SPORTS TURF Manager

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...for better, safer Sports Turf

PRESIDENT'S MESSAGE

Fall is with us!

I hope all members have had an enjoyable summer and an opportunity to take some vacation for rest and relaxation. The summer seems to go so quickly, although we here in Southern Ontario cannot complain about the weather. It has been extremely hot for a good deal of the last couple of months. With record high temperature and humidex readings on some occasions, I am sure turfgrass was not the only thing feeling the heat. I hope your athletic fields have withstood the drought, insect, diseases and weed infestations which frequently accompany such hot, humid conditions. If fields have undergone considerable stress this past summer, now's the time to implement some maintenance work.

We were blessed with warm weather and sunny skies for our 8th Annual Field Day held on July 21st at Globe Park in Hamilton. Our theme this year was Ball Diamond Maintenance. While attendance was slightly disappointing, those turf managers who attended were treated to excellent speakers in Mark Altman from Altman & Altman Associates, and Bob Kennedy, Supt. of Parks for the City of St. Catherines. In addition, delegates had the opportunity to see some of the finest equipment available for maintaining ball diamond infields and outfields. Sincere thanks to all suppliers for their continued commitment to our Field Day. I extend special thanks to our Directors, David Smith, Jane Rivers, and Everett Nieukoop for their efforts in planning and putting on the event. It was an excellent educational opportunity for our members, topped off with a barbecue for all, and baseball game for some of the attendees.

At the Field Day it was my pleasure to announce the recipients of our educational scholarships as Mr. Tommy Joe Coffey Jr. and Mr. Gord Noble, both from the City of Hamilton. Each year the Sports Turf Association makes available a $200 scholarship and 1-year subscription to the Sports Turf Manager to the student who receives the highest academic achievement in sports turf courses at the Guelph Turf Managers Short Course. This year, due to the closeness of the grades, we were pleased to award two scholarships. I presented Mr. Coffey with his scholarship award at the Field Day. Unfortunately Mr. Noble was unable to attend, but we extend our sincere congratulations.

Your Directors have been working steadily at planning our portion of the upcoming Ontario Turfgrass Symposium, Jan. 3 to 5, 1996 at the Regal Constellation Hotel in Toronto. It plans to be another superb conference for educational opportunities, networking with industry suppliers, meeting old friends and making new acquaintances. Please note the change in venue and remember to attend our Annual Meeting which is held during the OTS. Watch the OTS brochures and information package for the time and date of the Annual Meeting. Also when registering for the OTS, it is very important to remember to **identify yourself as an STA member.**

If your athletic fields require some renovation from the summer heat and compaction due to usage and/or a lack of irrigation, now is the time to implement an aeration, topdressing and overseeding program. With cooler air temperatures, and still warm soil conditions, overseeding to fill in bare spots or thicken high traffic areas is ideally suited to this time of year. You'll be amazed at the results with turf type perennial rye in particular, and how quickly your turf will recover. Remember that aeration, be it coring or slicing, is best done in several directions. If topdressing is beyond your budget, dragmat the cores back into the holes as a topdressing material. It has been my experience that overseeding is best done the length of the field and then again at a 45 degree angle. Whether or not your fields have undergone a lot of stress this summer, try a dormant application of nitrogen this fall and see the results next spring. I believe you will be impressed.

Best of luck with your fall athletic field maintenance programs.

Wishing you better, safer sports turf.

Christopher Mark
President

SPORTS TURF ASSOCIATION OFFICE HOURS

Mrs. Sonja Schneider will be in the office from 9:00 a.m. to 1:00 p.m., Monday, Wednesday and Friday. The office phone number is (519) 763-9431. At other times a messge may be left on the Voice Mail system. Please include the vital information of name, telephone number with area code, and time of calling. The office may also be reached at any time on FAX #(519) 766-1704.

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Sports Turf Association Announces Scholarship Award Winners

The Sports Turf Association is pleased to announce this year's educational scholarships have been awarded to Mr. Tommy Joe Coffey Jr. and Mr. Gordon Noble. Each year the STA makes available a $200 scholarship and a one year subscription to the Sports Turf Manager to the student who achieves the highest proficiency in sports turf related courses at the Turf Managers Short Course held each February at the University of Guelph. The awards are based on the students standing in three courses, Soils and Nutrition, Turf Management, and Herbicides. This year, due to the slimmest of margins between the grades, it was decided to present two scholarship awards. STA President Christopher Mark was honoured to make the announcement and presentations at the recent Field Day in Hamilton.

Tommy Joe Coffey Jr. is Superintendent of Chedoke Golf Course and is actively involved in the lawn bowling operations with the City of Hamilton. Prior to this position he was the Sports Turf Manager of Mohawk Sports Park where, among other duties, he had responsibility for preparing the fields for the World University soccer matches. He has also hosted international rugby tournaments and worked at Ivor Wynne Stadium on their events.

Gordon Noble also is employed with the City of Hamilton where he is a member of the golf course maintenance staff at Kings Forest Municipal Golf Course. Gord is also involved in all facets of turf maintenance at Roselawn Municipal Lawn Bowling Club. Prior to these duties, he was a Sports Groundsman at Mohawk Sports Park where he performed all aspects of sports field maintenance related to soccer, football, baseball, track and field. Gord's winter duties also have a turf flavour as he is involved in snow making and grooming the Chedoke Winter Sports Park.

