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SPRING 1992

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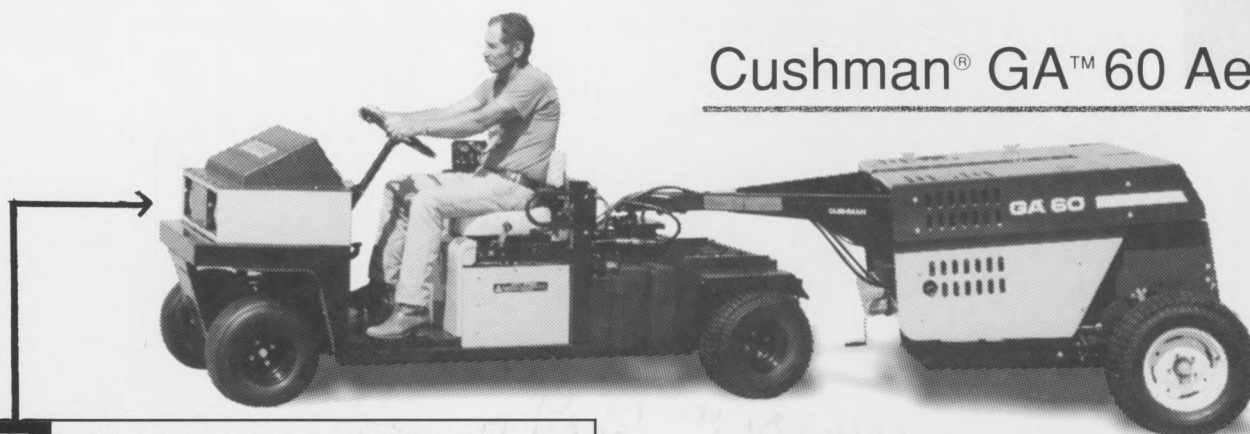
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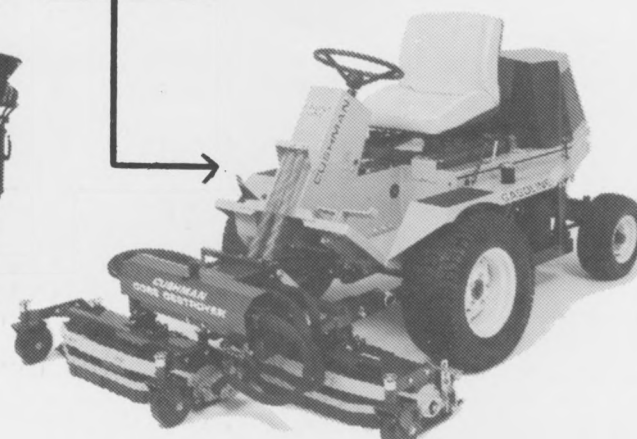
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PRESIDENT'S REPORT

If our last annual meeting is any indication of the year ahead it will be very interesting. I would like to thank all those who stayed for the annual meeting. Your board of directors has only the best interests of the association in mind and can only serve its members well if they know what the membership wants. Some of those concerns were well voiced at the annual meeting. This is the place to voice your concerns. If there is anything you would like to see or suggest, then please write to the board.

The Membership of the OGSA has more than doubled in the last 7 years. The way our association works has not changed and maybe it needs to. We are looking into that. We are looking at the whole picture and we need to hear your concerns. Our association is one of the largest, and best organized green industry associations in the country. And we can only get better. We need more member input and participation to better represent the membership as a whole.

I look forward to this year, both for the Association and at my club. Superintendents are a group who truly enjoy their jobs. With all the problems in the world today, there is no better place to get away from it all than on your own course. Not many people can boast of a better work environment.

Rhod Trainer,
President, OGSA



Cover Photo Courtesy of
RHOD TRAINER
Hamilton Golf Club

The New Look

By: Rhod Trainor, Superintendent, The Hamilton Golf and Country Club

The Hamilton Golf and Country Club will be 100 years old in 1994. That year will be a time of many special events including the Canadian Amateur Golf Championships. Committees have already been formed to deal with all the many special events. One of the major concerns of all committees and many members is that the golf course looks its best.

