

SPORTS TURF

Newsletter

VOLUME 4
ISSUE 1

March
1991

...for better, safer Sports Turf

EVENTS CALENDAR

March 23 & 24, 1991

Pesticide Safety Training
Seminar

June 19, 1991

5th Annual Sports Turf
Association Field Day
Milliken Mills Community Centre
Markham, Ontario
Contact Peter Kleschnitzki
(416)338-4171

August 22, 1991

Guelph Turfgrass Institute/OTRF
Field Day, Cambridge Research
Station

December 4-7, 1991

Sports Turf Managers
Association
National Convention & Trade
Show
San Diego, California
The Theme "Playing It Safe"

PRESIDENT'S MESSAGE

Things are really popping within the Association. Our new executive secretary is busy and quickly becoming our experienced executive secretary. He has attacked and completed project after project! He is picking up the details that make a good association a better one. These things are being attended to by Bob.

Your executive committee has been working hard behind the scenes as well. Mike Bladon and his wife, Elaine, and Bill Harding have put together our past and future financial information. Stephen Bodsworth and Chris Mark have been supplying information for the newsletter. Peter Kleschnitzki, Chris Mark and Bob Sheard have organized our Field Day in June at Markham. Plan now to attend and see some excellent fields and listen to some great speakers.

I hope you have been successful in obtaining your wants and needs for planning and budgeting for the coming year.

Good Luck

Bruce Calhoun

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WE GET LETTERS

(The following letter was sent to Bishops Seeds from Pieter Posthuma. We thought you would be interested in the content. We have Pieter's permission to print it. Ed)

Dear Mr. Borden:

As per our last conversation, I would like to express my satisfaction with the use of your Jaguar Tall Fescue. We have now used this for three years on our main stadium, Raymond Field, and also started using it on a second field with lights and heavy traffic.

Over seeding usually takes place in April at a rate of 12 lbs per 1000 sq. ft. Good germination is noted, even in cool temperatures. Also, a light over seeding 5 lbs per 1000 sq. ft. is carried out in the late fall.

The field is used by a football team, a mens' soccer team, and a womens' soccer team. Normally, the use is from late August to mid-October, but since 1987, our womens' soccer team hosted Regional play-offs until mid-November.

In 1989, Acadia University hosted the National Women's Soccer Championship. This was awarded to us on the basis of our facilities and the condition of the field. The two accompanying magazines speak for themselves on how other people and the coaches view our field.

When we first started using Tall Fescue we were somewhat worried as to the durability until late in the fall. This worry proved not unnecessary, as the surface remained excellent.

Mostly, we are impressed with the color of Jaguar Tall Fescue, it sure makes a show piece!

If there is one drawback, we found it in the summer of 1990. It was very hot and humid and in August we had to remove our irrigation; two weeks later browning occurred. In other years we had irrigated from late June until September and did not have this problem. This Tall Fescue likes lots of water.

Fertilizer is applied as to limestone very early in the spring on top of the last snow, at a rate of 50 lbs per 1000 sq. ft. In late May, 9-12-12 is applied at a rate of 12 lbs per 1000 sq. ft. and light application of 5 lbs per 1000 sq. ft. every 30 days until the end of August.

The excellence of our sports teams surely has carried over to my grounds crew, shown in the enthusiasm and care of our sports field.

Yours truly,

Pieter Posthuma
Supervisor General Maintenance
Acadia University

BLUE SPRINGS PREVIEW CENTRE IN THE OLDE HIDE HOUSE

Good news for golf enthusiasts! Golfers who dream of the warm days of spring and the lush green fairways can get a glimpse of what's to come by dropping in to the Olde Hide House.

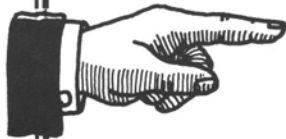
Golfers can view a new video, with Brian Williams of CBC Sports, showing Acton's new Blue Springs Golf Development. The Blue Springs Golf Club, slated for play in the spring of this year, is the new home of the Canadian P.G.A., the site of the 1993 Canadian P.G.A. Championship and the new home of the SCORE National Golf School.

The 6,700 yard championship *Turtle Lake* course has already been described as a "collection of signature holes". The course, with spectacular vistas, undulates up and down the Blue Springs Valley and is complimented by the nine hole, par three *Trillium* course, a practice fairway and practice greens.