The STA congratulates both these gentleman on their superb achievement and wishes them much success in all future endeavours.

STA President, Chris Mark, presents a Scholarship Cheque to Tommy Joe Coffey Jr., Superintendant of Chedoke Golf Course in Hamilton.

EDITORIAL

The English language has been enriched lately by expressions such as the T-word (Tax), the H-word (Helicopter), etc. I would add another to that growing list - the D-word.

The D-word refers to DEDICATION.

Webster's dictionary defines a person who is dedicated as one who is devoted to, consecrated to or appropriated to a purpose.

For any organization to be progressive, particularly a non-profit organization, it must have people in the positions of Directors or Executive who have the D-word.

Some individuals allow their name to stand for nomination because the position will look important on their C.V. Others look for the per diem payment that the position provides; something most non-profit organizations cannot afford. Neither are reasons which provide the type of individual the organization requires.

A person who has the D-word must be the individual who is willing to make personal sacrifices in terms of personal and family time and finances without desire of any personal gain. The person who has the D-word must, in his or her own mind, be convinced that our Mission - TO PROMOTE BETTER AND SAFER SPORTS TURF - is worthy of his or her individual effort and the collective effort of the Board.

The By-Laws of the Association state that a Nominating Committee shall, not less then sixty days prior to the annual membership meeting, prepare a list of nominees for the positions of Directors and Officers that become vacant at the end of the current fiscal year.

The Sports Turf Association needs members who feel they have the D-word. If you are dedicated to our mission and wish to become a Director, please give this office a call.

UNDERSTANDING TURF MANAGEMENT

RYEGRASSES

the 17th in a series by
R.W. Sheard, P. Ag.

Ryegrass originally developed as a pasture grass which would withstand close grazing and had a superior ability to produce meat and milk. Even today nitrogen-fertilized ryegrass is the preferred animal feed for cattle in the Netherlands. The early settlers in New Zealand fell and burnt the forests, then threw Ryegrass seed in the ashes to develop one of great introduced grazing environments in the world.

The Ryegrass Family

There are about ten species of ryegrass which have been botanically identified, but only two are commonly used in the turfgrass industry. Italian ryegrass (*Lolium multiflorum* Lam.), sometimes referred to as annual ryegrass due to the predominately annual growth habit, is a native of the Mediterranean regions of Europe. It is noted for its rapid germination rate and hence may be used where rapid cover is desired. The annual nature and low cold tolerance of the species limit its use for sports fields in Canada. Under more tropical environments it has found a place in overseeding dormant tropical grasses for winter play.

On the other hand, perennial ryegrass (*Lolium perenne* L.), sometimes referred to as English ryegrass, has a world wide reputation as a premier grass for sports field use. The reputation has been gained through the superior wear resistance of the grass. It originated in the temperate areas of Asia and North Africa. Although a bunch type grass without the colonizing ability of bluegrass with its rhizomes, ryegrass may provide a dense, high wear resistant turf when grown in temperate climates under high fertility and adequate water. Hence it is the preferred sports field grass in Europe.

Ryegrass Advantages

The major advantage of ryegrass is the wear resistant qualities of the ryegrass leaf. The wear resistance is derived from the extremely tough, fibrous vascular bundles in the leaves. While this advantage increases the wear ability of the leaf, ryegrass is more difficult to mow than other turfgrass species. A whitish appearance, due to shredded, mutilated leaves, may be observed if the mower becomes dull.

A second advantage of ryegrass is the relatively rapid germination and emergence rate. Under favourable temperature conditions of 12 - 25°C, ryegrass will emerge in 5 to 8 days. Thus ryegrass is the preferred species for overseeding in the late spring or early fall. In overseeding operations rapid germination of the ryegrass increases its competition potential with weed species, such as annual bluegrass, which may also be germinating. On the other hand, because of the rapid establishment, ryegrass can be excessively competitive in mixtures with other species, resulting in poor establishment of the preferred species; usually Kentucky bluegrass.

Since ryegrass is a bunch grass thatch accumulation is seldom a problem. Thus topdressing programs for thatch control are seldom required on sports fields with a high ryegrass content.

Ryegrass will perform well under a wide variety of soil conditions, including the heavy textured soils. It has fair to good tolerance to poor drainage and compaction. The latter advantage makes the species a popular choice for reseeding goalmouth and centre field areas, but it does not correct the underlying problem and will not perform as well as if the soil was less dense. Best performance is obtained on neutral soils, however it will tolerate slightly acidic soils. Drought tolerance is medium. Its adaptation to shade is good.

Ryegrass Disadvantages

A major disadvantage ryegrass is the bunch-type growth habit. It lacks the rhizomes of Kentucky bluegrass or the stolons of bentgrass which enable them to colonize bare areas. Recovery from winter kill or other stress factors is poor and overseeding becomes essential. Ryegrass will also become stemmy during late spring when numerous reproductive tillers are formed. The stems will resist mowing by reel mowers giving the sports field a ragged appearance.

