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1988/89 Board of Directors

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# SPORTS TURF

## NEWSLETTER

## PRESIDENT'S MESSAGE

1988 saw increased capital budgets in certain municipalities where communities constructed new sports field complexes due to population increases. Shrinking budgets in other areas allowed at least a big improvement in the existing facilities, as managers gained more experience and expertise in the maintenance of same. The videotapes are progressing favourably as is the booklet that Pat Tucker, along with other experts is developing for us.

We have been invited by the C.G.S.A. to participate with them in their Annual Conference on December 8, 1989.

Your board made some interesting contacts in 1988, first with the Ontario Association of Landscape Architects. We sent them an article about the Sports Turf Association for their newsletter. They in turn sent out information to our industry members on Technospec. It is a binder of technical information about the products each supplies. These are then sectioned off into different categories.

Another contact made was with The Canadian Sports Spine and Head Injuries Centre at the Toronto Western Hospital. There we talked to Virginia Edmonds, R.N. who was unaware of the S.T.A. Information was exchanged, plus we obtained the name of Dr. Robert Pelletier at the University of Ottawa. He runs C.A.I.R.S. — the Canadian Athletic Injury Reporting Service. He receives charts on a weekly basis from coaches and trainers at the high school and university level on all injuries sustained that week. This program is the equivalent of N.A.I.R.S. which originated at Penn. State University.

Lastly, in future issues of the newsletter we will be reporting on the first Symposium on the Characteristics and Safety of Playing Surfaces (Artificial and Natural) for Field Sports. It was held in Phoenix, Arizona last December. The idea came from A.S.T.M. — The American Society for Testing Materials and profes-

sional sports, the N.C.A.A. and the N.F.L. to determine standards for both types of media to try to cut down on the number of injuries and to arrive at a set of standards for the industry.

Peter Kleschnitzki and Annette Anderson have some interesting speakers organized for the June 15 Field Day. Among them, Dr. Paul Rieke from Michigan State University. The Field Day will be held at the River Oaks Community Centre in Oakville. The City of Kitchener has agreed to host the event in 1990 and will assist in the planning this year.

Bruce Calhoun will be attendance at the Sports Turf Managers Association Conference in Florida in January and will report back on talks and events held there.

Other Board members — Ron Dubyk, Geoff Corlett, and Mike Bladon have been invited to speak at a Department of National Defense Symposium January 25, 1989. Topics discussed will be Drainage, Renovation, aeration or Cultivation, Compaction and general field maintenance. Then again in March other talks at the O.P.A. Conference.

As you can see your Board had a busy 1988 and 1989 looks even busier. My thanks and appreciation to all Board members for their time, effort, and travel and travel last year. I am very grateful for their support, on behalf of the S.T.A. We feel we have made big strides in this, our first full year of operation. Special thanks to Annette Anderson for her continued support and advice throughout the year.

Lastly, thanks to the C.G.S.A. and particularly Bob Brewster for their help and ongoing interest in our association. It is much appreciated!

My wish for all of you is that all your Sports Turf is better, and safer in 1989.

Sincerely,

Michael J. Bladon

## WELCOME! To Our New Members

**City of Prince Albert**

Prince Albert, Saskatchewan

**R.J. Standish**

Corporation of the City  
of Ottawa  
Ottawa, Ontario

**Kim Knight**

Sportfield Sup. & Aquatic Sup.  
The City of Fort McMurray  
Fort McMurray, Alberta

**Michael J. Milloy**

Gateman-Milloy Landscape  
Contractors Ltd.  
Kitchener, Ontario

**Barry Elliott**

Coquitlam Parks and  
Recreation Department  
Coquitlam, B.C.

**Cliff Turner**

Orillia Parks & Recreation  
Orillia, Ontario

**Richard J. Spraggs**

Corporation of the Town of  
Leamington  
Leamington, Ontario

**Bill Thompson**

The Muskoka Board of  
Education  
Bracebridge, Ontario

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# TRENDS IN SPORTS TURF

by Michael J. Bladon

Athletic fields comprise the most observed turf in the world. Millions watch major sports world wide, thousands observe games at the local level including university, college and high schools. There is extensive coverage on TV of every conceivable sport. Newspapers reserve several pages for it, there are many sports magazines and radio and TV give us reports hourly as part of the news.

Since time began games involving body contact have received the plaudits of our world. They provide an outlet for a competitive and aggressive society and are in themselves therapeutic. They challenge a player's skill, conditioning and training.

