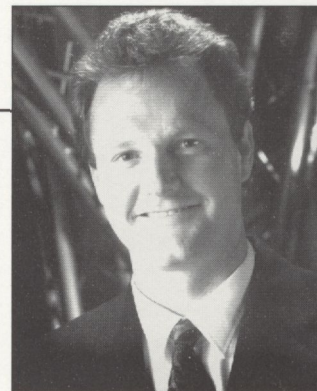
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President's Message



My relatively short tenure as president of the OGSA has been full of challenges both professionally and personally. As president of the OGSA, I greeted the turfgrass students from both the Turfgrass Shortcourse and the Turf Club at the University of Guelph. It was quite refreshing to meet with and discuss our profession with the future leaders of the turfgrass industry. In March, I met with the CGSA board members in Montreal to reinforce the relationship between the two associations. The Canadian Golf Superintendents Association led by president Mr. Mark Duresne, are embarking into the 90's with a great sense of determination and excitement. I have also had the opportunity to meet with the CPGA of Ontario, in Fort Erie, as an Honourary Director, to explore the roles of the two associations as they relate to each other and to the golf industry.

The move to the GTI building in Guelph has been postponed until late August or early September of this year. The reason for the holdup in moving results from delays in acquiring the proper leases from the government agencies. However, I am quite confident that once all the paper work is completed the GTI building will serve our association extremely well. Our current board has met several times this year to discuss many critical items that will strengthen our association. Our associations' financial position remains quite strong and we are now in the position to make a significant donation to the building fund as outlined at the last annual meeting. The four associations that will occupy the GTI have all been approached to donate \$25,000.00 to the building fund. This donation will allow the associations office to proudly display the dedication plaque by the OGSA.

Many by-law changes and revisions are being proposed by the by-laws committee for the memberships approval for this coming January. Most are relatively minor and relate to the terminology of the by-law. However, we are proposing that we reduce the required two directors from each region to only one, as the board feels that we should encourage qualified individuals regardless of their residence. This modification will still insure that representation will come from all regions of Ontario.

On a personal note, I have changed jobs once again. I am now at Club Summerlea in Montreal as of the end of March. Other than having to become bilingual, I am enjoying the challenge of this 36 hole complex. Wishing you all the best over the summer months.

David W. Gourlay, B.Sc.
President, OGSA

Ministry of the Environment

Posting Regulations Update for 1993

by John W. Gravett, Turfecs

The **Pesticides Act** is the legislation by which the transportation, storage, display, sale, use and disposal of pesticides in Ontario is regulated. Regulation 751 under the **Pesticides Act** was amended in June, 1990 to require posting/notification of pesticide use in Ontario on public land areas, and on residential land areas where pesticides are applied by licensed applicators.

For 1993, applicators should be aware of major changes in the amendment which was gazetted on September 12, 1992 and include the following:

1. The 24 hour pre-posting before application required for all public areas is amended to require pre-notification only for schoolyards and grounds surrounding other educational institutions, daycare facilities, urban parks, urban golf courses with uncontrolled access and some multi-dwelling units. A rural golf course or one to which access is controlled by means of gates, fences

or other barriers, rural parks, campgrounds and cemeteries may pre-notify through alternative methods (e.g. flyers, a sign at the gate, newsletters etc.).

Areas exempted from pre-notification include: roadsides, rights of way, MNR tree nurseries and Crown land forestry programs.

2. The exemption from posting given to the Queen Elizabeth Way and all 400 series highways is extended to all limited access highways as defined under the **Public Transportation and Highway Improvement Act**.
3. Subject to approval of the Director of the **Pesticides Act**, alternative methods of notification may be used for spray sites for the Gypsy Moth Control Program, and similar large-scale projects, which can be grouped into a single extermination, that can be considered a single extermination.

4. For residential areas, the applicator must post immediately **before** beginning to spray.
5. For both public and residential areas, the applicator must ensure that the signs are removed not less than three days and not more than ten days after spraying takes place.
6. On the posting sign, the word **"Warning"** replaces the words **"Keep Off"**.
7. On the posting sign, the words **"Date Posted"** and **"Date Sprayed"** will appear on the front of the sign, and the word **"Date"** will be removed from the back.
8. Signs that were legal for use in 1990, 1991 and 1992 may continue to be used until December 31, 1993.

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"Spills Bill" has serious implications for horticultural industry

by Sarah Willis from *Horticulture Review* — September, 1992

Discussing insurance always brings to mind worst case scenarios, and discussing environmental disasters conjures up even more ugly pictures. Put the two together and they make a boiling cauldron of controversy. The provincial government has stirred the pot with recent legislation designed to protect the environment that could leave many businesses exposed.

It is difficult at the best of times to keep abreast of all the possible recriminations implicated when Queen's Park introduces or changes legislation. Occasionally individuals, or corporations find themselves committing offences that would have gone unnoticed before the new legislation was introduced.

Environmental issues have never been more important to the public and politicians. In an effort to please their electors, governments in all provinces are amending old environmental legislation and introducing new, stricter bills.

The efforts of these changes have made headlines in recent news. Owners and directors of major corporations such as Bata, Blackbird Holdings have been found personally responsible and liable for damage done to the environment by the toxic waste disposed of by their respective companies.

changes to the Environmental Protection Act have rendered the corporate veil useless protection in environmental damage cases.