A second disadvantage is the lack of cold tolerance. More recent cultivar introductions of turf type perennial ryegrass, however, have increase cold tolerance. Unless good snow cover can be assure in areas with severe winters winter kill can be a serious problem.

Ryegrass is susceptible to leaf rusts. In August and early September rust can reduce the vigour and quality of pure ryegrass stands growing at low levels of nitrogen fertilization and without irrigation. Under sports field condition other diseases seldom become a problem with ryegrass.

Ryegrass is not tolerant of close mowing. A height of 2.0 to 2.5 inches is preferred, although the higher mowing height may create problems obtaining a clean cut. Because of the tough nature of the leaf and the stems which appear in late spring, a rotary mower may produce a superior quality turf in comparison to a reel mower.

Cultural Practices

Satisfactory quality of ryegrass turf may be maintained with medium fertility which involves .25 - .75 kg N/100 m^2 of nitrogen per growing month. The higher rate may be necessary for high use fields on which midfield and goalmouth wear can be more intensive. Phosphorus and potassium requirements are similar to those of other species.

Turf-type perennial ryegrass varieties are recommended for Southern Ontario, lower mainland B.C. and Vancouver Island, and the coastal areas of the maritime provinces. Relative to bluegrass, perennial ryegrass is a large seed. Therefore the recommended seeding rate is 2.0 - 4.0 kg/100 m^2.

When your work speaks for itself, don't interrupt.

-Henry J. Kaiser

Evaluating Sports Field Quality

Turf quality for sports fields may be evaluated from several aspects. For example the appearance of the field, or visual quality, is of concern to those viewing the game, either from the stands, or on T.V. On the other hand the coach may evaluate the quality of the turf from a safety aspect; a must in these days of litigation for injury to the player. The player evaluates the turf from the standpoint of how the ball rolls, the hardness of the field, the smoothness of the surface, or the ability to make manouvers as he runs.

Peter Canway and his associates at the Sports Turf Institute at Bingley, U.K., believe the non-visual aspects can be collectively termed "playing quality." They divide "playing quality" into two characteristics: ball/surface properties and player/surface properties.

Ball/surface properties include ball rebound resilience and ball roll. Player/surface properties include traction and friction (grip) and hardness (stiffness and resilience). Surface evenness and turf density or cover are additional factors which should be considered.

If the properties for these two characteristics for playing quality are satisfied, safety and visual quality of the field should be optimal.

While sports managers, coaches and players agreed with Canway on the two characteristics, no definitive methodology has been developed and accepted by all concerned. Furthermore, no set of standards have been developed and accepted for the methods of field testing by the constituency of users of sports fields.

To resolve the methodology aspect, Canway conducted playing quality tests on 49 soccer fields in the U.K. Five types of fields, ranging from native soil fields without tile drainage to sand based rooting zones, were examined over a two year period. At least two visit were made to each field and measurements were made on six test areas on the fields. The test areas were the centre of each goalmouth (high wear), on the centre circle opposite each goalmouth (medium wear) and inside the side line at mid point on each half, or wing area (low wear).

Five measurements of quality were made at each test point. The selection of characteristics to measure were those which used simple, relatively inexpensive, robust and readily transportable equipment. The measurements were 1) football rebound resilience, 2) surface hardness, 3) traction, 4) distance rolled by the ball and 5) surface evenness. In addition percent ground cover was recorded for each test site. Over 600 measurements were made for each quality factor.

At each visit the players were asked to fill out a nine-point questionnaire concerning their opinion of those characteristics of the field that the measurements were designed to evaluate. The results of the questionnaire were correlated to the physical measurements made on the fields prior to play on the same day.

The results of their study are recorded in Table 1. The range of values indicate the diversity of playing conditions that can occur on natural turf playing surfaces. Zero values for rebound resilience and hardness were associated with very wet and muddy conditions.

Separating the data according to field position showed somewhat similar values for the goalmouth and centre field areas. Field edges or wings had lower rebound resilience and Clegg impact values, indicating a generally softer surface as a result of less wear and compaction. Traction values were also lower in these areas of less play, probably a result of more dense and taller grass. The player questionnaire indicated a preference of the players for the turf conditions on the wings.

The highest degree of player satisfaction with rebound resilience was obtained for values between 20 and 30% although values as high as 50% were acceptable (see Table 2).

The Clegg impact hardness measurements were related to player response by two criteria 1) falling/diving on the surface and 2) running on the surface. The greatest satisfaction with the surface for falling or diving was with a hardness ranging from 60 to 80 g. The 60 to 80 g range was also considered ideal for running.

Satisfactory traction was considered by the players to fall in the 20 to 40 N.m range. Poor traction was a concern were values less than 20 N.m were measured.

The players were willing to accept as satisfactory any value for ball roll that was between 5 and 10 metres. The wide range of values was considered to be due to players perception of ball roll on wet surfaces and the amount of spin imparted on the ball during a pass.

Ninety eight percent of the players considered the surface satisfactory where playing surface had an evenness reading between 2 and 4. A rating of 10 or more was considered excessively bumpy.