This article will address the trends in Sports Turf today as they relate to Canada and the U.S. These trends are many and varied. The first and most significant is the tend to technical information, with particular emphasis on high quality sports turf and on how to construct and maintain the various athletic fields. It is found in technical publications, turf magazines, and at seminars, field days and conferences. At turf conferences now, sessions are held specifically related to sports field problems.

## VIDEOTAPES

Increasing use of videotapes for inservice training sessions provides up to date information to the sports turf manager on maintenance and renovation practices. In addition, they are used at trade shows to portray equipment use and new equipment ideas, and to show materials and construction techniques related to drainage and irrigation.

## SPORTS TURF ASSOCIATIONS

Another direction is the formation of Sports Turf Associations. A group in the U.S. started the Sports Turf Managers Association in 1981. Its membership is now 700 strong. Two years ago the National Sports Turf Council was launched to co-ordinate the efforts of national experts to help develop top quality sports turf.

A similar organization in Canada is the Sports Turf Association. Conceived during a brainstorming session in February of 1987 at the University of Guelph, Arboretum, this association now has a membership of 80 and growing daily. These members are from virtually every province in Canada and include School Boards, Municipalities, Universities, Community Colleges, Private Schools, Manufacturers and Distributors of turf-related products.

The objective of the Association is to collect and disseminate scientific, educational and practical knowledge through liaison with those people involved with the construction and maintenance of safer and better sports turf. Its members represent a wide range of sports, including field hockey, football, soccer, baseball, softball, slo pitch, cricket, lawn bowling and horse race tracks.

The aims of the Sports Turf Association are to co-operate with and aid existing organizations which have an interest in the improvement of athletic fields. In 1988 the Sports Turf Association held their first annual Sports Turf Conference in conjunction with the Canadian Golf Superintendents Associ-

ation and had 100 people in attendance. Each year field days are held in different locations using knowledgeable speakers from Canada and the U.S., followed by hands-on equipment demonstrations and tours.

The Association has published in its newsletter several field maintenance guidelines for different sports. It also plans the publication of a guide to "Construction and Maintenance of Athletic Fields" in the spring of 1989. This will be one of the few publications at this time on sports turf that relate to Canadian conditions. In the same area of educational material the Association hopes to produce the first of several instructional videotapes. These will address the maintenance functions associated with sports fields.

The second most important trend in sports turf today is in the advances in Turf Management. Research was needed, and is still needed, because of the "overuse" problem associated with athletic fields. This is due to increased leisure time and escalating land prices. So we are seeing increased work in the breeding of turf grass cultivars which have potential for sports fields and a change in the equipment available for maintenance and renovation practices.

## EQUIPMENT:

The direction for equipment manufacturers has been the improvement of existing designs. This has resulted in larger, wider, more reliable machinery with multi-faceted uses. The individual can now buy aerifiers, overseeders, topdressers, grounds groomers, vacuums and dethatching units. These pieces of equipment, because of their size and versatility, mean a considerable drop in labour costs associated with maintenance and renovation. In the case of mowing equipment, because it is much lighter, compaction problems are lessened.

contact, hence germination results are improved. Topdressers can now be calibrated so the sports field manager can calculate with more accuracy his or her topdressing requirements for a given area. 3 5 gang thatching units can now be utilized for thatch removal.

There are also a great many different aerification units on the market from Europe, Canada and the U.S. to counteract your compaction difficulties. Your selection should consider whether drum or cam type, local soil conditions, tine durability, high maintenance, downtime as it relates to loading and unloading, and transport over curbs. Hydraulically driven reel mowers, while more expensive to maintain, in conjunction with diesel and water cooled engines, are finding increasing favour with grounds maintenance personnel.

## COMPUTERS:

There is a growing inclination towards automatic sprinkler systems in combination with moisture sensors. These aid the sports field operator to apply water based on soil moisture levels, climatic differences, or the needs of specific turf grasses. These systems not only take the guesswork out of irrigation but also use water more efficiently. Computers speed up inventories and may be used to measure maintenance costs. For the groundskeeper, their uses appear endless.