The club has been at this site since 1916 and has seen many changes in both design and maintenance. There have been some greens rebuilt and some minor remodelling, however, the basic Harry Colt design still shows through. The desire of the members is very strong toward preserving the character of that original design. It has been the subject of many discussions and meetings and is a major concern when there is any talk of rebuilding.

The original greens are topsoil construction with no internal drainage. They are small and do handle probably more traffic than they were designed to, however, they do quite well and even better since the advent of some new

equipment technology such as Verti-drain and Hydro-jet. We have some new (USGA type construction) greens and plan to add some more in the future; however, they will not all be built in one year. Plus there is always resistance to change what is already an outstanding layout.

One of the benefits of new green construction is all the things that go along with it. Such as new bunkers and sand and if the job is done complete the area is usually all resodded with new bluegrass. The contrast of colors between the bluegrass and the bentgrass gives a dramatic effect. Everything is visible and with good design is extremely pleasing to the eye. The golfer gets excited and can't wait to play.

Many of our members got out to play the many new courses these past few years and their comments are all very similar. They refer to the look. Here we have a great old golf course but it is missing something, it doesn't look as good.

Our course is a sign of the times. It's had every type of maintenance at one

time or another over the years. Its borders, fairway edges, tees and collars have been changed or altered many times and like many courses of this vintage has come to have "poa" as its main grass. Maintenance practices of the most recent years have shown us how to get back to more bentgrass and healthier poa. Our playing surfaces (green, tees and fairways) are first rate, but that's where it stops.

Roughs on old golf courses usually consist of a mixture of bluegrasses, fescues, ryegrasses and, of course, "poa". In the case of our greens areas, the grass surrounding our green sites was composed of poa and bentgrasses which gave a playing surface that was puffy and clumpy. Most of our greens are like that. We wanted to change that but were not prepared to rebuild the green, and did not want to wait until the green was rebuilt. Therefore, in the fall of 1991 a small project was undertaken to correct this problem.

Three of our older greens were selected and scheduled for resodding. Following all of our members events in October we closed the green area. We have 27 holes so a temporary was not provided. Sod cutters were used to cut all of the sod from the edge of the collar to the tree line. It took about 2 days to completely clear the area of the old sod. Some minor grade changes were made at the same time. We created some swales and depressions to channel off surface water. Sand was redistributed in the bunkers and the edges were redefined. New bluegrass sod was delivered on the second day and placed around the perimeter. Some sod laying began the second day, but most of it was done on the third and fourth days. We also went to our bentgrass nursery and brought over new bent to reclaim areas where it was felt the green had grown in.

We used approximately 2,500 rolls of sod per green site to get the desired effect. Each green took about 4 days to complete. We started on the Monday and the bulk of the work with our crew was done by Thursday. A couple of people were required to do some minor cleanup and edging on Friday. We allowed a full week for each green. This way we were not pushed and could still tend to our other duties on the rest of the golf course.



This photo shows the extent of sod removal and replacement.

The result is very exciting. The members who saw the finished result in the fall were very complimentary and excited. We believe that with the new bluegrasses in place, not only will the holes look better, but will play better and be easier to maintain. We hope these three greens will be the green light to do the rest of our greens in the years to come.

The approximate cost per hole was \$3,000. It's a small price to pay for what you get. We did all the work in-house. In future years if the desire is to do more than 2 greens I think I would budget to have the sod placed by a contractor. Sodding is the most time consuming. Stripping off the old sod and grading is easily done in-house. Lots of bodies are required to lay that amount of sod and there is not usually that amount of help around at that time of year.

These 3 old greens have been given a face-lift into the 90's. Sodding is final and complete and no aerating or overseeding program in the world can give the same effect in such a short time. We are also considering a few rows around our fairways.



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Proving a Revolutionary Old Idea

By Mark Leslie

An old idea has found new life with Hurdzan Design Group in Columbus, Ohio.

Saying he has become a believer – a believer that theories are theories and reality is reality, architect Mike Hurdzan is now offering clients an old-fashioned alternative to high-tech green construction methods. He has been developing all-sand greens that are easier to grow grass on and cheaper to build.

That is a turn away from U.S. Golf Association specifications, which recommend a laboratory-tested 12 to 14 inch top mix of sand and organic matter, which is placed over an intermediate sand layer, which is underlain with a pea stone blanket and tile.