From this array of field measurements

Table 1: A summary of six measurements of turf quality on English soccer fields.

	All Test Points			Specific Field Positions		
Measurement	**Min.**	**Max.**	**Ave.**	**Goalmouth**	**Wings**	**Centre**
Rebound resistance (%)	0.0	8.8	32.5±0.5	34.5	29.1	33.9
Clegg impact hardness (g)	0.0	198.0	42.6±1.2	51.7	29.5	46.7
Traction (N.m)	9.0	51.0	29.2±0.3	27.1	33.0	27.4
Ball roll (m)	3.6	12.0	6.9±0.1	7.2	6.0	7.4
Surface evenness (mm)	1.9	14.2	5.6±0.1	5.8	5.6	5.3
Ground cover (%)	0.0	100.0	55.4±1.3	37.0	85.3	43.6

Table 2: The accepted standards for soccer field quality determined by the Sports Turf Research Institute, Bingley.

Measurement	Acceptable Levels
Rebound resilience (%)	
Low level of play	15 - 55
Medium level of play	20 - 50
High level of play	25 - 38
Surface hardness (g)	
Preferred	20 - 80
Acceptable	10 - 100
Traction (N.m)	
Preferred minimuum	25
Acceptable minimum	20
Ball roll (m)	
Preferred	3 - 12
Acceptable	2 - 14
Surface evenness (mm)	
Preferred maximum	8
Acceptable maximum	10

and their relationship to the actual player acceptance of the surface during a game within two hours of the time of measurement, Canaway and his associates have devised a table of acceptable standards for each of the tests on soccer fields (Table 2). The range of preferred values is sufficient to include the range of values found in the three field positions where the measurements were made. Likewise the range in values for the acceptable field is wide enough to include changes due to weather conditions.

Use of the standards developed in the U.K. could serve as a basis for evaluation of field conditions in Canada. No doubt some adjustments in the values may become necessary as more data is accumulated. The study also serves as a base from which to develop standards for other sports using turf, such as field hockey and rugby football. One would expect the standards to be similar.

Devlopment of procedures and standards for Canadian conditions would be a large step toward consistency between venues for games. As a result the outcome of the game would be a factor of the ability of the team, not the condition of the field.

A further use of the methodology and associated standards would be in the field renovation and new construction. Design systems and material selection for the rooting zone would have to produce a playing surface which met the accepted standards.

(Summarized from: Canway et al. 1990. ASTM STP Pub. 1073, pp.29-47, R.C. Schmidt et al., Editors.)

New GTI Director Appointed

The Advisory Board of the Guelph Turfgrass Institute (GTI) has announced the appointment of Rob Witherspoon as Director of the Guelph Turfgrass Institute. He becomes the first full-time Director of the Institute.

After completing B.Sc. (Agr.) and M.Sc. degrees from the University of Guelph, he worked as an instructor in the turfgrass management program at Fairview College in Alberta. He returned to Guelph to manage the Independent Study Ontario Diploma in Horticulture program. Rob was appointed Assistant Director of Independent Study in 1989. Most recently, he was the Director of the Ontario Horticultural Human Resources Council. Rob will be working to enhance and expand GTI programming and services for the turfgrass and urban horticulture industry.

"GTI was developed as a result of the foresight of turfgrass professionals," says Witherspoon, "I plan to help fulfil their vision of a centre for excellence in turfgrass education, research and the promotion of turfgrass as an integral component of the landscape."

Alternative Procedures

Steve Cockerham, a turf researcher at the Univ. of California, Riverside has developed an alternative method for measuring football rebound resistance.

The Canway procedure (see article opposite) involved the dropping of the ball through a set vertical distance, with a visual recording of the height to which the ball bounced. An additional measurement was used for ball roll by recording the distance travelled by the ball after rolling down an incline.

Cockerham's procedure determines both parameters in one operation. The ball is rolled down an incline and the height of the bounce as the ball hits the turf surface is recorded by a "hop indicator." The "hop indicator" is a stand with a series of horizontal aluminum bars set on roller bearings positioned at two cm intervals along the height of the stand. The stand is placed one meter from the base of the ramp.

As the ball bounced at the base of the stand it deflects some of the bars; the lowest bar deflected was taken as the measure of the ball bounce. The distance the ball rolled from the base was recorded as the distance of ball roll.

While the distance rolled may be slightly less due to energy loss from to deflecting the bars, the Cockerham procedure has the advantage of dropping the ball on to the turf at an angle which is closer to the contact angle of a kicked ball with the turf.

[Adopted from SportsTurf, Vol. 11, 22-23, July, 1995.]

8TH ANNUAL FIELD DAY

Christopher Mark, President, STA

On July 21 the Sports Turf Association held its annual field day in partnership with McCracken Golf Supplies at Globe Sports Park, Hamilton, Ontario. Athletic field managers and staff from across southern Ontario gathered under brilliant sunny skies and warm temperatures to hear seminars and view equipment demonstrations related to Ball Diamond Maintenance. The organizing committee, consisting of David Smith, Jane Rivers, Everett Nieukoop, and Roy Forfar, worked very hard putting together a program which treated delegates to practical, hands-on information related to ball diamond maintenance, a barbecue, and a baseball tournament for those who wished to play ball.