## **TURFGRASSES:**

The development of Merion Kentucky Bluegrass in the 1950's showed scientists and plant breeders that breeding improvements were possible in grasses. Today, millions of dollars are spent in this area. The result is there are a large number of varieties of all grass species that can be used in blends and mixtures. All of these bring different and useful strengths to the sports field manager. Contributions of Kentucky bluegrass in mixtures are:

- Rhizomes — sod strength - recovery**
- Increased disease resistance to snow mold, brown patch and Pythium**
- Less mowing**
- They exhibit good cold tolerance — winter hardy**
- High visual quality**
- Many seeds per pound**

The turf type perennial ryegrass were non-existent prior to the introduction of Manhattan in 1967, as the first improved turf type perennial ryegrass. Due to recurrent selection of this species which is cross pollinated, scientists have been able to increase its disease resistance. So the contribution of perennial ryegrass to mixtures are:

- Quick establishment**
- Tolerance to high traffic and compaction**
- Wide soil adaptation**
- Tolerance to close mowing**
- Competes with weeds**
- Deeper roots and no thatch**

The tall fescues also provide an important offering to seed mixtures:

- Drought tolerance**
- Wide soil adaptation**
- Lower fertility needs**
- Heat, traffic and disease tolerance**
- Shade tolerance**
- No thatch**

While not an easy process the sports turf manager using Kentucky Bluegrass varieties, the mainstay of our northern climate, now has some choices. He or she in co-operation with seed companies, turf grass specialists and the Guelph Turfgrass Institute can keep up with current research and information. There is a definite trend toward sports turf mixtures to withstand heavy use.

Although not a new idea, there is a leaning towards pre-germination of seed (long used in the vegetable industry). In combination with irrigation it speeds renovation of areas. The seed is soaked for several days in drums or on a piece of plywood in an area where the temperature and light are constant 22°C (70°F). The seed is then mixed with a carrier such as sand or vermiculite, placed in a slit seeder and applied where needed. It is very important not to bring the seed too far along, as damage can occur to the emerging root radicle, and to ensure seeder openings are increased to compensate for the seed swelling. George Toma of the Kansas City Chiefs has used this method on occasions where a big game was involved and in combination with a perforated plastic cover. This simulates a greenhouse environment and enables him to cut the new grass in ten days.

## **GEOTEXTILES:**

Much greater use of these polyester materials where larger, heavier canvas tarpaulins used to be in vogue. They are used to cover fields to cut down on wear or damage from concerts, marching bands, and the problems related to

desiccation of the grass plant. Bench tarps of the same material practically eliminate the wear from a football team congregating in one area for an entire game (we use them at the University of Guelph). Here to stay, they are light and easy to handle unless it rains, at which point they become heavy and difficult to clean and dry.

## **MESH ELEMENTS:**

The addition of randomly oriented interlocking mesh elements to granular soil has shown initially: (1) substantial benefits to turfgrass rootzone and stability, and (2) enhanced turf growth. The mesh element matrices have a positive effect on soil aeration porosity which is important for root growth needed to intertwine with the mesh to achieve maximum turf stabilization. The mesh elements were provided by Netlon Limited in England. The results of the American research in this area are to be published soon.

Potential applications include sports fields, horse race tracks, car parks, golf cart paths and roadways grassed and used by vehicle and foot traffic. The use of these elements is one of the most promising approaches to provision of a stable uniform playing surface, under various weather conditions. It retains the cushioning effect of a turf, the stabilizing effects of an artificial turf, but retains the beneficial dimensions of a natural grass.

Liability is becoming an increasing problem. In the future, it is possible insurance companies may offer lower rates for fields that are properly constructed and maintained. As Dr. Eliot Roberts (Director of the Lawn Institute) stated in the American Lawn Applicator's October publication, "there is no longer an excuse for negligence in the culture of natural grass for sports playing surfaces". He adds that while costs will vary considerably from location to location, and are dependent on work done, the economics of sports field construction and maintenance or renovation is more favorable than the economics of compensation for injuries to young athletes. Sports turf managers would do well to check their fields daily, to ensure they are safe.

Dr. Kent Kurtz said that "the sports turf industry has never fully recovered from the 'wonder rug'." With some of the trends mentioned here we could well start closing the gap. Due to the number of injuries on artificial turf, professional sports teams are going back to natural grass. E.G. Soldier Field in Chicago, Mile High Stadium in Denver has natural grass with soil heating cables under the surface. Given a choice, athletes would prefer to play on natural grass. They practice on it all the time.

The future looks bright for those involved in safer sports turf in Canada. Indications are the sports turf manager will be better educated, better compensated, and more highly respected for their role in this most important of vocations.

As stated in a Royal Bank newsletter titled 'Building and Keeping Quality', "there is nothing quaint and old world about love of quality and the desire for excellence".