It is also a return to ancient times in terms of golf construction, when earthmoving was minimal, irrigation was rare and naturally adapted grasses were planted and maintained, and when the superintendents' main cultural practice was frequent topdressing with pure sand.

Hurdzan's alternative method is simply 12 to 14 inches of pure selected sand, placed over tile. There is no blending of organic matter, no intermediate sand layer, and no gravel blanket. The key is finding the proper sand which has not been a problem so far, he says.

Holding a Ph.D. in environmental turfgrass physiology, a master's degree in turf studies, and a bachelor's degree in turfgrass management, Hurdzan has put his scientific knowledge to work. And, instead of complexity, he has found simplicity to be the answer and a return to the benefits of pure sand culture.

We've just taken out one of the variables – and that variable is organic matter. No one can exactly predict how and when that organic matter is going to break down in the mix and to what end

product, and so we're not taking a chance. We're making this nice and simple," says Hurdzan, a former president of the American Society of Golf Course Architects.

"Simple" means no soil, no peat, no rice hulls, no bark. Hurdzan's mix contains just sand, with micronutrients, fertilizers and water-absorbing polymers.

The results?

"Our greens are awesome," says Joe Perry, superintendent at Hurdzan-designed Eagles Landing in Berlin, Md., which opened last summer. "They are beautiful and held up all summer. The (grass roots average six to eight inches deep)."

Perry, who was superintendent for 4 1/2 years at Crestbrook Country Club in Watertown, Conn., said that while other area courses had trouble after a recent five inch rainstorm, Eagles Landing, with its high percolation rates, "flushed right out. The greens have amazing drainage and playability. They will never be closed."

Galen Scharenberg, superintendent at Hurdzan's new Sycamore Creek Golf Course in Richmond, Va., said, "I can't see why you wouldn't build this way all the time."

Rusty Madden, superintendent at Cobblestone Creek, a course Hurdzan last year designed in Victor, N.Y., said "I've never ever had or seen roots like these.

"When I first cut the cups, I set the cut cutter down eight inches pulled it out and you could literally hold the whole thing. That really struck me."

Craig Schreiner of Kansas City, Mo., who was Hurdzan's project manager for Cobblestone Creek, says: "They have the wonderful greens – the finest in Rochester, and there are some great courses in Rochester."

Schreiner said, in fact, that building 12 inch sand greens was "such a great idea, we put in six inch sand tees, and they are awesome."

Initially hesitant about all sand greens "because I'm used to working on solid greens and was concerned about keeping enough moisture in there," Madden said it was an excellent choice he would recommend to others.

The superintendent for four years at Oak Hill's East Course, Madden said he was persuaded it could work at Cobblestone Creek when, during a planning meeting, Wadsworth Construction Co. President Paul Eldredge was asked if he would build all-sand greens.

"If it were my own course and I had the perfect sand, yes, I'd do it," Eldredge recalls saying. He adds that he was discussing a Northern course and he would think differently in a desert site where the sand could percolate too fast.

HOCUS-POCUS?

Removed as a member of the USGA Greens Committee, Hurdzan says: "I think the industry is making too much hokus pokus out of building greens. . . . Yes, they grow well when built to USGA specs. But there might be another way, and that way could lead to a better healthier plant. That is what I am searching for."

It also costs around \$1 to \$2 less per square foot – or \$120,000 to \$250,000 on a normal 18-hole course, Hurdzan estimates. "If you can save that, plus 10 percent for the life of the loan, that's a lot of money," he says. "Or it might mean the difference between affording a very fine drainage and irrigation system as opposed to a lesser system. Personally, I would rather use the money for more sod. However, if the client wants USGA greens, we build them to perfection. It's the client's choice."

In 1957 at the age of 13, Hurdzan worked with his mentor, course architect Jack Kidwell, when Kidwell built a 100-percent sand green and "it was the prettiest green we ever had," Hurdzan recalls.

In the early 1970s, Hurdzan visited the Palm Desert, Calif., site where Arnold Palmer-designed Ironwood Country Club was being built with all-sand greens by contractor Keith Dewar.

That memory stayed with him. Then several years ago, when Hurdzan was building The Centennial in Canada, heavy rains prevented getting peat on the greens in the fall and again the next spring.

"The course had to get open, so we took a chance, smoothed the greens up, seeded them to 100 percent sand, applied solid amendments and the greens were absolutely gorgeous," he said.