The first speaker on the day was Mr. Robert Kennedy, Superintendent Parks and Cemeteries from the City of St. Catharines. We were privileged to have him address our field day as he is well known for having a premier sports maintenance program in St. Catharines and as a speaker to many audiences across Canada on various issues, particularly athletic field management.

Mr. Kennedy delivered a truly uplifting and motivational seminar. While the majority of his comments focused on athletic field maintenance, his theme can be extrapolated to any area of maintenance. First and foremost, sports field managers must have a PLAN and those responsible for carrying out the PLAN must have PRIDE. Without a PLAN your PROGRAM will not have any direction, and that will come across very quickly to frontline staff, as well as elected officials or senior managers responsible for apportioning funding and making operational decisions. Without PRIDE in the work, the maintenance PROGRAM will suffer.

The result is someone else will be given the work. In these tough economic times for Municipalities, Universities, Colleges and Board's of Education, etc., there are two options for maintenance, public, or private through contracting out. He suggested the main difference between the public and private employee is often PRIDE in the work.

To instill PRIDE in employees he recommended giving them clear direction and training so they have a firm understanding of what they are doing. For example, explain why aeration benefits turf and why it is important to do it in several directions and multiple times during the season. Explain why slow release fertilizers are the best type for use on your athletic fields.

Mr. Kennedy indicated that based on his experience, most municipal employees want to contribute in a positive way to the organization and desire the tools to do the work in the best manner possible. That means having a PLAN, communicating that PLAN to them, ensuring they have the proper equipment and products to achieve the best results for the PROGRAM.

Talk, listen and communicate with elected officials and residents so they have a firm understanding of what you are trying to achieve in building a lasting community for years into the future.

If your goal is to have the best sports fields to attract top calibre tournaments and teams to your area, then develop a PLAN, ensure your PROGRAM and its contents will meet the expectations of the PLAN, and the people challenged with achieving the PLAN have PRIDE in their work. Make sure everyone, from the student who picks up litter, to the tractor operator, right up to the elected officials who vote on your requests for funding, have an excellent understanding of what the PLAN is and how you intend to make it work for the betterment of the community and all citizens.

The second speaker on the day was Mr. Mark Altman, of Altman & Altman Consulting; a renowned athletic field expert who has consulted on fields from high school, University and College, to professional sports fields and golf courses. Mr. Altman's casual style and presentation made for a very educational experience for all delegates. Mr. Altman is known for his hands-on and practical tips and opinions on ball diamond and athletic field maintenance. His presentation covered topics such as aeration, fertility, infield materials, overseeding and topdressing. His three goals for athletic fields is Quality, Safety, and Durability.

One maintenance suggestion entailed how to repair ball diamond "lips" which develop at the edge of the infield and outfield grass. These lips, which develop over a season, are usually caused by gilling/dragging the infield in predominantly the same direction. Besides the usual labour intensive technique of removing the sod with a sod cutter, raking out the material and resodding; he suggested three other possible options. Cut a 3 - 4 inch wide by a 4 - 6 inch deep trench in front of the lip. Then drive a tractor wheel along the lip which will cause the material to cave in the trench, thereby reducing the lip. Secondly, try using a power broom to remove the lip, or lastly, try a high pressure water hose to blast the material back onto the infield.

In terms of dragging infields, Mark suggested that one of the most common mistakes is travelling too fast. Instruct operators to slow down and if possible apply water onto the infield immediately after dragging to firm up the infield. If economics dictates you cannot afford a diamond groomer, rig up an old fashioned nail drag using six inch spikes. It may be crude, but it still gets the job done.

Mark indicated his philosophy on ball diamond and athletic field maintenance in general. Tailor the maintenance of your fields to the type and amount of play. If you cannot afford to maintain the entire playing surface, prioritize maintenance on those areas receiving the most wear and tear. In baseball this would be the infield (particularly grassed infields). For soccer it would be the goalmouth creases, centre,

and penalty kick areas. In the case of football the area would be from the centre of the field extending across to where the yard marker numbers are placed on the field. Mark suggested that high wear areas on athletic fields should receive three times the maintenance of other areas on the field.

He feels that aeration is the most important maintenance practice and suggests it should be performed a minimum of five times per year. He stated aeration is the key to plant growth, wearability of your turf, and reduction of injuries to athletes.

Two further maintenance tips he suggested were 1) pre-germinating seed to speed up rehabilitation of worn areas if timing of the repairs is critical and 2) if hardball pitchers (particularly in senior league play) are forever digging holes in the mound, bury an old clay brick where they constantly drag their foot. This will at the very least assist in not having to rebuild and retamp the mound after every game.

It was most enjoyable having Mr. Altman address our field day and his ability to communicate and capture an audience was best represented in holding the attention of numerous students who primarily came for a baseball game, as well as the full time athletic field managers and staff who attended for training and education. All seemed genuinely interested and entertained by Mark's enthusiasm, sense of humour, and philosophies on everything from athletic field maintenance to safety issues on sports fields, to just knowing and being able to relate to the routine problems sports turf managers face on an everyday basis.