The most dramatic change in Canada is perhaps the trend toward the use of sand as a rootzone material in the construction of sportfields. Started in the late 60's and early 70's, more and more park systems and school boards are using this approach. The most notable is the P.A.T. system, Prescription Athletic Turf developed at Purdue University by Dr. William Daniel and Associates. Others include Sportsturf Systems, The Cell system, and slightly different, The Cambridge System. The latter system involves cutting slits to a depth of six to eight inches and then incorporating sand.

The type of sand used is the key to these fields, and

much work has gone into research. A sand in the medium particle range appears to be the best. Economics dictate the depth of any imported sand. Most of the systems mentioned earlier make use of an underground system of piping below the rootzone and attached to extraction pumps. The water may be removed to holding tanks to drain the field or reversed to supply water or fertilizer in combination through the irrigation system.

The advantage of the sand field is that a crown is not required. An 18-24" crown was used as a standard procedure in football field construction to remove surface water. Therefore a sand football field, if properly constructed and maintained, will move water through its profile faster than irrigation or rain can apply it. This is beneficial because the field can be used for other sports where a crown is undesirable (soccer or field hockey).

The challenges of this trend in field construction are the different nutrition and irrigation regimes. Nutrition studies on many sands indicated that nitrogen, phosphorus, and sulphur were always deficient. While you can't manage sand fields like soil fields, they can be managed, e.g. fields in North York, Vaughan and Mississauga, Ontario.

The sand football field responds to many of the difficult problems associated with the high use football and soccer fields. Overuse still causes wear damage to the sod but even

in wet weather, good footing makes the field playable. The sportsfield manager does not have to wait for the field to dry out in order to carry through with his maintenance program.

#### CHEMICALS AND FERTILIZERS

The leaning here is toward fertilizers which will release nutrients uniformly over several months, rather than the water soluble types which leach more readily.

New, improved herbicides, fungicides, and insecticides, with lower mammalian toxicity, reduced eye and skin effects, lack of odour, use of more water soluble packets instead of emulsifiable concentrate formulations for less waste. Finally more biological controls including a natural fungus that kills dandelions, developed by Dr. Lee Burpee of the University of Guelph. Considerable government and private interest has been shown in this research. The chemicals above are being evaluated for broader spectrum systemic qualities, in a trend towards integrated pest control.

Although the Sports Turf Association is Ontario based, membership is available to anyone in the turf industry in Canada who is interested. If you require more information please contact: Michael J. Bladon, Sports Turf Association, 185 Edinburgh Road South, Guelph, Ontario, N1G 2H8. Phone: (519) 824-4120, ext. 3460.

## BEAT NEGLECT ON THE PLAYING FIELD

### GROUNDS CARE MUST STRESS PREVENTION – OR YOU'LL PAY DOUBLE LATER

by Kent W. Kurtz, Ph.D.

Almost every child has developed motor skills, coordination and philosophies — and experienced "the thrill of victory and the agony of defeat" — on the school playground or athletic field. Since the formative years are the most important in a child's development, the playground and athletic field during these years are very crucial to the child's future and an integral part of the child's success.

If the playground and sports fields are so vital to our students' educations, why then are we so careless with them? Take a close look at the playgrounds, parks, ball fields and sports facilities in your community — are they safe? Unfortunately, the vast majority show deterioration, neglect and worn-out turf. Many of these facilities are hard, compacted, dangerous and very unsafe. Holes, depressions, litter, debris, glass, metal and other hazards are far too abundant.

The problems are most often the direct result of poor or faulty construction, shortcuts, politically motivated change orders, shortsightedness, a lack of knowledge or funds, or the implementation of the wrong priorities by misinformed administrators or novices. It doesn't make sense: decisions are made to save money and costs initially, but then we pay later with higher maintenance costs in order to try to rectify the condition.

Many public agencies and schools find themselves in trouble from the outset because of the low-bid process in awarding contracts. It is a fact that most contractors have no background or experience with the proper construction and/or maintenance of athletic fields and they really don't have time to learn. They lack the expertise and knowledge of soils, soil management, and soil modification, proper drainage and surface uniformity, water infiltration rates, use and compaction requirements and the proper turfgrasses to use for heavy



wear and tear. The bottom line when the low-bid contractor is selected, in most instances, is a very expensive ongoing maintenance program.

Problems that are directly attributed to the construction phase are most often soil-related. The playgrounds and athletic fields that exhibit poor drainage and severe compaction problems are normally due to poor soil preparation during

construction. Often the absence of a good site survey and the lack of soil analysis (both physical and chemical) are responsible for failure.