The general public will be able to enjoy this semi-private facility which is expected to be fully playable at the start of May.

The *Blue Springs Preview Centre* is open seven days a week from 10:00 a.m. to 10:00 p.m.

More details about Blue Springs can be obtained by phoning (519) 853-0904.



ADVERTISING:

If you wish to place an ad or continue to advertise, please contact Dr. R.W. (Bob) Sheard, telephone (519) 763-9431

NEW BOOK FROM BINGLEY

Cricket Grounds: the Evolution, Maintenance and Construction of Natural Turf Cricket Tables and Outfields

by R.D.C. Evans,
Advisory Agronomist,
The Sports Turf Research Institute,
Bingley, West Yorkshire, BD16 1AU, UK.

There has long been a need for a comprehensive text book covering all aspects of the difficult and controversial subject of cricket groundsmanship. We confidently predict this publication will meet that need, as its ten chapters deal in detail with all aspects of construction and maintenance of modern cricket grounds, set in historical context by a survey of the development of the groundsmen's art over the last three centuries.

The text details the history of groundsmanship prior to the 2nd World War, and moves on to cover post-war developments, including the increasing role played by agronomists and other scientists in the study of cricket surfaces. Subsequent topics include the assessment of an existing table; pitch preparation; mechanised maintenance operations, fertilizer and top dressing; weed, moss, worm and pest control; renovation and repair; and care of the outfield. A chapter is devoted to the planning and construction of new grounds.

A comprehensive series of Appendices contain all significant articles on the practice and science of cricket ground management which have appeared in the STRI's annual Journal in recent years. There is a full Bibliography of the subject.

Book orders to:

Mrs. M. Curran,
Sports Turf Research Institute,
Bingley, West Yorkshire, BD16 1AU.

Large A4 format (210 x 300 mm) Case bound hard covers
279 pages 64 b&w plates 17 figures

ISBN:1-873431-00-7 Price £23.00 plus £2.50 postage & packing



Sports Turf Managers Association announces formation of Colorado Chapter

Las Vegas, Nev.—The Sports Turf Managers Association (STMA) announces the formation of its newest chapter in the Colorado/Rocky Mountain region, bringing the total number of STMA chapters to four.

Heading the Colorado Chapter is Thomas A. Lujan of Mile High Stadium, Denver, Colorado. Other elected officers include Bill Whirty, Ft. Collins Parks & Recreation, president elect; Larry Perotti, Sharp Brothers Seed Company, vice president; and Mark Leasure, Colorado Springs Sky Sox, secretary / treasurer.

The chapter has already held a soccer and football field maintenance workshop and is planning a softball / baseball field maintenance workshop in Colorado Springs during the spring of 1991.

Fred V. Grau

The turf industry lost one of its greatest organizers in December when Dr. Fred V. Grau died after an extended illness.

His list of achievements includes becoming the first extension agronomist in turf in the United States, the first director of the United States Golf Association Green Section, first chairman of the American society of Agro-

nomy's Turf Committee, and organizer of the Musser International Turfgrass Foundation and National Sports Turf Council. He participated in the development and release of Merion Kentucky bluegrass, Penncross bentgrass, Meyer zoysiagrass, Penngift crownvetch, and improved bermudagrasses for turf.

Grau collaborated in the initial design of the turf aerifier, seed harvesting equipment, and hydraulic seeder.

Grau was born and raised on a farm in Bennington, NE in 1902. He received a bachelor's degree in science from the University of Nebraska and master's and doctorate degrees from the University of Maryland.

He was the author of hundreds of articles, publications and books on turf management and spoke at conferences around the world about the benefits of improved turfgrasses and scientific maintenance practices.

THE NEW GENERATION IN TURF-GRASS SEED

Scott Uffelman/
Everett Nieuwkoop
Ontario Seed Co. Ltd.
Waterloo, Ontario

There have been more changes in turf-grass seed development in the past 5 years than there have been in the previous 50 years. The standard lawn grass varieties in Canada have been annual ryegrass, creeping red fescue, and common bluegrass, both Kentucky and Canada blue. Preceding these varieties were Timothy, Alsike and Clover. These species were subject to problems with drought, disease, texture, wear-resistance, coarseness, low-fertility and germination.

Due to these problems, a new generation of turf-grass seed was needed. Extensive research by institutions such as the University of Guelph, Penn State, University of Michigan etc., as well as privately funded horticultural research stations have yielded a wide variety of new cultivars and sub-species which, either alone, or blended with other new varieties or the old standards, are producing superior turf. Some require much less fertilizer, herbicides or fungicides than the older types.