All in all it was a most enjoyable day in Hamilton. Thanks again to the organizing committee and the host venue, the City of Hamilton, for putting on an educational and entertaining day. If you missed it this year, we hope to see you next year.

1995 Guelph Turfgrass Institute/Ontario Turfgrass Research Foundation

Research Field Day

Pam Charbonneau, OMAFRA Turfgrass Advisor

Apart from a sudden cloud burst during registration the Guelph Turfgrass Institute/Ontario Turfgrass Research Field Day held on Mon., Aug. 14, 1995 proceeded without a hitch. There were over 250 people in attendance. The day began with a welcome from Dr. Dennis Murr who introduced the new Guelph Turfgrass Institute Director, Rob Witherspoon. Thom Charters, President of Ontario Turfgrass Research Foundation, promptly presented Rob with a cheque for $30,500 for turfgrass research for the current research season. Randy Fielder, President of the Georgian Bay Golf Superintendents Association also gave Rob Witherspoon a cheque for $1000 which is their final payment of their pledge of $5000 for the G.M. Frost Research and Information Centre Building Fund.

For the first time ever the Ontario Golf Superintendents Association held a golf tournament for their members in conjunction with the research field day, a format which was well received by their membership.

The purpose of the turf research field day was to give all members of the turfgrass industry a chance to view first hand the turf research results. It was also an excellent opportunity to meet the GTI turf researchers and ask them any burning turf questions which have been on your mind lately. Twelve of the GTI faculty and graduate students were on hand to present their research results.

For any of you who did not attend this is a must for next years calendar.

1996 Ontario Turfgrass Symposium

Ontario's Premier Education and Trade Show

Ontario's Premier Turfgrass Education and Trade Show will be better than ever in 1996. A new venue was sought due to space conflicts with classroom scheduling at the Univ. of Guelph. The Regal Constellation Hotel and Convention Centre near the Toronto International Airport has been selected by the OTS Executive Committee.

Thus all the program will be under one roof - check you coat and gloves and move from event to event in your shirt sleeves. Parking is unlimited and free if you register for a room in the Constellation. Room rates range from $60.00 to $80.00.

The time of the year remains the same - January 3 - 5, 1996.

The Educational Program will be kicked off by the Keynote Address by Dr. Tom Watson of Toro International. Dr. Watson is a library of knowledge of practical turfgrass management, gained through many years of trouble-shooting turfgrass problems in the U.S., Canada, and world-wide.

The Sports Turf Association has a full program of speakers which includes an afternoon panel on "Costing Sports Field Construction." Since all events are close together the opportunity to move to another speaker program such as that of the Ontario Golf Superintendents Association will be simpler than previous years.

The Annual Meeting of the Sports Turf Association will be held as a complimentary breakfast on Thursday morning, commencing at 7:00 a.m. Please endeavour to attend and participate in the business of operating your Association.

Last but not least please indicate your membership in the Sports Turf Association when you register. If you register early you may include other employees in your organization who are not members of the STA at the STA membership rate. Remember this event is the major source of revenue for the operation of your organization.

THE TURF POLL

This is the era of the poll. Consequently the Sports Turf Executive decided to conduct a poll of the membership with the objective of tabulating the extent of the use of the various management practices by Association members on their sports fields. The questionnaire was included with the membership invoices mailed in April of 1995. Forty-nine percent of the membership who were in administrative or supervisory positions with access to the necessary date for municipal or educational facilities responded - a truly remarkable response level.

All types of sports turf use were included in the management responsibilities of the respondents - stadium, golf courses, general sports fields and even cemeteries. The employer ranged from large municipal governments to small town operations; from large county school boards to small private schools; from Ontario locations to some in Western Canada.

The average total acreage of the 25 facilities reporting was 390 acres, with a range of 4 acres to 2000 acres (Table 1). On average 39% of the acreage was in sports turf, although the range of acreage devoted to sports turf varied from 100% to a low of 7% . The high percentages allocated to sports turf were associated with the small private schools whereas the lower values were related to large municipal parks departments.

The number of employees in an organization ranged from 1 to 112, with an average of 20. These employees cared for an average of 28.5 acres per person. The range of acres per employee was 4 to 198.3, the higher value being associated with a municipal parks department which opted to report only permanent supervisory personnel.

All reporting managers used Kentucky bluegrass on their fields. Fifty -four percent indicated they used ryegrass, while only 32% reported using fescues on their sports fields. Twenty of the 25 respondents indicated they had an overseeding program, probably the reason for the greater choice of ryegrass over fescues in the type of seed use.

Only three respondents indicated they did not use irrigation. Some respondents, particularly those in Western Canada, reported 100% of their acreage was irrigated. An average of 42% of the sports field acreage was irrigated.

Fertilizer was applied an average of 2.6 times per year. Some small municipal parks authorities used only one application per year whereas park authorities with golf courses reported up to eight applications each year, reflecting the intensive management of golf greens. Sixteen of the 25 managers used a dormant fall fertilizer application.

Only one manager indicated he did not use an aeration or topdressing program. Unfortunately the survey did not ask a question which would separate the two management practices.