However, many problems arise due to the installation of improper drainage systems or none at all where there should be one. Where irrigation systems are utilized, many school districts or campuses turn the job of installation over to plumbers rather than someone who is familiar with irrigation and design of sports fields. Mistakes of this nature may result in poor water distribution, improper infiltration rates of water moving through the soil, or fields that are either oversaturated or droughty.

### **The Wrong Turfgrass**

The second most common problem experienced on fields is the selection of the wrong turfgrasses. Recommendations by so-called "turfgrass consultants" or "experts" are easy to come by and are not generally based upon research of local conditions, or are not well-thought-out beforehand. Turfgrasses must be selected for the conditions at hand and must be based upon the site, climate, soil type, use intended, funds available for care and maintenance, personnel available to maintain the site and, in some cases, the type of mowing and turf care equipment available to care adequately for the species being grown.

There is often a lack of knowledge of the specific capabilities of the grasses, the nature and properties of the soils, and the interaction of use with grass and soil. This is compounded by the common problems of poor-use discipline, overuse and abuse.

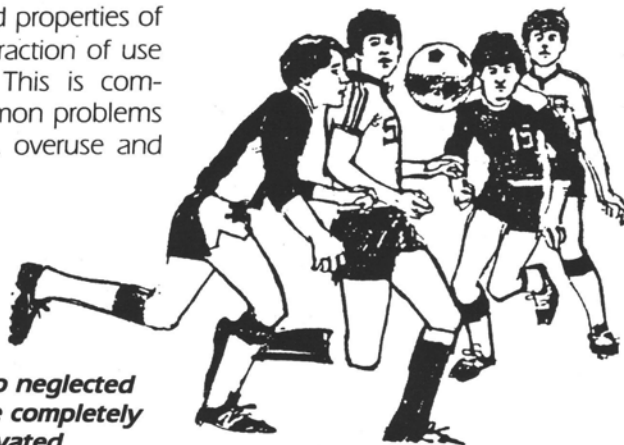
**Many facilities are so neglected that they need to be completely rebuilt or renovated.**

Many community playgrounds, ball fields and youth sports facilities are in poor condition, deteriorated or rundown as a result of ill-advised or poor fiscal responsibility. For too long, sports fields have had to take a back seat to other budget priorities. Many facilities are so neglected that they need to be completely rebuilt or renovated. Many of these crisis situations could be prevented with a moderate budget and a weekly maintenance program.

### **Care now or lawsuits later?**

Beware! Lawsuits and litigation in today's society pose a big problem for all public agencies. If the courts can prove negligence, everyone within a public agency can be dragged through a very unpleasant experience. Based upon prior experiences, many schools and municipalities are being denied liability insurance coverage. In 1984 there were more than 189,000 children in the U.S. who required hospital care for playground injuries. Back in 1980 there were 130 verdicts of \$1 million or more awarded across the U.S. for liability - "negligence" - cases. By 1984 there were a record number of 401 verdicts totalling \$1 million or more, and many of these were playground related.

***If schools can show they are attempting to rectify conditions, court may be more lenient.***



Most injuries occur on hard surfaces that have been severely compacted and are devoid of a good turf cover. If schools and other public agencies can show they are attempting to rectify the playground and athletic field conditions, courts may be more lenient toward such entities. Well-cared-for natural grass and the



correct soil composition beneath it offers the participants forgiveness, and turf is softer, safer and more resilient than fields without grass. Injuries may still occur on natural grass, but chances are they will be reduced in severity and frequency.

Common problems found on playgrounds and athletic fields, whether they are attributed to poor construction, inadequate maintenance or too many activities, can all be solved. Unsafe field conditions and liability hazards can be avoided if the personnel at all levels within an organization cooperate. This means a strong interaction between grounds personnel, administrators, athletic directors, coaches, band directors, business managers, school boards, the parents and students. These people must work together, learn together, share knowledge, share ideas, attend conferences, seminars and trade shows, try new products and equipment, try new concepts and keep an open mind.

*Reprinted from the February issue of "American School and University Magazine".*

# SPORTS INJURIES AND TURF — IS THERE A CORRELATION?

by Cindy Code

As athletes — professional and amateur — continue to receive substantial media exposure, so do the fields they play on.

Gone are the days when sports injuries were shrugged off as mishaps. Instead, the spotlight now focuses on sports turf and field maintenance as a leading factor in injury.