"So I am convinced we don't need the organic matter. But yes, we need some soil amendments."

Cobblestone Creek, Eagles Landing and Sycamore Creek are results of that conviction.

Hurdzan's method includes laying the four-inch drain tiles in six-inch-wide trenches and covering the trench, only, in pea gravel. On top of that goes 12 inches of sand. In the top two to three inches of the sand, he mixes four pounds of super absorbent polymer, 20 pounds of STEP (a Scotts Co. micronutrient mix), 30 pounds of Sand-Aid (a seaweed extract), 20 pounds of 18-5-9 fertilizer, 20 pounds of Milorganite (which is Milwaukee sewage sludge) and 10 pounds of sulfur-coated urea, per 1,000 square feet.

KEEPING IT SIMPLE

"When you start with sand you have an inert but predictable mass," Hurdzan says. "If you add organic matter you don't know what you have. Sawdust, rice hulls, leaf mulch, composted sewage sludge – it's all so variable. There's no definition of organic matter. Aspirin is aspirin, but peat varies.

I'd rather blend in things that will react predictably."

Under the normal method, Hurdzan says, "The danger is that we start with a sterile sand mixed with an organic substrate. Then, at grow-in (the first one to two years), we get weird diseases because organisms can just move into that sterile mix."

Scharenberg, who has worked at The Links and Eagle Sticks courses in Ohio, and had to rebuild two greens at Eagle Creek in Naples, Fla., agrees with the positives of a pure sand root zone.

"I know my greens profile is not going to change," he says. "I also like the loose profile because when you're pushing the roots for grow in, they go right down for you. And once you get roots that deep you greatly reduce the risk of stress."

Essential to Hurdzan's all-sand plan is getting the right sand.

"I caution that you can't do this with every sand," Hurdzan says. "We search for sand that falls within guidelines. I'd like to see an infiltration rate at 25 inches per hour or less; a percolation rate that when compacted is at 20 inches or less; a water holding capacity in the 15 to 25 percent range; and 1 or 2 percent silt and clay.

"But most important is uniformity in the sand particles. I like it in the one-half-to-one-millimeter size. That's almost the same sand as everyone uses."

Madden agrees. "I feel the key to the whole thing was in the selection of the sand. . . . A lot of sand has too many different particle sizes and the particles tighten up. I know guys with sand-peat greens who, after two or three years have to deep-tine aerify. That doesn't make sense to me, agronomically. Something is wrong," he says.

"First in importance is the right sand. Get the subgrade right and the subgrade drainage right. The next goal is, keep it simple. Bentgrass wants to grow. Roots go down in the sand. . . . I feel whatever you can do to simplify the process, do it."

"We've all been like sheep," following guidelines that recommend adding organics to sand in the root zone mix for greens, Hurdzan says. "I was a sheep, too. Now I'm a lion."

YEAS AND NAYS

The all sand program is not new. "The problem is that too few golf course architects or contractors have the technical or scientific background to challenge the standard," Hurdzan says. "It was simply easier to build them to conventional guidelines than to question if there is a better way.

I guess it is my obligation, given my training and position, to be the dissenter. I simply ask, "Why?" and "How do you know that?"

Hurdzan adds: "With all the turf research in the past 30 years, surely someone could offer definitive performance comparisons between green construction methods. But to my knowledge, no one has proven any method to be one bit better in terms of turf growth, water conservation, pesticide reduction, or fertilizer savings. Just a lot of theory, no proof."

Advocates of organic matter say their reasons for adding organics are:

- "To increase the cation exchange capacity (the holding capacity of vital nutrients). Yes, but that doesn't mean the amendment releases nutrients to the plant. That only happens when the organic matter decomposes or the cation is displaced by a free cation with a greater affinity.
- "It holds water. Yes, but will it give up moisture to the plant? Grudgingly. . . . Water retention? Just turn the sprinklers on more until it is grown in more. We're only talking about a couple hundred gallons of water.
- "It gives resilience to sand. It makes sand so soft so it holds the ball. But you're trying to grow a good pad – mat layer. Let the mat (one quarter to one half inch deep) be the pad.
- "Micronutrients. That's why we add them, too. And we're not complicating by having it tied into organic matter."