In the past, if damage was caused to the environment by a corporation, large or small, the owner and/or board of directors were protected by their corporate entity. Jim Bradley, Minister of the Environment for the former liberal government introduced changes to the Environmental Protection Act (E.P.A.) proclaimed into force that rendered the corporate veil useless protection in environmental damage cases. The changes not only made the officers of the offending company ultimately responsible for corporate damage and personally liable and accountable for

clean up costs.

In addition, government agencies don't have to establish responsibility or negligence in order to press charges or fine company officers for clean up costs.

Immediately upon notification of this bill, the insurance industry in Ontario labeled this law lopsided in favour of the government and refused to cover environmental damage caused by inadvertent spills. As a result, all liability policies now have an "absolute pollution exclusion" clause and for a short time there was no coverage available for toxic spills.

The liberal government countered by insisting they wouldn't change their new bill which was rapidly becoming known as the Spills Bill, and that the insurance industry would have to pick up the slack and write new policies to cover pollution spills.

landscapers and nurserymen can also be financially crippled with fines and clean up costs in the event of an accident.

Responding to this demand, 25 insurance companies formed in 1985 to act as a re-insurance pool and collectively formed the Pollution Liability Association (P.L.A.). Today, whenever an insurance company underwrites a liability insurance policy, they must apply for limited pollution liability coverage through the P.L.A..

The eye opening news is that it is not just the large multi-national companies that can be seriously affected by the new legislation, but homeowners, farmers, landscapers and nurserymen can also be financially crippled with fines and clean up costs in the event of an accident.

The amendments to the Spills Bill also mean that a violator is guilty until proven innocent under this new law. Pleading ignorance of day-to-day company operations or waste handling policies is no defense.

The introduction of the Spills Bill has brought out a new breed of consultant that is known as an environmental loss control expert. No matter what they are

called, however, they all have the same advice for businesses, large or small. It is now the duty, by the statute, of the company directors and officers to be sure that their company has safe and effective hazardous materials handling practices. Delegating these matters down the corporate ladder is unacceptable and directors must take an active involvement in a company operations and be able to act promptly and take responsibility for their actions in the event of a spill.

the Ministry of the Environment is now authorized to come in, clean up the spill and charge the company responsible whatever they like for clean up.

A second consequence environmental consultants warn of is that the liability of the directors is independent of the corporation, and as such they may be prosecuted whether or not the company is prosecuted.

David Harder, a partner with Hope & Harder Insurance Brokers in St. Catharines has some sobering thoughts about this new twist in environmental legislation. "It's not simply the fines that your readers should be leery of. It's the face that if a pollution spill does occur within their company, the Ministry of the Environment is now authorized to come in, clean up the spill and charge the company responsible for the damage whatever they like for clean up. There is absolutely no appeal process, just a large bill to be paid. Their message is "if you damage the environment, you clean it up."

David is a broker in an area heavily populated with farms and nurseries and is no stranger to pollution liability. He cites a number of cases in his area that at first seem quite inoffensive, but take on new significance under the Spills Bill.

As an example he mentions the landscaper whose tractor tipped and spilled diesel fuel on a homeowner's lawn. The MOE took charge of the clean up immediately, they removed the soil, brought in new soil, resodded and sent the landscaper a bill for between \$10,000 to \$11,000

"Spills Bill" cont'd

to cover their costs.

Paying the enforced clean up bill is unappealing enough, but the fines that can be levied for damage to the earth are even more daunting. The owner, not the company, is charged and violators can face fines with upper limits of \$200,000 to \$1,000,000 for each day the unwanted waste is uncontained in the environment.

Chemicals are a fundamental tool in the plant industry, and David Harder warns that "if you have a potential pollutant in your care you are ultimately responsible if a spill occurs, no matter how it happens." As an example, he explains that if the building containing your chemical storage room burns down, by law the MOE will be called in by the fire department to assess and clean up the damage—and bill you later.

Even a commonplace object such as an above ground home heating oil tank has been the subject of controversy due to the Spills Bill. A homeowner discovered that his outdoor tank had seeped into the soil around his house, collected in the tile drain around the house and diverted into a nearby drainage ditch where it eventually found its way into storm sewers and the public water supply. The clean up costs and fines for this case reached \$8,000.

Insurance broker David Harder recommends that in any situation where potentially hazardous chemicals are involved, the business owner should seriously consider adding a pollution insurance policy to their regular liability coverage.

As an example, an average sized nursery that store and uses horticultural chemicals would most likely be quoted on \$1,000,000 pollution liability coverage. David explains that this is limited pollution liability—companies are essentially buying the cost of unexpected clean up including: clean up costs, defense expenses, property damage and bodily injury claims.

As mentioned earlier, pollution insurance is not yet offered by all insurance companies. However, your insurance broker will be able to contact the recently

formed Pollution Liability Association who will provide a list of the underwriters who provide this specialized coverage.

An initial inspection of the work place by an engineer from the Insurers' Advisory Organization (I.A.O.) is required before a pollution insurance quote can be issued. The cost of this inspection is charged to the insured whether or not they elect to take the pollution insurance.

In an article entitled, "The Farmer and Pollution: an issue of the 90s," the authors determined that most farmers don't consider themselves to be polluters. Not only do they consider their handling and use of potential pollutants to be all in a day's work, but they haven't had to face the criticism, prosecution and lawsuits that industrial polluters have faced."