Professional athletes generally have the opportunity to play on properly maintained fields, but high school and college athletes remain more susceptible to injury as play continues on fields which are poorly maintained. Oftentimes the situation can be improved, but many educational institutions think they cannot afford, nor need, to spend money on athletic fields.

At the collegiate level, comparisons between natural turf and artificial turf in connection with football injuries have been drawn, but differences in the quality of the turf on natural grass fields has received only minor attention, according to John Harper, professor of agronomy at The Pennsylvania State University.

As a result, Harper and three Penn State associates — Chauncey Morehouse, professor of physical education; Donald Waddington, professor of soil sciences; and William Buckley, instructor in health education — set out to investigate how turf quality affects injuries.

Their study, conducted several years ago, consisted of 12 schools active in the Pennsylvania Athletic Trainers Association. The participants came from various locations across the state and provided 24 fields — 12 game fields and 12 practice fields — for evaluation. Because two schools didn't provide a complete record of injuries, the results and correlations involving injuries are based on data from 10 schools, Harper said.

All injuries to football players in the sample schools were reported through the National Athletic Injury/Illness Reporting System (NAIRS), established by Penn State in 1974. NAIRS receives weekly reports from team trainers or physicians of injuries and illnesses sustained by members of an athletic team during practice or competition.

In this study, injuries and illnesses were classified by NAIRS into four categories:

1. *Minor* — any reportable injury/illness (other than dental or head injuries) that didn't prevent an athlete from returning to practice

or competition for longer than seven days following the injury or illness.

2. *Significant* — all head and dental injuries regardless of time lost from play or practice, and any injury/illness that kept an athlete from returning to play or practice for longer than seven days.

— 3. *Major* — any significant injury/illness that prevented a player's return to practice or competition for 21 days or longer.

4. *Severe* — any permanently disabling injury, such as paraplegia.

Game and practice fields were evaluated both before and after the football season. Information ranging from the kinds and amounts of turfgrasses to the total weed coverage were evaluated.

Information collected on the maintenance of game and practice fields showed considerable variation between fields at an individual school as well as among fields of different schools. Although practice fields were more intensively used than game fields, they received less care — a fact which disturbed Harper.

"If they spend money at all they do it on the game fields rather than the practice fields," he said. "It's unfortunate because the practice fields are where the kids spend probably 95 percent of their time, yet they're (practice fields) the ones they do absolutely nothing to."

According to the study, mowing heights were similar on game and practice fields, but game fields received more nitrogen fertilization and more aeration than practice fields. Herbicides were used for weed control on 25 percent of the game fields, however, none of the schools reported use of weed control on practice fields. The fields which did receive some weed control were treated with a pre-emergence crabgrass herbicide and a combination herbicide for broadleaf weed control.

About 83 percent of the 24 fields involved in the study were overseeded — with  $\frac{2}{3}$  being overseeded in the spring. In addition, 83 percent of the fields were fertilized at least once a season.

Only 75 percent of the 12 playing fields and 25 percent of the 12 practice fields were aerated.

About 75 percent aerated game fields once a season and 33 percent aerated more

than once, but only 16 percent aerated with more than three passes.

Harper said he normally recommends at least three aerations per year, per field. In early spring, he suggests a fairly heavy aeration with six or seven passes. A second, lighter aeration is recommended in late August, just before the game season begins. Another heavy aeration should be done at the end of the season.

After field maintenance evaluations were complete, the focus of the study turned toward injuries. Approximately 210 injuries were reported by the 10 schools. A further breakdown shows that 96 of these injuries occurred in regular season games, four in practice games and 110 during scheduled practices. About 152 of the injuries were classified as minor and 58 were significant. No severe injuries were reported.

Of the 210 injuries reported, 5.7 percent were definitely field-related, 15.2 percent were considered possibly field-related and 76.7 percent were definitely not field-related. The types of injuries varied among body parts, but showed up most often in the knees, ankles and feet.

Harper combined the definitely field-related and possible field-related together to conclude that 21 percent of the injuries *may* have been caused by poor field conditions — injuries which might have been prevented.

"I can't say if (the number of injuries) it's high or low because there's nothing to compare it with. Nobody has really done much along these lines," Harper said. "A lot of people felt it wasn't significant, but if you stop and think how many injuries there are across the country . . . if you can reduce that by a fifth, it's going to make a big difference."

Following the second field evaluation, suggestions for maintenance and renovation programs were sent to each school.

"Probably half of them followed our recommendations. The rest said they didn't have the people or the interest," he said. "They're more conscious of the importance of the situation in professional sports, but the interest is really starting to increase (at all levels) with the liability suits that are occurring."