Hurdzan contends: "The essential ingredient for good greens is not sand. It is not the tile drainage, type of grass, irrigation system, fertilizer program, pesticides, mowing equipment, aerification, top-dressing, or consultant's advice.

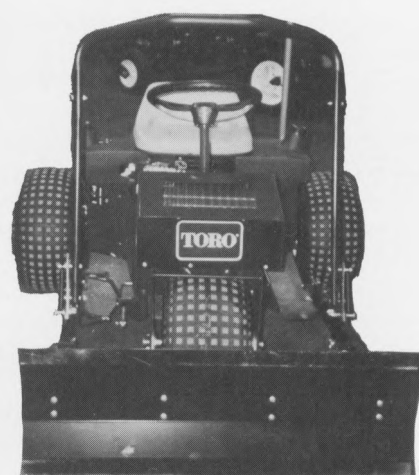
Each of these influences the quality of a golf green. But none of them is the essential element. The essential element is the golf course superintendent. No combination of factors will work without the careful manipulation of them by the golf course superintendent who, through his experience and knowledge, can anticipate the deleterious effects and apply well-balanced preventive measures."

Hurdzan even questions whether all 18 greens need to be exactly the same, for each will receive its own maintenance regime based upon its location.

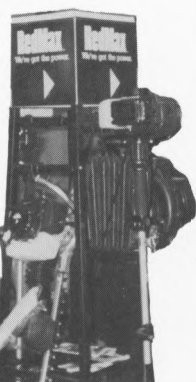
"Given a set of greens of exactly the same root zone mix, but located differently – on top of a windy hill, in a protected valley, in full sun, in shade, in Georgia, in Michigan – would you treat them all the same? Of course not, for each has its own micro-environment and susceptibility to desiccation, disease, and dormancy. My goal is to provide the superintendent with each green predictable within itself, not to its neighbors. The fewer the number of variables the superintendent must contend with, the easier it is for them to manage." Hurdzan believes natural processes of that micro-environment will amend the sand with organic matter produced by the plants growing there.

Continued on page 10.

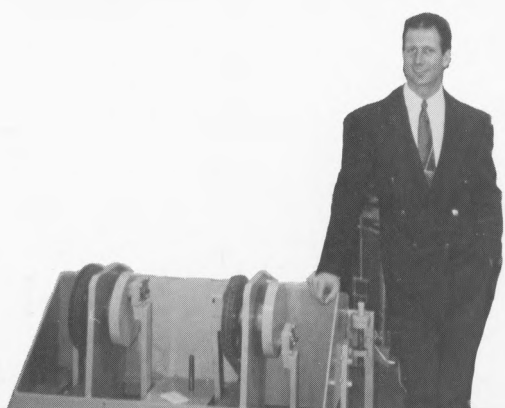
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Continued from page 7.

"Just grow the turfgrass vigorously and let the sloughed-off roots and natural organic debris provide the organic constituent to the sand," he says. "This happens within a year or two."

"I am constantly searching for ways to improve green mixes. One new one that shows lots of promise is Isolite, which is said to hold water and nutrients in the soil until the plants need them. The problem is that it adds more than \$100,000 to green construction and there are not yet enough tests to prove its advantages. To me it is simply a matter of cost-to-benefit ratio."

The Negatives

Perry and Madden both report they are using more fertilizers than normal, and they face localized dry spots.

"My biggest problem is isolated dry spots daily," Perry says. "With pronounced slopes on some greens, and a lot of wind on the course, I will have problems with dry spots."

Madden says sand tends to form isolated dry spots and can become hydrophobic – fighting water. Yet, he adds, using sand uncomplicates the matter. You're not introducing a foreign element that has to be a perfect mix. For the long haul, it's going to work out for you."

Hurdzan says: "All greens are susceptible to localized dry spots, regardless of how they are built. I've seen localized dry spots on university turf plots using every type of rootzone mix imaginable, and most often hand-mixed in small batches. I see about 100 courses a year and, during certain times of the year, most of them have localized dry spots."

As for higher fertilizer costs, Perry says: "We use organic fertilizer continually because, with all-sand greens, you use a lot of fertilizers. We will require 15 to 20 pounds per 1,000 square feet of nitrogen per year compared to the typical six pounds."

"My green fertility program has 15 different types of products. The program cost at least double the normal green, it costs \$10,000 a year compared to \$4,000 to \$5,000, plus extra labor and spot watering."