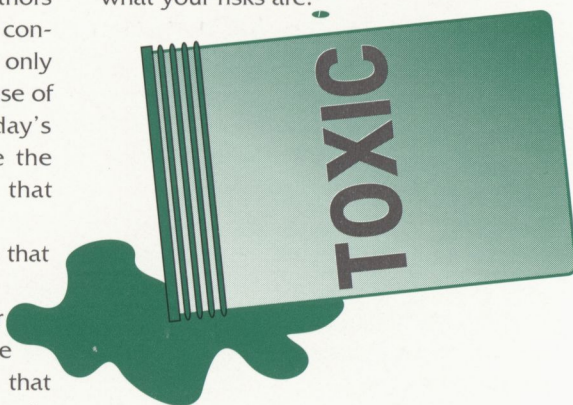
At this point, it is hard to imagine that the consequences of a small accidental spill of diesel fuel at a nursery, or an insecticide could result in the heavy, crippling fines and jail terms that have plagued a few large corporations in recent history. But most loss control consultants advise that all business owners dealing with hazardous chemicals take certain steps to protect themselves.

While a nurseryman might never release toxic dioxins into the environment, there is the disturbing possibility that fertilizer runoff could contaminate ground water. Taking the worst case scenario further, imagine purchasing property for expansion and discovering contaminants in the soil. As the new owner, you

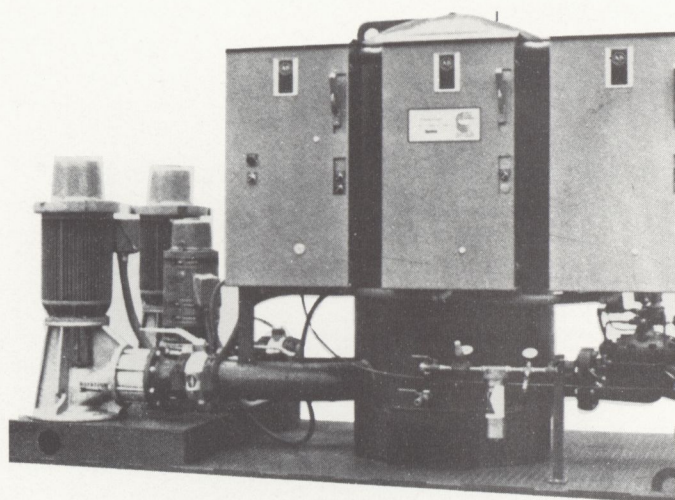
are now ultimately, legally and financially responsible.

This legislative trend is by no means unique to Ontario. There are now over 200 provincial or federal statutes across the country regulating the environment and imposing personal liability on directors of corporations.

Ignorance is no longer an acceptable defence. Where the environment is involved, it is your responsibility to know what your risks are.



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Ontario Golf Superintendent's Association Spring Field Day

What started out as a very dismal and rainy day actually turned out to be fair golf weather with overcast skies and cool temperatures. A total of 89 people played golf.

Low gross Superintendent was Rhod Trainor from Hamilton Golf Club with a score of 75. Low net went to Bruce Vollett of Foxwood Golf Club. Low gross Assistant was Kevin Broham of Merry-Hill Golf Club with a 79. Low net was taken by Paul Evenden of Hamilton Golf Club. For the Associate members Rob Davis from Repart was low gross winner with a score of 78 and Graydon Goff from R.M.C. Equipment won low net. For the ladies, low gross was won by MaryBeth Kelly from Hutcheson Sand & Mixes with a score of 103. Low net was taken by Daisy

Moore from Vigoro Inc.

The Bannerman Trophy which represents the low Superintendent and Assistant from the same club was presented to Dave Schmelefske and Kevin Broham from Merry-Hill Golf Club.

A very special thanks to Cutten Club Superintendent Richard Creed and his staff for having the course in excellent shape and to the Cutten Club for hosting this years' event, the hospitality was second to none.

I would also like to thank all the suppliers for their generous donations to the prize table and to Hutcheson Sand & Mixes for group pictures on the 10th tee.

Tournament Director
David Schmelefske



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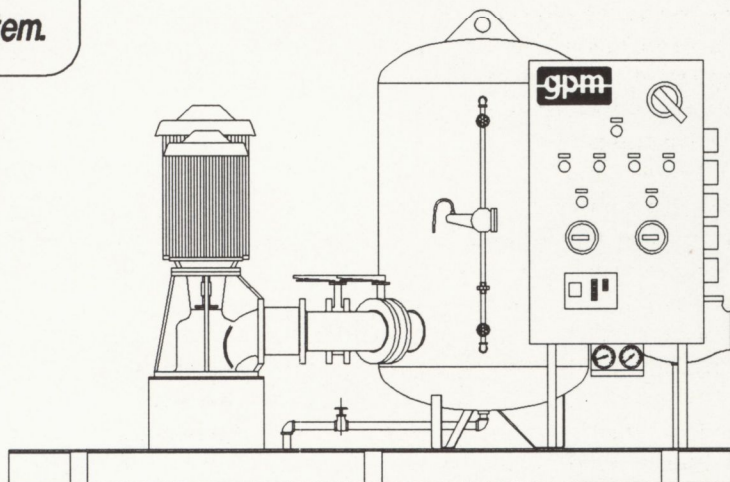
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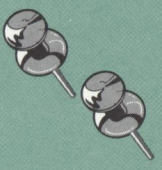
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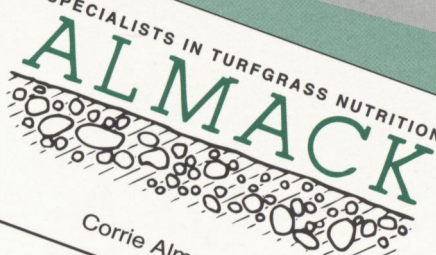

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From The Editor



As we move into summer, the stress of bringing our golf courses back to peak condition is behind us. Now we have time to reflect on how we will rid ourselves of those problem areas for next year.