Reprinted from ALA, June, 1988

## SPORTS TURF SEMINAR

Dol Brothers Limited hosted a Sports Turf Seminar at the Notawasaga Inn, Alliston, on December 7th, 1988.

The invited audience were mostly chosen from school boards and parks & recreation departments responsible for school board turf maintenance.

Guest speakers were Mr. Norm McCollum, superintendent of the Guelph Turfgrass Institute, and Mr. Pat Tucker, formerly of the University of Guelph and now a private consultant in the field of horticulture.

Norm spoke on the most recent test results of his work at the Cambridge Research Station as well as the results of experiments being conducted on highway ditches in the Guelph area.

Pat addressed the area of soils, including: fertilization, aeration, soil profiles, irrigation, etc.

Both presentations were top-notch and well received by an enthusiastic audience.

The second half of the program was given over to Ernie Pecore, manager of Dol Brothers Sports Turf Division. Ernie reviewed the problems faced by sports turf maintenance personnel — past approaches to these problems, and new alternatives available to sports turf managers. One of these new alternatives was an ongoing turf maintenance program offered by Dol Brothers which included top dressing, aerating, fertilizing, and overseeding. This was followed by an explanation of how the program worked and how, through mutual co-operation, the program would be a complete success.

Participants in the panel discussion which followed were more active than usual and this reflected the

interested created by the seminar content.

The social hour was followed by a delicious dinner consisting of filet of lamb prepared in the style of beef wellington. There were no table scraps for Fido that night.

The results of a seminar evaluation questionnaire completed by the guests revealed there is a new wave of growing interest emerging in the area of sports maintenance. Perhaps we, as members of the Sports Turf Association, should make a concentrated effort to expand into those fields which may not be aware of our existence and therefore our aims and objectives.

Norm McCollum threw this timely question out a few weeks ago: "What comprises the second largest acreage in the province of Ontario?"

## Practical Pesticide Safety Pointers

by Dr. Austin M. Frishman,  
State University of New York

There are a host of small steps which can be taken to reduce exposure to pesticides. When all these practical steps are combined, the result is a safer environment to work in. Use this article as a checklist.

- ☑ Keep fingernails short so dirt and pesticide do not absorb under the nails.
- ☑ Avoid beards or wash beard daily. There are two major reasons beards are not advisable when applying pesticides: the beard readily absorbs and holds pesticides and it is very difficult to get a tight fit when using a respirator or gas mask.
- ☑ Avoid the use of cuffs on pants. Cuffs hold excessive pesticide.
- ☑ Do not carry lunches in the vehicle or carrying case which contains the pesticide. If it must be done (in rare cases), keep the lunch in a tightly sealed metal lunch pail. Do not use a paper bag.
- ☑ Wash hands before eating. The back of the hand absorbs almost twice as much pesticide as the front, therefore, wash thoroughly before eating, after using concentrates and at the end of the day.
- ☑ Within the vehicle, store pesticides in areas outside of where the driver sits.
- ☑ Keep pesticides in containers with tight lids. All items should fit tightly so they do not move, tilt, or spill when stopping. Avoid the use of wooden boxes for liquid pesticides as they readily absorb

pesticide and thereafter emit vapors.

- ☑ Do not wait for a pesticide spill to occur to try to figure out how to remove it from the trunk of a vehicle. Anticipate the worst. Line the bottom of the trunk with a plastic liner, cover the liner with a pre-cut piece of cardboard. If large spills occur, the plastic will keep the pesticide from saturating the trunk. This not only results in a safer environment, but allows the selling of the vehicle at a higher price.
- ☑ Keep windows in the vehicle open. In the winter, even a small crack will help.
- ☑ Carry pesticide absorbent-material for small spills. Commercial absorbent used in garages will do.
- ☑ Do not smoke while using pesticides.
- ☑ Change clothes daily and wash clothes separately.
- ☑ When handling pesticide concentrate, use gloves which are not cloth lined.
- ☑ Carry and use a funnel when pouring pesticides. This will reduce spillage.
- ☑ Place the funnel in a tightly sealed container when not in use.
- ☑ Use paper towels, not rags for wiping hands.
- ☑ When mixing concentration, do not put head close to the tank.
- ☑ Carry small amounts of concentrate in the vehicle.