New developments include dwarf-type hybrid Kentucky bluegrass, shade tolerant *Poa trivialis* and Chewings fescue, and low-maintenance Hard and Sheep fescue.

Some of the most exciting advancements have been made in two common species. They are ryegrass and tall fescue. Both have been adapted to turf-type varieties. Turf-type perennial rye has a fine-leaved blade

and is very similar in texture to Kentucky bluegrass. It can be used in a bluegrass mixture, or over-seeded on older bluegrass lawns and fairways and blend in very well. Turf-type perennial rye can withstand moderate shade, and, in drought conditions, is one of the last grasses to lose colour and the first to green-up. It also requires far less fertilizer than bluegrass. Rapid germination, 3 to 7 days, makes turf-type perennial rye ideal for slopes and in areas where grass is required of rye, such as "Spectacular", which features the unique qualities of "BARCLAY" which is actually the only creeping rye cultivar, or a mixture containing 40% rye, 20% Kentucky bluegrass and 40% Chewings fescue is good. For direct seeding, apply this mixture at a rate of 6-7 lb per 1000 sq. ft. (250 lb./acre) for great turf. However, turf-type perennial rye does poorly in areas that are wet and is susceptible to ice and salt damage.

In these areas, on sports fields, and along roadways and boulevards turf-type tall fescue is ideal. This cultivar also germinates quite quickly, 7 to 10 days, and requires little fertilizer and does well in drought conditions. It can take heavy traffic and can be used in low, wet areas such as seasonal drainage areas. However, this is a fairly coarse grass and should not be used in over-seeding established turf because it tends to clump. A mixture of 80% turf-type tall fescue and 20% turf-type Chewings fescue, sown at a rate of 5-6 lb./1000 sq. ft. (225 lb./acre) gives a very sturdy turf with excellent wear-ability. An additional benefit of this mixture is that it requires little maintenance.



If sandy soil or fair to heavy shade is a problem, the variety that should be used is Chewings fescue. This species is less susceptible to disease, and keeps greener longer in drought conditions than does creeping red fescue. It is extremely shade-tolerant and germinates in 3 to 7 days. It is a very fine textured grass but does not take high traffic well. In very sandy areas use Chewings fescue and turf-type perennial rye mixed equally at 50% each and spread at a rate of 6-7 lb./1000 sq. ft. (250 lb./acre). In heavy shade use 100% Chewings fescue at a rate of 6 lb. per 1000 sq. ft. It must be remembered though that nothing will grow in 100% shade. In areas where there is a mixture of sun and shade, the mixture of 40% Chewings fescue, 20% Kentucky bluegrass and 40% turf-type perennial rye is ideal, both as an over-seeding mixture to re-vitalize established turf or for starting new lawns.

The new turf-grass seed has done extremely well in all test plots and is producing superior lawns throughout the country. Research continues to develop even better cultivars for the future.

NEW SPORTS FIELDS FROM OLD TIRES

Bio-Cycle, July 1990
(by permission)

A Fort Collins, Colorado company is using scrap tires to improve sports fields, tracks and pathways. In essence, the process developed by International Soil Systems, involved incorporating crumb rubber from shredded tires into the soil to a depth of three to five inches. "The rubber particles, about the size of Rice Krispies, make the soil much more porous," says Paul Hoffren, Director of Development, "and that increases the rate of water absorption and oxygen diffusion to the grass roots." The results are described as twofold: On grass playing fields, the soil does not compact under heavy use and the grass grows luxuriously, resulting in a very resilient surface. "It's not so much the rubber directly giving resiliency, but the aeration it provides makes the grass thick and cushiony," says Hoffren.

"Studies indicate that injuries on artificial turf are one and one-half times greater than on natural turf, and less on a good turf than a poor one. Many knee injuries in professional football can be traced to high school injuries that occurred not on the good playing field but on the practice field. We think insurance companies are going to get very interested in doing something about that situation."

On race tracks, ball diamonds or tennis courts, the patent-pending, crumb rubber treatment, which the company calls The Rebound Sys-

tem", allows the surface to dry faster but not to the point of cracking and breaking up. "A Rebound-treated race track or horse trail reduces the concussive force of hoof on track that is partially responsible for lameness," says Heffron.