Joe makes a good point," says Hurdzan, "but an extra \$300 per green compared to the initial saving, plus the dependability of these greens, seems like a small cost."

"If my client saved \$150,000 or more in initial construction, he doesn't

mind buying an extra \$5,000 in fertilizer for the first couple of years. After that, these greens perform the same as greens constructed by other methods, for they have produced their own organic matter."

Madden says he is using more fertilizers and micro-nutrients – projecting a rate of seven to nine pounds per thousand square feet.

But Scharenberg likes the idea of being able to fertilize greens "as much as you want during grow-in because the sand percs so quickly. I use quick-release fertilizer. It keeps the price down and the fertilization up. You can make 2 1/2 times the applications for the price of one slow-release application."

Wadsworth's Eldredge says it's basically an economic decision.

"It's the developer's decision. Is it worth eliminating the mixing operation and cost of peat? Or is it cheaper to spend more on water and nutrients?" Eldredge says.

Fear and Open-mind Factors

Hurdzan and Eldredge say architects and builders have been afraid to use greens construction techniques other than USGA recommendations.

"Architects have to recommend to do what the USGA tells them, or risk facing a suit from the owner," Eldredge says. "What if the green fails for some

reason? The owner will come back and ask, "Why did you go against the USGA?" You'll never win that one in a court of law."

Hurdzan adds: "There has been a liability problem for those who specify the USGA method because it has a measurable performance standard. If you claim a car goes 150 mile per hour and it goes only 145, then someone can sue. If you just say this car is dependable and it goes fast, there is no basis for a suit."

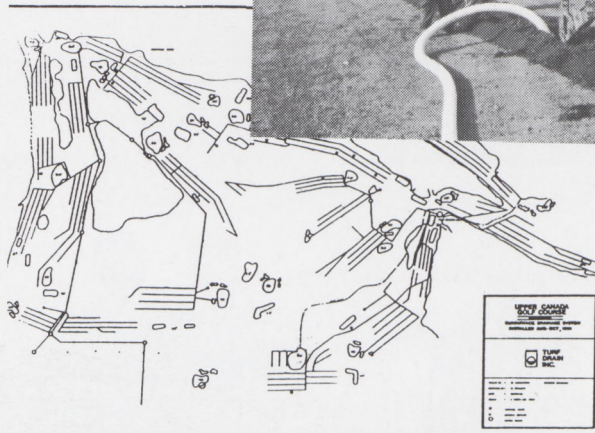
"Isn't it a pity that the fear of being sued should overshadow principles of good turfgrass management and add immensely to the cost of golf course construction without a measurable advantage?"

Yet, he says, "If the purpose of the green is to provide the golfer the truest, most consistent putting surface possible, I offer Oakmont as a benchmark. Its greens are made of clay, as are many U.S. Open courses and thousands and thousands of other famous courses around the world . . .

"It must be recognized by all golfers that tournament-speed putting surfaces can stress the grass plant beyond its ability to survive. Keeping super-fast greens on a routine basis is flirting with failure, no matter how the green is built."

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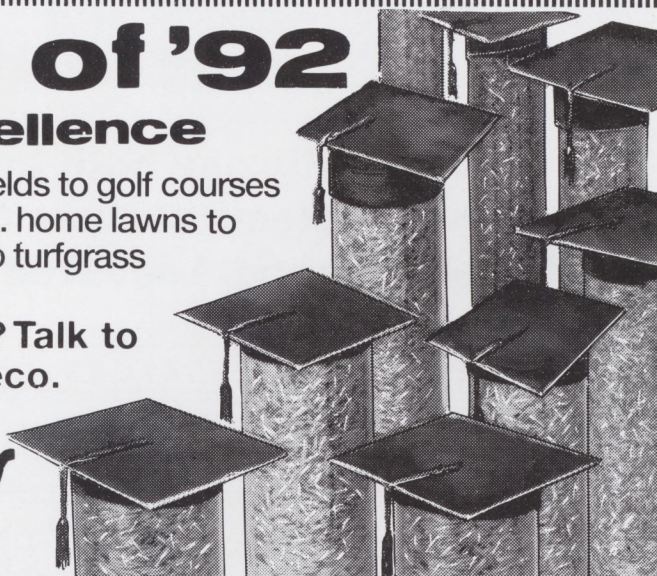
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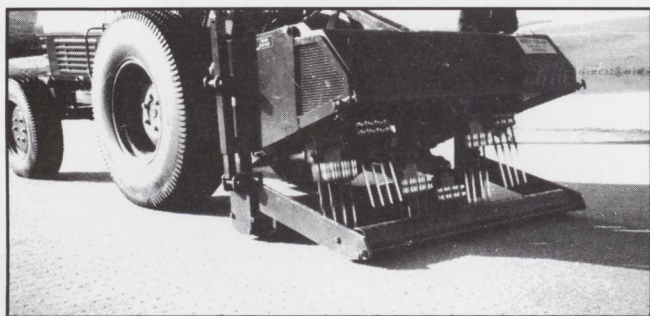
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R.C.G.A. Green Section Update