Jim Sara gives us some composting ideas and Gary Roos talks of lightning protection. The last two topics, although relatively new, will be discussed in greater detail in the future. We also have an article from a super wife.

In our first two issues I have been developing an association page and we have been able to report on many events and dates for meetings but we would like to publish all of them. Please fax Cindi or myself your events and dates. The same applies with our industry page. Let us print about new products or sales personnel changes.

Doug Suter

How to get ahead of the game in fewer rounds:

In today's economy, it's no secret that one of the best ways to stay profitable is by reducing costs.

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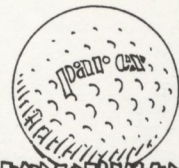
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THE SCOTTS COMPANY, Marysville, Ohio introduces **Super Turn Fertilizer**,

part of the Scotts Proturf product line. With an analysis of 26-4-12, Super Turn Fertilizer provides 12 to 14 weeks, initial green-up with uniform growth and a corrective level of available potash from potassium sulfate. It is for use on fairway-height grasses. For more information about Super Turf Fertilizer contact: The O.M. Scott & Sons Co., 14111, Scottslawn Rd., Marysville, Ohio 43041.

RANSOMES AMERICA CORP., introduces the **Ransomes 300**, a midweight fairway mower designed to provide the productivity and durability of heavyweight mowers, as well as the maneuverability of lightweight mowers. The Ransomes 300 features floating cutting heads with a variable weight transfer system that allows the unit to follow ground contours. "Bouncing" of the heads is virtually eliminated. This provides uniformity of cutting

height, the heads also have a steering feature that allows them to turn with the unit, instead of sliding across the turf. For more information contact: G.C. Duke Equipment Ltd., Burlington, Ont.

Industry News and Announcements

Congratulations!!

- Mr. *Charles Terry* is now at Castlemore Golf Club.
- Mr. *David W. Gourlay* is now at Club Summerlea Inc., Quebec.
- Mr. *Greg Williams* is now at King Valley Golf Club.



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Newsworthy Tidbits

Dr. Clayton Switzer, former Dean of O.A.C. at the University of Guelph and the former Deputy Minister of O.M.A.F. has accepted the appointment as the Chair of the Ontario Pesticide Advisory Committee. This is a very influential group within the Ministry of the Environment pertaining to pesticide classification. It is our good fortune to have such a knowledgeable and respected person in this position. Clay most recently has devoted, on a voluntary basis, his time to the OTRF/GTI Building Fundraising Committee.

Robert Ackerman, OGSA member and Superintendent at the Markland Wood Golf Club, recently addressed the Weston chapter of the Kiwanis Club regarding golf course maintenance practises. He is to be commended for this kind of community involvement and it would benefit us all to take it upon ourselves to do something similar this year. This kind of "grassroots" public relations work is inexpensive and effective. **Well done, Rob.**

The CGSA Annual Conference will return to the 1st week of March, 1994 in Calgary, Alberta. Also, please remember that the Fall Field Day is now the Fall Classic and for the 1st time will be held in Ontario at Deerpark Golf Club—Don't forget to reg-

ister!! We encourage people to consider a CGSA membership in effort to achieve their goals. Submitted by Pelino (Paul) Scenna, Ont. Director of the CGSA.

The Ontario Turfgrass Research Foundation is pleased to announce

that its' 14th Annual Fund Raising Golf Tournament will be held on Monday, August 9, 1993 at the King Valley Golf Club. Club Corporation of America and King Valley are looking forward to showcasing their critically acclaimed Doug Carrick/Curtis Strange designed golf

course and new clubhouse. All proceeds will go toward the funding of turfgrass research in Ontario. To participate in the success of this year's event, players and sponsors can contact Brenda or Donna in the OTRF office (416) 274-3109.



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Twenty-Five Years Ago Today

By Barry Endicott

In 1968 Dave Gourlay was the president of the OGSA. Keith Nesbit, Gord Witteveen and Dave Moote were retiring directors and Bob Moote was the past president.

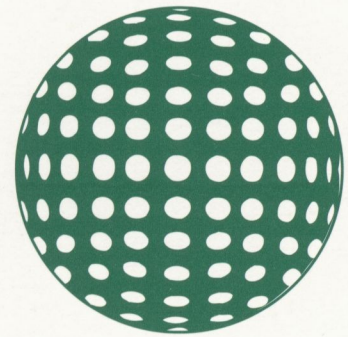
Tom Unsworth moved from Clearstream C.C. in Oakville to St. Thomas Golf Club and Bob Heron, assistant at the Board of Trade Country Club was appointed Superintendent at Brampton G.C. Dave Baker moved to Glen Cedar G.C. and Don Creed left London for Orchard Hills Golf and Country Club in Michigan. Ian Williamson moved to Castelgar Golf Club in B.C.