Three of the 24 managers indicated they did not have a herbicide program in use. Likewise they did not indicate they had an active IPM program as an alternative to a herbicide program. Otherwise the managers indicated they had some form of active IPM program.

Both rotary and reel type mower were used by the majority of the managers. Five managers indicated they used rotary mowers only, while six indicated the used only reel mowers.

Sand based root zones were being used by only five of the organizations with a total of 14 such fields reported to be in use.

Only six of 22 respondents indicated they were able to rotate their fields. While 15 of them indicated they were able to charge a user fee for the use of the sports fields only three suggested those fees were used for the maintenance of the fields.

The major concerns expressed by the 25 responding managers was overuse of existing fields combined with lack of funding. Two respondents cited lack of professional knowledge on the part of staff or the need for continuing knowledge upgrade as a concern. It is interesting to note that only one individual raised a technical problem, that of compaction, as a area of concern.

Table 1: Some statistics generated by the survey

	Range	Average
No. of Employees	1 - 112	20
Total Acreage	4 - 2000	390
Acres per Employee	3.3 - 198.3	28.5
Acreage of Sports Fields	3 - 800	146
% Acreage in Sports Fields	7 - 100	43
% Acreage Irrigated	0 -100	42
Fertilizer Applications	1 - 8	2.6

GTI HILITES

Pesticide Persistence in Composted Turfgrass Clippings

A group of turfgrass researchers under the direction of Prof. Garry Stephenson of the Dept. of Environmental Biology at the Univ. of Guelph and the Guelph Turfgrass Institute have conducted an experiment to determine the persistence of three common turfgrass pesticides in compost generated from grass clippings.

Landscape maintenance personnel for parks or golf courses are composting turfgrass clippings and reusing the compost in compliance with the 3-R concepts of environmental correctness. If the turfgrass has been treated with herbicides or other pesticides there is concern about the persistence of the chemical in the composting process and the potential for damage to plants when the material is reused as a mulch.

Stephenson and his associates applied 2,4-D, Mecoprop and Dicamba at three rates to a large area of turf on a sod farm. One day later they harvested clippings from the blocks and mixed them with untreated tree leaves in a 60/40 ratio of clippings to leaves on a volume basis. The mixtures were composted in small, aerated plastic drums. Samples were removed initially and at weekly intervals over a ten week period for analysis

During the 10-week period 92% of the dry weight of the grass clippings was lost through the composting process. At the same time the weight of the 2,4-D decreased by 87%, the weight of Mecoprop by 85% and the weight of Dicamba by 78%. Thus the breakdown of the pesticide materials was not as rapid as the grass clippings. As a result during the composting operation the three herbicides had increased on a concentration basis by 1.7, 2.0 and 2.8 times, respectively, for 2,4-D, Mecoprop and Dicamba (Table 1).

Table 1: Dissipation of 2,4-D, Mecoprop, and Dicamba during the composting of treated turfgrass clippings.

	Herbicide Residues in the Compost (ppm on dry weight basis)		
Composting Time (weeks)	2,4-D	Mecoprop	Dicamba
0	14.2	45.3	24.1
1	23.8	58.8	27.8
2	30.3	77.1	38.8
3	23.6	69.9	39.4
4	30.7	88.1	52.9
5	25.9	78.3	49.5
6	25.2	91.0	52.1
7	13.8	80.7	52.0
8	29.5	103.1	58.2
9	23.8	107.3	66.4
10	23.9	92.3	67.8

GTI Hilites *(continued from page 9)*

The concentrating effect of the more rapid rate of breakdown of the grass clippings relative to the herbicides would appear to have peaked with 2,4-D after two weeks. This would suggest the microbial population responsible for the degradation of this herbicide have built up to a level where they are removing the 2,4-D molecules as fast as the organic molecules in the grass clippings were being converted to CO_2. This equilibrium breakdown does not appear to be the case for Mecoprop and Dicamba whose concentration in the composting clippings continue to rise with time.

The next step in this research by Stephenson and his associates is to determine the phytotoxicity of the compost after the composting operation has stabilized. They also plan to determine the effect of the diluting of the compost where clippings are continually added to the system.

In the meantime sports turf managers should exercise some caution if they are using clipping-generated compost on sensitive areas such as flower beds on their properties.

ARTIFICIAL TURF - Is it Always No?

R.W. Sheard, P.Ag.

Editor, Sports Turf Manager

One might be accused of heresy to write an article on artificial turf for a Sports Turf magazine. Yet sports turf facility managers must be aware of alternatives to natural turf for use in special situations.

One such situation occurred at Wilfred Laurier University in Waterloo, Ontario. The University was land locked, with only one undersized football field. Their Physical Education and Athletics program required the rental of off-campus space at a significant cost and with considerable inconvenience to the athletes. Natural turf did not appear to be a solution.

Their thought processes were guided by an article in "Athletic Business," Sept. '94, which stated - a single synthetic field provides the same utility as 12 to 18 natural fields. While the statement may be considered an exaggeration, it lead the administration at WLU to examine the cost and design factors of artificial turf. While costs were the major factor in choosing the design they also considered the base on which to lay the artificial turf, the shock absorbing pad and the type of fibre to use in the artificial turf.