The continuing pressures on the golf industry with respect to the impact of golf courses on the environment has not gone unnoticed by the Royal Canadian Golf Association. The association represents Canadian golfers who as individual citizens are just as concerned with maintaining the integrity of the environment for the following generations as their neighbours.

The R.C.G.A. Green Section has been given the mandate by the R.C.G.A. Executive Committee to research and develop an environmental policy for the R.C.G.A. This has entailed correspondence with representatives from the many layers of government at the municipal, regional, provincial and federal levels. We have also contacted members of environmental action groups to hear their concerns. These concerns will be divided into the different areas of the golf industry such

as development, construction and maintenance.

The second phase of the process will involve asking golf course managers, developers, architects, contractors and superintendents to address specific environmental issues that have been raised by the government agencies and environmental interest groups. A set of guidelines will be developed from the information collected to be reviewed by an advisory committee consisting of representatives from all the previously consulted sectors. This advisory committee will submit their recommendations to the R.C.G.A. hopefully by the end of summer 1992.

The R.C.G.A. Green Section is also investigating the development of a golf course co-operative sanctuary programme for the wildlife akin to the U.S.G.A. sponsored programme in the United States. This is designed to work

towards a certification process whereby golf clubs can work with environmental biologists on a voluntary basis to implement forms of resource management as well as examine the possibilities of wildlife habitat enhancement in the non-golf areas of the golf course and be recognized for their efforts.

The R.C.G.A. has also decided to become more involved in the on-going push to find alternative management practices and the development of more disease and stress tolerant species of turfgrass. This involvement will be in the form of financial support of research projects. The financial commitment has been approved and once the administrative vehicle is in place the R.C.G.A. will be making a substantial financial contribution to turfgrass research starting in 1992.

ATTENTION Golf Course Mechanics

On Saturday, February 8, 1992 The Golf Equipment Technicians Association of Ontario was formed. A meeting was hosted by Fraser Barrett, mechanic of the National Golf Club. The meeting was attended by 24 golf course equipment technicians.

This association has been formed to educate, inform and encourage networking between mechanics and to promote communication between mechanics, manufacturers and superintendents.

The Board of Directors for 1992-1993 are:

Fraser Barrett, National GC - President; Todd Clark, Glen Abbey G&CC - Vice President; Ed Conrad, Ladies Golf Club of Toronto - Secretary/Treasurer; Richard Heffering, Scarboro GC - Director and John Kinch, Muskoka Lakes G&CC - Director.

As machinery becomes more high-tec and specialized the need for education is crucial. I encourage all mechanics to join and enjoy the benefits of professional development and the networking that will be offered by your association.

Superintendents must support their mechanics and this association to ensure that they keep abreast of this fast-moving industry. Remember - the more informed our people are the more time and effort we can channel toward other facets of our jobs.

To apply for membership, for more information, or to offer suggestions please contact Ed Conrad, Secretary/Treasurer, G.E.T.A.O., 7859 Yonge Street, Thornhill, Ontario L3T 4A2 or phone (416) 887-7620

From The Editor

Welcome to the first issue of *Green Is Beautiful* for 1992. Spring seems to be just around the corner and I am sure that we are all looking forward to an early start this year.

The O.G.S.A. continues to grow throughout the province: look for more regional meetings to come.

I would like to take this opportunity to say thank you to David Danks and the staff at Rewco Printing for the fine job they have done and for all their help and suggestions over the past few years.