Reprinted from New York State Turfgrass Association

## GET INVOLVED WITH SPORTS TURF ASSOCIATIONS

Probably the easiest way to begin solving playground and athletic field problems is to get involved with fellow professionals and join an organization that supports and promotes education, research and the concept of safer sports turf. Within the past two years two national organizations have emerged and are committed to work toward improved playing surfaces for our nation's youth and participants at all levels of sports. Both organizations work hand in hand in an all-out effort to improve conditions on playgrounds and sports field to reduce injuries and make the activities more enjoyable to the participants.

The *Sports Turf Manager's Association* has over 500 members from public and private schools, high schools, colleges, universities, youth sports, municipalities, parks, professional stadiums, contractors, educators, and commercial affiliates that are committed to improving sports turf, wherever it is grown. STMA sponsors seminars, workshops, and trade shows throughout the U.S. to educate the athletic field manager in solving problems, promoting new ideas and concepts, providing on-site demonstrations, and working together to improve the image and professionalism of the sports turf manager.

STMA's goals are:

- to collect and disseminate scientific, educational and practical knowledge through association with those persons engaged in or concerned with the construction and maintenance of safer and better sports turf areas
- to provide scholarship monies to promote, develop and encourage future leaders in the sports turf industry
- to provide monies for research and development of playing surfaces, facilities and quality sports turf
- to promote the design, development and use of related materials, supplies and equipment to the sports turf industry.

For further information contact Dr. Kent W. Kurtz, Executive Secretary, STMA, 400 N. Mountain Ave., Suite 301, Upland, CA 91786, 714-981-9199.

The *National Sports Turf Council* has been organized to promote research and education leading to better and safer sports turf everywhere. The NSTC creed is "To marshal all forces that can be brought to bear on the improvement of all sports playing surfaces for greater player safety and to enhance spectator and player enjoyment."

For further information contact Dr. Fred Grau, Chair, NSTC, USDA-ARS-BARC, Bldg. 001, Room 333, Beltsville, MD 20705, 301-344-3655.

## OHIO TURFGRASS CONFERENCE

The Ohio Turf Conference was held December 6-9, 1988 in Cincinnati, Ohio. This is one of the largest regional trade shows held in Canada or the United States, and this year's conference was extremely well organized.

This was an excellent conference with respect to the speakers who were invited and the topics selected, which covered a wide range of concerns of the turf industry.

Some of the items covered were: golf course maintenance, professional lawn service, grounds maintenance and athletic field maintenance.

This annual conference is "a must" for everyone who has the opportunity to attend.

## GUELPH TURFGRASS INSTITUTE

The 1st Annual Symposium on Turfgrass Management for Professionals in the Turfgrass Industry was held November 9, 1988 and was a great success. The Guelph Turfgrass Institute is expected to become a world-class centre for research, extension and professional development in all aspects of the turfgrass industry.

The Symposium consisted of 8 sessions and they included a wide variety of topics, including: Developing a Turfgrass Fertility Program; Use & Misuse of Turfgrass Species; Diagnosis and Management of Turfgrass Insect Pests and Diseases; Construction and Management of Athletic Fields; and more.

Each session was filled to capacity, with a total attendance of for the day. Those who attended were presented with an abundance of excellent information and possible solutions to ongoing problems. Lunch and refreshments were included in the day's activities.

The turfgrass industry is certainly excited with what is happening with the Guelph Turfgrass Institute and we are eagerly looking forward to their next Symposium.

Special thanks to Dr. Lee Burpee and Annette Anderson for all their hard work in organizing a truly successful event.

## COMING EVENTS 1989

	<b>Date:</b>
Ontario Recreation Society Toronto, Ontario	Feb. 15-17
Turf Care Trade & Service Symposium Markham, Ontario	Feb. 20-24
O.P.A. Educational Seminar Humber College Rexdale, Ontario	March 8-10
C.G.S.A. Conference Vancouver, B.C.	March 12-16
C.G.S.A. Field Day Contact C.G.S.A.	June 1
P.R.F.O. Conference (416) 495-4088	June 8, 9
<b>Sports Turf Association Field Day</b> <b>Oakville, Ontario</b>	<b>June 15</b>
O.P.A. Conference St. Catherines, Ontario	July 19-21
C.P.R.A. Conference Hamilton, Ontario	Aug. 14-17
Ont. Turf Research Foundation Golf Tournament	Aug. 14
Guelph Turf Institute/Ontario Turf Research Foundation Field Day	Aug. 24
<b>Sports Turf Association/ C.G.S.A. Conference</b> <b>Toronto, Ontario</b>	<b>Dec. 8-12</b>