The base of the field has many similarities to a sand based rooting system for natural turf such as tile drainage. Likewise the layering of different stone sizes with sand immediately below the artificial turf are concepts familiar to the design of natural sand-based fields. The materials were similar in size, but did not required the depth of a rooting zone. For example only 15 mm of sand was necessary under the shock absorbing layer. The choice of an aggregate layer in preference to concrete or asphalt would tend to add resilience to the system.

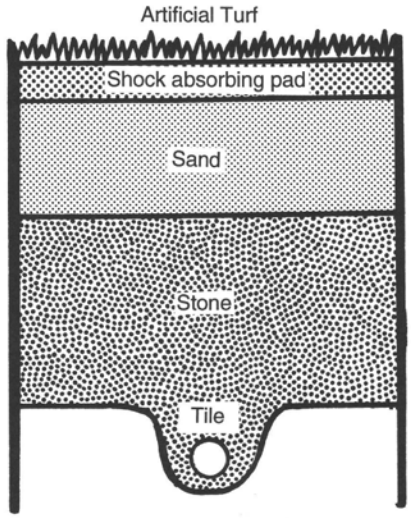
The choice of a tile drained aggregate base overcame one of the deficiencies of artificial turf on an impervious concrete or asphalt base. Rain or snow melt was quickly discharged from the system.

After considering four types of materials for the shock absorbing pad, they chose a shock absorbing layer which is an 80% granular rubber, 15% pea gravel, 5% granular foam mix, held together by urethane. The choice was based on the deficiencies of closed-cell polypropylene, which softens in hot weather, and closed-cell polyvinylchloride, which hardens in cold weather and compresses with time.

The choice of the artificial turf was between nylon and polypropylene. Polypropylene was the selected material due to lower costs, a softer, less abrasive material, and having superior wet weather traction. A new fibre product using a polypropylene/polyester blend from Holland was the final choice. The manufacture provided a 100%, zero deductible, eight year warranty on the product.

The total capital cost was $1,600,000.

The facility has flood lights and a 6,000 seat stadium. Included are a 6-lane brick dust running track, long jump pits and high jump run ups. The design permits use for football, soccer, lacrosse, field hockey



and two slow-pitch ball diamonds.

The facility permits 24-hour use, rain or shine. As a result the field was used for 13 Ontario Minor Football final games on one weekend in November, 1994, a time when most fields had already closed down to avoid field damage to natural turf. Plans are to use the field for "on the snow" recreational touch football and rugby during January and February. Beginning March 1 soccer and softball preseason practice will start. In essence the availability of the field is limited only by the user demand for bookings and cleaning time.

The first evaluation of the system indicates the users are satisfied with the "feel" and "give" of the surface. No evidence of "artificial turf related" injuries have been recorded. Above all, a consistent surface is provided, regardless of the weather.

On the plus side for maintenance is the elimination of all mowing, fertilizing, topdressing, aerating, and irrigation.

On the negative side is the 1.6 million dollar capital expenditure. Based on their a eight year guarantee that is a capital expenditure equal to one sand-based rooting zone field per year.

Another negative is the need to sweep the field. Any garbage, even discarded tape by football players will be visible and must be swept away to maintain the appearance of the field. In this site brick dust from the running track has to be swept away on a regular basis. In addition, all reports on artificial surfaces indicate they result in a warmer environment for play.

[Based on an address by Mr. Robert Vanderspeck, Wilfred Laurier University, at the 1995 Turfgrass Symposium, Guelph.]

COMING EVENTS

November 6 - 10, 1995
Turfgrass Management Certificate - Level III
Venue: Olds College, Olds, AB.
Contact: Educational Development Centre,
Olds College,
c/o Registrar's Office'
4500 - 50th Street
Olds, AB.
(403) 556-4684

November 7 - 10, 1995
New York State Turf & Grounds Exposition,
Venue: Riverside Convention Centre
Rochester, N.Y.
Contact: NYSTA
(800) 873-TURF or (518) 783-1229

November 20 - 21, 1995
GCSAA Educational Seminar
Golf Greens: History, Theory, Construction & Maintenance
Venue: Guelph Tufgrass Institute
328 Victoria Road, S.,
Guelph, ON.
Contact:GCSAA
(913) 832-4444

January 3,4 & 5, 1996
Ontario Turfgrass Symposium
Venue: Constellation Hotel, Toronto
Contact: Office of Open Learning,
Room 160, Johnston Hall,
University of Guelph,
Guelph, ON. N1G 2W1
(519) 767-5000

NEW MEMBERS

- Michael McClellan, City of Scarborough
- Rob Field, Nu Gro Corp, Woodstock
- Neil Zaph, North York
- Bob Crump, North York
- Ray Biggart, Metro Parks & Properties, Toronto
- John Sherritt, Univ. of Western Ontario
- John R. Sellers, City of Oshawa
- Andre Rivette, Cornwall Parks & Recreation
- Mike Bruyere, Cornwall Parks & Recreation
- Lori Burgoyne, Whistler, BC
- Harold Van Gool, Plant Products Ltd.

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LAST WORDS

Sometimes you earn more doing the jobs that pay nothing.