On January 8th, there was a curling meeting at Bayview Country Club with Ed Ortlieb as host. The rink skipped by Curly Endicott and comprising of John Stoughton, Carl Wagner and Bernie Mac-

donald, won the trophy defeating Bob Moote's rink. President Gourlay reported on a possible Greens Chairman/Superintendent Day and a Pro/Superintendent Day. On July 9 at Richmond Hill Golf and Country Club the first Greens Chairman Superintendent Day was held. Tom Mascaro, president of West Point Products, was the guest speaker and George Darou was the host.

OGSA dues were \$15.00 for superintendents and \$25.00 for associates. CGSA membership dues were \$15.00 and GCSAA dues were \$50.00. Bill Forrester was made an Honorary member of the OGSA, after retiring from 20 years at Weston Golf Club. Robbie Robinson was also presented with an Honorary membership on his retirement as Director of the Greens Section of the RCGA. James

Hickman, chartered member of the OGSA recently passed away in London. The CGSA held their first Turf Research Foundation meeting at the Skyline Hotel on March 19 in Toronto. Tom Johnston replaced John Steel as President of the CGSA.



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'The Gardener's Corner'

Beauty at the Toronto Golf Club

by Laura Fehr

It is with relief and satisfaction that the month of May is over and June is upon us. Mid-April to mid-May is the busiest time of the year for gardeners. The tulip display has faded and the stage is now set to plant the annuals and summer bulbs. In the greenhouse at The Toronto Golf Club, the plants have been carefully tended, preparing them for this moment. There are approximately 6000 annuals, 100 dahlias and 450 tuberous begonias grown.

The Toronto Golf Club was initiated in 1876 and has been at its present location since 1913. Over the years the gardens have undergone many changes. The latest one occurred in 1985 when the decision was made to form a garden committee consisting of some club members. The gardens, at that time, were at the mercy of some dismal landscape contractors. Different gardens and landscape designers

were researched. A designer was hired, plans were drawn up and the first stage of the three year planting program commenced in 1986.

The flower beds mimicked those of the classic english borders, a mixed garden of shrubs, perennials, and annuals, a perfect accompaniment to the style of the clubhouse. The shrubs are generally background plants and provide the permanent structure or 'bones' of the garden, while framing the flowers in the foreground. The perennials are also permanent plants and contribute to the ever-changing view as they come and go. The annuals fill in the gaps and provide constant colour throughout the summer season.

The beds bordering the front entrance contain primarily acidic loving plants such as rhododendrons and azaleas. The perennials borders on the west side have warm colours with many blues and pinks. The south beds are dominated by hot yellows, oranges, and some red accents. No english garden is without it's formal rose beds and The Toronto Golf Club has theirs. Besides the perimeter beds there are five satellite beds and two large cutting gardens. Flowers are cut for the clubhouse twice a week.

The last week of May and the first two weeks of June are spent preparing the

beds and planting the annuals. A manure mulch is placed around the plants and then dug in, improving soil structure, nutrition and aeration. As the beds are prepared they are planted according to the plans. Concise plans are available for every flower bed.

Maintaining a garden in the summer means; for the most part, looking after the basics. The most important is watering. There is an irrigation system throughout the beds at The Toronto Golf Club. This saves a lot of valuable time. If the flowers are growing well the weeds probably are too, especially at the beginning of the summer before the annuals have matured, weeding and cultivating are essential. To maintain the vigour of the plants, the flowers must be deadheaded. This prevents them from going into seed and stimulates flowering. While you are busy with the basics don't forget the other jobs. Shrubs should be pruned to remove dead flower heads. Support full perennials before they absolutely need it. Prune the evergreens.

It's important to be observant. Notice any pests before they become real problems. Above all, enjoy the garden and the beauty they have to offer.

Fighting Disease

by Gord Witteveen

I recently met with Dr. Noel Jackson, who is the chief turfgrass pathologist at the University of Rhode Island. Dr. Jackson is highly regarded for his practical approach to solving turf disease problems. Following are some of Dr. Jackson's comments:

- Take-all Patch, first discovered in

New England in 1974, has since spread all across Canada and the United States. Take-all Patch especially attacks bentgrass greens on sand greens of high pH. If such greens are topdressed with high pH sand and watered with high pH water, the chances that the turf on such greens will be attacked by Take-all Patch are substantially increased.

- Take-all Patch can be controlled by manipulating the pH in the top half inch of the soil. Apply Ammonium Sulphate to temporarily lower the pH in the top portion of the soil profile. Adding Milorganite or Sustane at regular intervals to build up the organic matter content of the

top layer also helps. In addition, these organic materials seem to have built in fungicidal properties.

- Other Patch diseases include Summer Patch and Necrotic Ring Spot which occur on bluegrass and also on Poa Annual. At one time all these diseases were collectively known as "Fusarium Blight" not to be confused with "Fusarium Patch" which is a fall disease on damp, shady greens and tees.
- There is proven direct proportional relationships between stressed out grass and the incidence of fungus disease. The more traffic, the more stress. The more stress, the more fungus disease.

OTRF Report

by Thom Charters

OTRF

The Ontario Turfgrass Research Foundation is pleased to announce that the new G.M. Frost Research and Information Centre at the Guelph Turfgrass Institute will be officially opened on August 26, 1993 in conjunction with the GTI/OTRF Field Day. Some GTI personnel and Pam Charbonneau, our Turfgrass Extension Specialist, have been in the building for some time and final arrangements for the other tenants are being finalized at the time of writing. For your information, the OGSA, the OTRF, the Sports Turf Association and the Professional Lawn Care Association of Ontario are all taking an office in the new building.