Bob Malmgren, a soil scientist with some 40 years experience, began working with rubber five years ago and developed the Rebound process. "We want to emphasize that his process won't work on all soil," he said, "and each situation requires its own special handling. We just don't prescribe so many pounds of Rebound per sq. foot. We have to do testing and analysis at each site before coming up with a prescription." The process can be used when building new gridirons or retro-fitting existing ones. Restructuring the soil with Rebound is said to be for all practical purposes a one-time, nearly permanent treatment.



Malmgren says that it takes an average of 12,000 tires to treat a football field with Rebound. It doesn't take too much time on a calculator to appreciate what a dent that would put in the scrap tire glut as interest in sports soars.

At present cost rules out Rebound for normal agricultural uses - about \$2600 for an acre of corn, Malmgren estimates. "But it was one of our experiments with corn that opened our eyes to the possibilities," he says. "One year we used a 10 percent rubber incorporation to a depth of 6 inches on some corn plots at Colorado State to compare with conventional soil structures. After a bad storm in August, the only corn left standing was on the rubber-treated plots. When we investigated, we found that the increase in macropore development had resulted in massive root systems that anchored the plants better."

So far, the young company (five people) has, by design, operated out of pocket, avoiding debt. Now with the research to support their produce under their belts, the potential markets everywhere, "we're looking for capital," says Heffron. "Ideally, we'd like to affiliate with a company in a related business - somebody in the scrap tire business with the ability to supply a large market. With all the potential uses, we feel there is a nearly unlimited market." - G.L.

Paul Hoffren *Bob Malmgren* *John Heffron* *ETN/July 1991*

CONFERENCE HIGHLIGHTS

DR. RICHARD CATON Keynote Speaker, Turf Conference

- As far as most people are concerned pesticides are toxic. Biological controls still 5-10 years away. Nematodes eating flesh etc. Where do they stop and start. Have to think of pesticides at protection and use I.P.M. (integrated) pest management) systems. Environmental groups are unhappy and would like to see changes.
- Talked about need for irrigation systems that are more related to water conservation. Too many systems still putting out water after heavy rains. Where there is no need, cited the need for drainage and used the example of John Harper Professor Emeritus, Penn State University who said there are three things an athletic field needs;
 - 1) drainage,
 - 2) drainage,
 - 3) drainage.Fine to have a crowned field but still needs under drainage.
- Exhorted and pleaded with delegates to listen and observe to get as much out of their day at conference.

BOB MILLER Pesticide Control Officer MOE

- Changes in Posting - Remove "Keep Off" from sign just a logo

perhaps to indicate hazard.

- Also new regulations where each person spraying will need a licence.
- New regulations are chemical storage materials stored to counteract spills. No drains in storage to go into sewer system.

RON ANGUS Pesticide Toxicology Use & Precautions

- Outlined 2 good books one on occupational health, 2nd put out by Workman's Compensation Board in B.C. entitled "Standard Practices for Pesticide Applicators". This costs \$10 plus mailing. Write to Workman's Compensation Board, B.C. Films & Posters Division, Box 5350, Vancouver, B.C., V6B 5L5.
- Stated there are 4,000 pesticide formulations.
- Discussed organic pest types - which included target areas, types of formulations and the chemical families of the active ingredients.
- Then spoke on toxic mechanisms - physical/chemical and physiological. The toxic agent acts on the body, body acts on toxic agent. There is a damage/repair balance v.s. no threshold limit.
Physical - irritants, asphyxiants, absorption, radioactivity.

Chemical - direct combination e.g. co. indirect combination and then chelatum - A bond to physiologic active metals.
Physiologic - enzyme induction - oxygen - CO₂ exchange, body heat generation, nerve impulses, excretion of body wastes, blood clotting and tumogenesis.

RICHARD STANDISH Non-use of pesticides

An excellent presentation. Had slides which showed the degeneration of parks and particularly athletic fields. Stopped spraying on 1978 one of the first municipalities to do so. In 1981 City of Ottawa then resumed spraying of 24D where necessary for weed control. Much advertising was done to let people know. Consequently upwards of 30 people would picket the park or football field and crews were unable to apply material. In 1982 concerns were raised again from child care centres and the Labour Council and signs were posted indicating area to be sprayed. In 1983 a 2-year ban was put in place. A report was then presented to Council on all park sites involved as to

- a) amount of land involved
- b) current weed cover
- c) areas chemically controlled in 1982
- d) current weed cover of treated v.s. untreated areas.