I hope everyone has had a pleasant winter and I wish you all the best in the season ahead.

Simon George,
Editor

Ontario Turfgrass Symposium

Way back in January 1991 the OGSA was approached about joining with the GTI and Allied Turf Groups into forming a 3 day education and trade show. Since we had kicked around the idea before, we were interested. We met at the University of Guelph with Annette Anderson, Mira Sone, Paul Dermott, Thom Charters, Roger Garbutt, Bob Sheard, Glen Dowling and Mark Hagen.

Initially we wanted to know each group's position and from this Mira, at Continuing Education, and Annette pressed on. After a few more meetings we were looking at deadlines for speaker selection and a trade show committee. Each association gave Annette ideas of

who and what they wanted and Annette pulled it all together. By November a decision was made to expand the trade show to arenas.

Pamphlets were mailed out and advertising was done through each association. As the show was about to begin we all anticipated a well-attended show but were still uncertain how it would go over.

Now that it is over I am very excited that a new tradition has been started in the turf business in Ontario, which is first class and gives you good value for your money. Thanks to all who helped put on this show.

See pages 8 and 9

Lab Practices Reviewed by U.S.G.A.

By Barb Gourlay, Manager,
Standard Soil Consultations Inc.

Over the past 40 years the U.S.G.A. has supported the research and development of construction specifications which are outlined in their publication, "Specifications for a Method of Putting Green Construction". These specifications were fully substantiated by extensive research and the original specifications have remained basically intact today.

With the addition of new soil testing laboratories in the U.S.A. and Canada, concerns have been raised regarding the standardization of testing procedures. Conflicting test results have arisen between certain labs which were sent identical samples. The U.S.G.A. has recognized this dilemma and is now investigating the inconsistencies. Dr. Norm Hummel, of Cornell University, has been retained to co-ordinate this

project. The first step involved Dr. Hummel inspecting the labs and observing the testing procedures. Technicians and principals were interviewed on lab techniques and the methodology was discussed. The second step involved sending all the recognized labs identical soil samples in order to compare the test results.

As expected variations in the test results occurred. Dr. Hummel and advisory committee concluded that they can "eliminate some of the more serious variations that exist between labs by defining some of the standards". It is their opinion that no lab will need to make any drastic change in their techniques or equipment. The U.S.G.A. will continue to work with the testing procedures. Dr. Hummel will be publishing the lab standards and results shortly. The U.S.G.A. will also be publishing a revised edition of the "Specifications for a Method of Putting Green Construction".



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August 19	Twenty Valley
September 28	Taylors Trophy, Brantford GC
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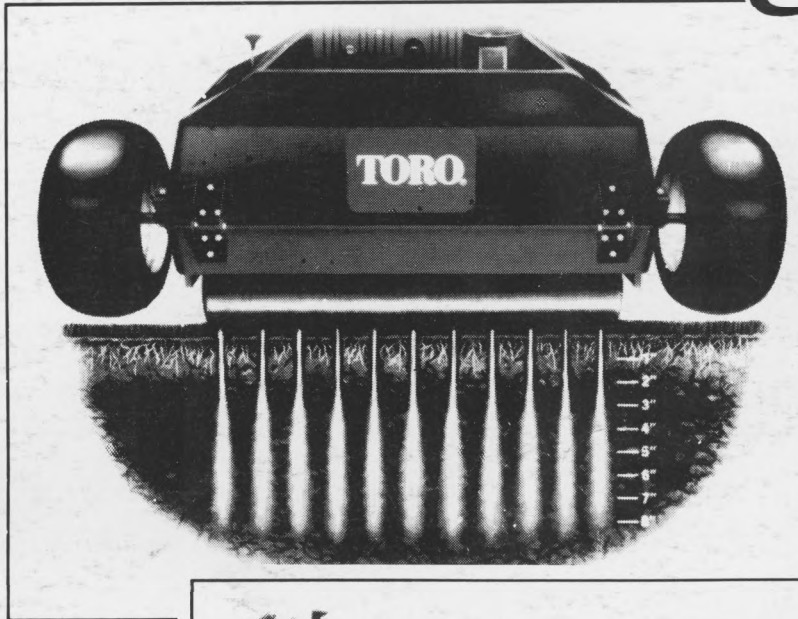
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