While the OTRF has had the dual responsibilities these past few years of raising funds for both research and the new building, we will soon be able to concentrate on research funding exclusively. The building is coming in on budget at 1.4 million dollars and we have less than \$150,000 to raise to meet this obligation. If you have not yet contributed to the building fund, or would like to 'top up' your donation in time for the official opening, please contact the OTRF office at (416) 274-3109 or Clay Switzer at (519) 767-5058. By doing so immediately, we will be able to insure that you are appropriately recognized on the beautiful Donor Wall in the lobby of the new building.

While this is all very exciting, so too is the research that we are funding. Dr. Tom Hsiang is completing his three year study on Necrotic Ring Spot and Summer Patch diseases, Dr. Greg Boland and T. Zhou are looking at biological dollar spot control, Dr. Gerry Stephenson and Pam Charbonneau are researching pesticide persistence in composted grass clippings and there is a possibility

that Dr. Mark Sears will be doing some further work on European Chafer control if the insects are present and he can secure the application equipment that he wants to experiment with. I am also pleased to announce that Dr. Jack Eggens, who is doing a super job as GTI Director during Chris Hall's sabbatical, and Ken Carey have received funding from the rejuvenated CTRF to establish blended plots of creeping bentgrass for long term analysis.

To insure that this and other important work is done in the future, please be certain that you and/or your club are members of the OTRF.

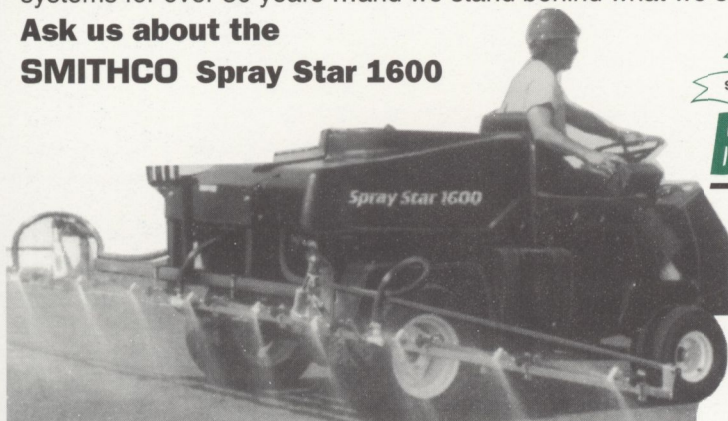


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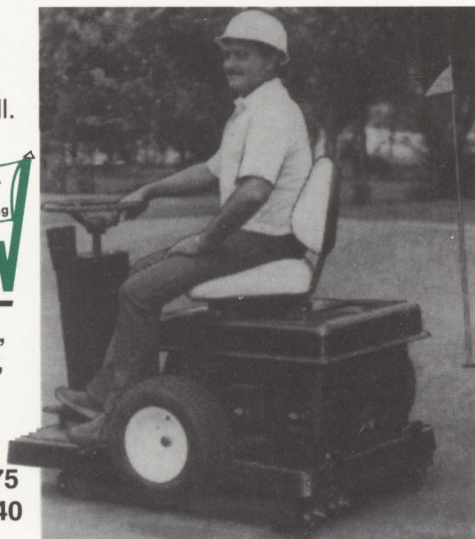
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Canadian Golfers will Benefit from Turfgrass Research

by Teri Yamada

OAKVILLE, ONT.—While the Canadian Turfgrass Research Foundation can't do anything about your golf swing, it is taking steps to help golf courses improve their conditions while reducing the water and chemical requirements of turfgrass.

The foundation announced today that four Canadian universities will receive a total of \$67,500 to fund research projects aimed at helping courses grow better grass.

"Golf courses have received negative, and unjustified, publicity about their effect on the environment," said Foundation spokesman Teri Yamada of the Royal Canadian Golf Association. "The entire golf industry continues to be environmentally conscious and will benefit from research initiatives such as these."

Dr. Brian Holl of the University of British Columbia will be studying the effects of cultural practices and products on the root systems of turf used on golf green and sports fields. The goal is to be able to predict root-based problems sooner and adjust conditions to avoid the need for chemical treatments.

The University of Manitoba team of Drs. S.R. Smith, Perry Miller and Doug Cattani will be assessing the effect of golf green cutting heights on resistance to annual bluegrass. This study may reveal "how low is too low."

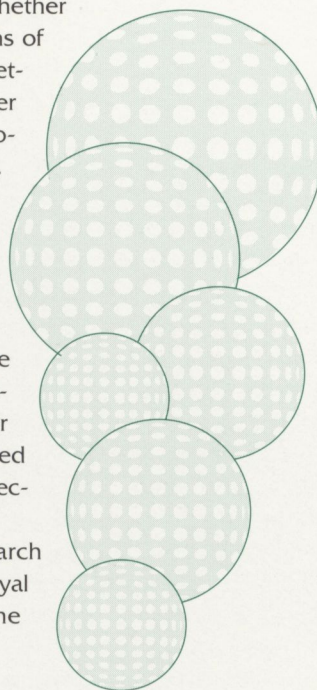
A four-man research team from the University of Guelph will be performing a long-term study to determine whether the combination of different strains of bentgrass will withstand stress better and therefore require less water on chemical treatments. This project will be co-ordinated by Dr. Ken Carey.