Then in 1990 a proposal was put forth by the Environmental Advisory Committee to "declare City of Ottawa a pes-

CONFERENCE HIGHLIGHTS

ticide free city". In this same year all pesticides were discontinued in the tree maintenance program and only insecticidal soaps are used now. Instituted a leaf pickup program all leaves were bagged. Took a six person crew 3 months to dump all the bags. Now different pickup method and leaves are turned with a front end loader from November until August twice weekly then run through a Royer Shredder. All this part of a recommendation as to alternative methods for maintenance of turf including aeration, mowing, overseeding, and topdressing, all parks topdressed once a year. Temperature of leaf compost kept between 140-160°F. Problem in winter because heat keeps frost out of ground. Very muddy all in all Ottawa only has green space no turf in parks. Many complaints particularly from homeowners and people with allergies worst time of year when dandelions in flower and seed spring and fall. Athletic fields receive a lot of use and are not in good shape.

DR. RICHARD CATON Turf Conference *Mowing Heights: Myth v.s. Reality*

- Stated coaches' perceptions of turf cut too high:
 - a) impedes speed of the athlete,
 - b) hinders traction,
 - c) impedes ball roll,
 - d) has an impact on the event.
- Tobias Grether Study at California Tech. in California indicated that of 10 different areas studied there was no difference in speed of the athlete as far as different varieties of grass and different heights of cut. Grass was cut every day few people can tell difference, if turf has a well groomed look. If you increase height of cut you have more leaf area, more buds and greater root development hence greater sod strength. Choices are turf survival, too short turf thins out, more overseeding, more expensive. We have to demonstrate the integrity of keeping turf at an optimum height.

BASEBALL

Guelph Mercury
Dec. 26/90

Bases May Prevent Injuries

Ann Arbor, Mich (AP) - Baseball bases that break free on impact would prevent 1.7 million injuries annually and save \$2 billion US a year in medical costs if used everywhere in the United States, a study says.

"Recreational sports injuries are expensive to families, employers and the entire community," said Dr. David Janda, director of the non-profit Institute for Preventive Sports Medicine.

Forty million Americans are estimated to play softball. Breakaway bases, attached to rubber grommets set in the ground, release on impact, unlike conventional bases.

BROCHURE IS OFFERED

Landscape Management
Dec. 1990

Dr. Bruce Augustin and Art Wick of Lesco, Inc. have authored a new brochure entitled "Athletic Field Turf Maintenance Handbook". The 12-page brochure gives specifications for a variety of athletic fields. To receive a copy, call the Sports Turf Managers Association at (702)739-8052 or Lesco at (800)825-3726.

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WE GET LETTERS

Continued from page 2

Dear Mike:

I was pleased to meet you at the Sports Turf Association Third Annual Information Day. Further to our recent discussion at the conference, please find enclosed a copy of the brochure on the Pesticide Safety Training Seminar (March 23 & 24, 1991 at the Springfield Golf & Country Club, Guelph). Mike, I feel this type of seminar could really benefit the members of STA and their employees. With increasing environmental pressure on the use of pesticides, both the safety and training of all employees handling pesticides is a key element in responsible use.

Mike, I would greatly appreciate it if you would kindly add the information on this upcoming opportunity to your next Sports Turf Newsletter. The enclosed brochure should set out sufficient guidelines to the seminar, however, please feel free to contact me if any questions arise.

Yours truly,

John W. Gravett, B.Sc.
Turfecs
45 Walman Drive
Guelph, Ontario
N1G 4G8

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WELCOME NEW MEMBERS

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NATURAL TURF IN DOMES

Landscape Management
Dec. 1990

Technology for installing and maintaining natural turf athletic fields in domed stadiums and other indoor facilities is now available from the Greenway Group of Horsham, Pa.

Greenway, says Thomas L. Ripley Sr., has a patent pending on the Integrated Turf Management (ITM) System, which can also be used over existing artificial surfaces.

ITM provides the first transportable natural turf-grass system, complete with an all-new greenspec light-weight growing

medium. The system, which Dr. Henry Indyk of Rutgers University helped develop, weighs a fraction of typical growing alternatives. ITM systems also can be interchanged to meet the demand of the sports activity.

For more information, contact Greenway at (215)343-0110.



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