Laval University in Montreal will be tackling the perennial Canadian problem of winter damage on golf courses. Drs. Yves Desjardins, Pierre-Andre Dube and Guy Allard will be testing a number of different winter protective covers under controlled conditions to determine their effectiveness.

The Canadian Turfgrass Research Foundation is a coalition of the Royal Canadian Golf Association, the

Canadian Golf Superintendents' Association and six regional turfgrass associations. Earlier this year, the RCGA donated \$75,000 to the Foundation.

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The Superintendent's Wife

anonymous

Golf Season. Those dreaded words. Let me tell you what golf season means to me. When your children say "When's Dad going to be home?" and you say "Maybe next Tuesday", when your husband walks around with a perpetual scowl on his face and you ask what's wrong and he roars "nothing!", when you forget what colour hair he has, when you wake up one morning and for some reason he is still home and you leap out of bed screeching "What are you *doing* here?"

This is a very difficult time of year for the men and women who are golf course superintendents. This is the time of year when you hear the question, "What does he do in the winter?" a thousand times and you find yourself wishing for winter so that the purple circles under his eyes will go away and he will stop working twelve hours a day, six days a week (he works a half day on Sunday). When I decided to spend my life with a golf course superintendent I thought, easy—you grow the grass and then you cut it. Hah. Golf course superintendents are a different breed, they are a little bit like goalies in the NHL, you find yourself describing them as "normal"—for a golf course superintendent. Superintendents deal with many people every day who

know how to do the job better than they do. They deal with these people without losing their tempers (until later). Superintendents must be public relations expert, accountants, teachers, salesman and labourers. They must be computer experts, ditch diggers, supervisors and trainers. They must know a pesticide from a fungicide from a herbicide and answer all the questions flung at them from a hysterical public who are sure that the above mean the end of the world. They must know how to drive, dismantle and put together machinery with names like: Cushman/Smithco sprayer with hose reel and hydro pump, Meter-Matic Topdresser and KTM Brouwer 5-gang, 8 blade fairway unit with 4 wheel Kubota hydro-static drive.?

The superintendent's wife on the other hand is the person who holds all this together. We are the people who remind the golf course superintendent to come home. There are times during the summer when for a whole week I think the only thing I say to my superintendent, "Have you eaten?" During the golf season the superintendent's wife, who probably has her own career to look after, suddenly finds herself with twice as much to do to keep the household running smoothly. For some reason, this fact is not as annoying

during golf season as it is at other times of the year. The superintendent's wife finds herself wanting to let the air out of the tires of the car that belongs to the Green Chairman at the golf club and she also finds herself wanting to slap anyone who says the golf course is not in wonderful condition. The superintendent's wife knows how hard he works (even if she does complain about it), she knows how tired he is and she knows when to leave him alone and when to remind him it is her birthday. The superintendent's wife knows that on the one Saturday during the season her superintendent decides to sleep in, that she will threaten with death anyone who awakens him. I'm not saying that the superintendent's wife is different from other wives, only that during the months of May, June, July, August and September she becomes temporarily insane at the thought of anyone second guessing, criticizing or censuring her superintendent.

Hey! I've got the answer to the question of all questions! The next time someone asks you what your superintendent does during the winter, you can say... "He makes up for golf season."

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Composting—Seeking Solutions

by Jim Sara

Like most of you reading this article, I love my work. Although there is a fondness for the game, nurtured through many days on the golf course with my Dad, the real joy in this job comes from being part of the land and of all things that grow on, with and in it. Being allowed to share in this growth is an honour that I take very seriously.

Golf courses must change. In the past we have all been guilty of pushing our turf beyond healthy limits and pushing ourselves at the same time, for the sake of the game. It is time to think of producing healthy turf in ways that are safe for all those who live here.

Composting has been a honoured practice for along time. I have wanted to incorporate this practise into my land stewardship for some time but I found that I did not have the time, the expertise or an area suitable to properly manage the

compost.

At Trafalgar, we are fortunate to have a solution "growing" on our doorstep. Though in its' infancy stages, there is a compost farm 2 kilometres from the club owned by Jim Scott and managed by Compost Management of Elora.

The compost farm has the ability to handle large volumes of organic matter from many sources, including golf courses, and compost them efficiently and safely. The result is large volumes of rich material that in time and with well directed research could be incorporated into our topdressing and construction programmes. It is possible that in the future this will reduce the need for pesticides and chemical fertilizers. Much stronger and healthier plants will result from the use of compost. I can see a day when communities will have a centralized compost farm to handle all their needs, both

from an organic disposal stand point and as a source of fertilizer and garden and land supplement. Most importantly the compost will be managed by people dedicated solely to this purpose.

Much has been done; research to produce suitable mixes, the cost/benefit analysis of this procedure, testing under a variety of uses and educational programmes. There are many projects underway and they deserve support. At Trafalgar we are incorporating farm compost into our gardens and our topdressing program for tees. Our main worry is a higher than desired silt content so we have not used it on greens nor have we been able to produce a suitable mix.

In time all these things will happen and for all of us who love the land and our work, the efforts will be well worth it.

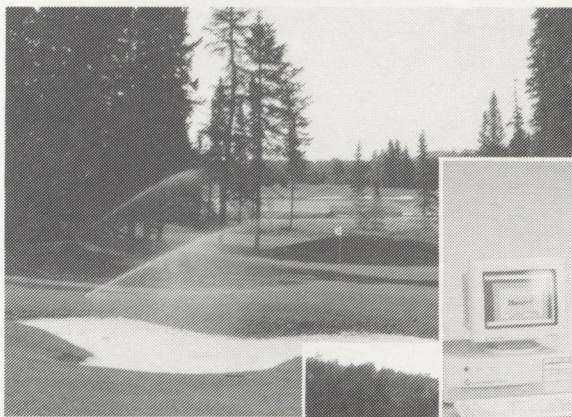
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When Lightning Strikes!

prepared by: Gary Roos — Turf Care Products Canada Limited—Irrigation Division

Golf courses are well known as very risky places to be during thunder and lightning storms. A review of any warning material published on the hazards of lightning usually mentions golf courses as a place to definitely avoid. Until recently, the only methods available to predict lightning warnings would range from human observation, listening to weather reports and/or the monitoring of a multi-station lightning location network.

Lightning—What makes it happen?

The process is thought to be kicked off by the interaction of ice and rain inside a cloud, resulting in ionizing—the separation of positively and negatively charged particles. We tend to get lightning storms on hot, muggy days because the towering, dense clouds that form in this weather create the ideal conditions for this separation.

Ionization sets the scene for both cloud-to-cloud lightning (which never reaches the ground), and the less-common cloud-to-ground lightning—the kind that does the damage. In cloud-ground lightning, the bulk of the positive charges are at the top of the cloud, the negative centre and at the bottom. As the negative charges build up at the bottom of the cloud, they repel negative charges at the earth's surface. (in electricity opposites attract).

When the difference between the negatives in the cloud and positives on the ground builds to the point where it overcomes the air's ability to insulate between them, the fireworks begin. An arc of charged negative particles, called a "stepped leader", reaches out from the cloud. "Basically, the leader is a feeler, trying many paths to make a connection with the positive charge on the ground" explains Bill Chisholm, an Ontario Hydro engineer and physicist who is involved with lightning research. Finally, a branch of the leader comes close enough, and a positive charge leaps up from the ground to cloud—what we actually see as lightning, this is the **real powerhouse**. While

the leader carries just 1,000 amps of electricity, the return stroke packs a **wallop of 20,000 amps**. From leader to final stroke takes less than a second. On average, there are three separate discharges within this time, but as many as 26 have been recorded—which is why lightning appears to flicker.

Within the lightning channel, air is heated to 30,000 Degrees Celsius causing thunder. Since sound and light travel at different speeds, you can use the amount of time between the flash and the boom to calculate roughly how far away the storm is.

The results and damage of lightning have been witnessed by everyone in the industry. Public awareness of the dangers of lightning hit home during the unfortunate incident which marred two of the last year's major golf tournaments. Since the 18th century scientists such as Benjamin Franklin have been studying lightning. Through their study we have gained knowledge that has helped us develop lightning identification systems.

LLP (Lightning Location and Protection Inc.) has been recognized as the world leader in the location and detection of lightning for over 15 years providing products to government scientific agencies, defense contractors and major utility companies. The Irrigation Division of The Toro Company has joined with LLP to promote their new system call ESID (Electrical Storm Identification Device). ESID is a rugged, omnidirectional, short range thunderstorm detector. It was developed to provide reliable and affordable information within a 25 mile radius. ESID's unique, patented ability to detect only lightning, both cloud-to-cloud and cloud-to-ground, enables you to make reliable decisions concerning your course's cooperation. This thunderstorm sensor has designed features that eliminate false alarms, nuisance alarms and failures to alarm.

ESID is comprised of a self powered sensor (for ground or roof mounting) and a display/controller (for use inside a facili-

ty). The sensor and display/controller are interconnected by a non-metallic, fibre-optic data communication link. Back-up power supplies for both sensor and display/controller provide uninterruptable power. The sensor periodically performs routine shelf-checks to insure credibility. Integrated relay contacts allow the potential to warn and also to isolate and protect lightning-sensitive equipment 24 hours a day. No other device combines all these benefits in a single package. The display/controller displays flash messages from the sensor and indicates the number of cloud-to-ground flashes which occur within each of three ranges: 0-5 miles (overhead), 5-10 (near) and 10-25 miles (distant). For additional warning information, the display/controller will indicate cloud discharges within approximately 10 miles. ESID's ability to detect and identify these nearby cloud discharges can help provide advance warning of developing thunderstorms as well as their departure.

Traditionally, protection against lightning strikes has been implemented through the use of lightning rods on clubhouses/shops/shelters, along with grounding grids on newer irrigation systems. New technology like the ESID system will

allow you, the user, the comfort of an early warning to gain shelter before the lightning strikes.



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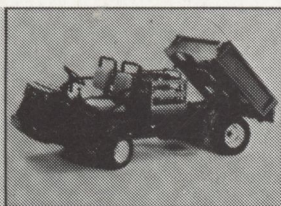
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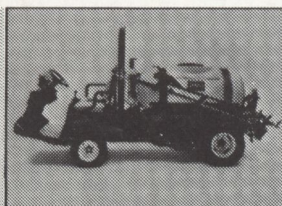
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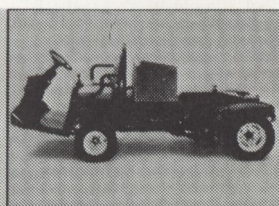
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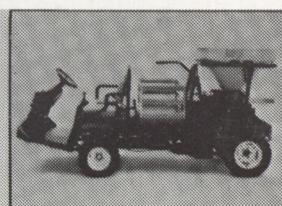
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