Northwest TURFGRASS TOPICS

Vol. 22 - No. 3

PUYALLUP, WASHINGTON

DEC 1979

THE PRESIDENT'S MESSAGE

by Earl Morgan

The 33rd Annual Conference of the NTA, held in Port Ludlow, WA, is now but a memory. For those who were unable to attend, it is indeed a beautiful site. We had perfect weather, a full program, and as fine a groomed golf course that anyone would wish to play. Our thanks to Dick Schmidt for making the facilities available and for all his efforts, to Ken Putnam and his assistants for such a wellrun tournament, both men's and ladies', to Dr. Goss for the very informative and interesting sessions on turfgrass management, and to all the committee members who worked so hard to insure the rest of us a delightful experience.

Our winter board meeting was held in late October, just prior to Dr. Goss leaving for New Zealand where he is spending a six-month sabbatical. The 1980 Conference, to be held at Sunriver, Oregon, was discussed at length. It is hard to realize that the committees have to work almost a year ahead to insure a good, informative, and interesting program with the best speakers available. Because of this foresight, the NTA Conferences are consistently as fine as any turfgrass conference held anywhere. We should all recognize this fact and make an effort to promote membership in our organization.

I would like to take this opportunity to thank the board for the honor of serving as President of NTA for 1980, and to extend to all our best wishes for a Happy and Prosperous New Year.

1919 - 120th Ave N.E. — Bellevue, WA 98005 (206) 455-5640

A NEWCOMER'S VIEW OF NEW ZEALAND TURFGRASSES

By Roy L. Goss

Without consulting the statistics I am sure that New Zealand has more acres of recreational and aesthetic turfgrasses per capita than any other country in the world. Sports and recreation are much more visible in New Zealand than they are in any part of the United States. Everyone seems to participate in soccer, rugby, cricket, tennis, squash, golf, jogging or bicycling.

With respect to golf there are approximately 250 golf courses for less than 3.5 million people. The golf courses range from 9 to 18 hole courses and from top maintenance down to minimum maintenance.

New Zealand has approximately 63 million sheep and a great number of these are used to keep grass under control on many of the little rural golf courses even today. They simply fence out the putting greens and play through the sheep.

Due to getting organized at the Research Station here at Palmerston North and getting some experiments on the ground, I have visited only two golf courses and one sports field since my arrival. Both of these golf courses are 18-hole courses. In general, maintenance is kept to a minimum in order to provide golf at a reasonable price to the golfer. The maximum employees on these golf courses including the superintendent, referred to as green keepers here, is four. Although I have heard many times that New Zealand golf courses are underfertilized. I have not found this factor to be sorely lacking at this point. One must remember, however, that this is the spring season and grass should respond at its best at this time of year. The major problems observed on putting greens here to date are much the same as in the Pacific Northwest - Poa annua and red thread disease. Red Thread is generally worse when nitrogen levels are somewhat low. Red thread disease, of course, can be controlled readily with proper fungicides. Again, fungicides are used predominatly on New Zealand golf courses for the control fo Fusarium patch disease but at a minimum even for that particular disease.

The grasses found predominantly throughout New Zealand on golf courses, playfields and home lawns is New Zealand Brown Top (one of the colonial-type bentgrasses). It is quite persistent and does a good job for them over many degrees of North-South latitude and when properly cared for, holds its own against *Poa annua* quite well.

Perhaps one of the most interesting aspects of the New Zealand Brown Top and the system of management is the

HIDDEN COSTS OF POOR SAFETY PRACTICES

The following is an edited version of an article that appeared in the proceedings of the "1979 Turf and Landscape Institute," which is sponsored annually by the University of California and the Southern Turfgrass Coucil. Mr. Thomas' message underscores the importance of safety in equipment operation. It also makes a sad statement concerning the increase in the "litigation mentality" which is so common today.

PRODUCT LIABILITY Gary Thomas

The purpose of my talk today is to impart to you some information on the subject of product liability and its relationship to you. I would also like to pass on to you a few possible steps that you may take which may prevent you from becoming involved in a product liability related action.

As you all know, product liability does not directly affect you or your employer, should one of your subordinates have an accident when operating a piece of equipment. However, because of such practices as *champerty*, the sue syndrome is enhanced. Champerty enables the Workman's Comp. Carrier to share in the first dollar of proceeds of litigation from the defendants which usually is the manufacturer, since Workman's Comp. settlements preclude the injured party from sueing his employer for any further damages other than for pain and suffering or simply to adequately compensate him for the injury sustained.

This does not mean, however, that the employee cannot sue for negligence those individuals who are in a responsible position. This practice is furthered by the plaintiff's attorney who files an ad damnum request for damages and a reward of \$1,000,00.00.

So, as you can see, both the insurance carrier and attorney will gain by their promoting the sue syndrome beyond the Workman's Comp. level.

Workman's Compensation is known as no-fault insurance — the employer gets stuck every time even though the employee may be partially or even fully to blame. This philosophy started to appear in this country around 1909 and was due to the consensus of that time that under modern industrial conditions the employment relationship was ample reason for assessing the employer for the cost of compensating workers for occupational injury or disease. Industrial accidents and disease were recognized as inevitable hazards of industry. They were not due to anyone's guilt, but rather to the nature of an industrial economy characterized by long hours, new and complex processes, mechanization, repetitive operations, speed, and the use of toxic materials. Their costs were legitimate costs of production.

We, at B. Hayman Company, have adopted a policy whereby we will repair or replace all missing safety items on pieces of equipment brought to us by our customers in an effort to bring the equipment up to the factory's safety standard unless our customer stipulates in writing that this work is not to be done. This course of action was adopted as a direct result of past court cases such as Hunt Vs. Ford Motor, 1977, in which an individual was awarded \$117,000.00 and which the dealer paid half of the award. The court's written opinion was stated as follows: "A repairman ordinarily owes a duty of reasonable care, inspection and

(Continued on Page 4)







(Continued from Page 1, Column 2)

mowing height. I have yet to see a shaggy lawn anywhere in New Zealand. People seem to take considerable pride in keeping their grass cut and in general the bentgrass lawns are cut at a height of less than 1/2 inch. Many lawns are mowed at 3/8 inch and sometimes less. Sports fields are maintained at a height of approximatley 1/2 to 3/4 inch and golf course fairways are mowed at approximately 1/2 to 5/8 inch. Putting greens, of course, are mowed at about the same height as in the U.S., but not as frequently.

One of the most serious problems observed on sports fields and golf courses is the soil. It appears that New Zealand has a preponderance of heavy soils in the silt-loam range. Construction of playfields, athletic fields and golf course putting greens has been practiced with this type of material. Due to this soil factor, playfields can become hard, compacted and puddled and putting greens the same way and algae may predominate during the winter season although the writer did not observe this. These compacted soils result in isolated dry spots or totally dry areas due to runoff on putting greens and inhibit root development for vigorous-type turf on the athletic fields.

There is a great deal of interest in sand field and sand putting green construction in New Zealand today. A number of putting greens of the golf courses have been constructed from sand with varying degrees of success depending upon the superintendent's ability to manage sand compared to the native soil. Some of the sand greens are responding very well. Interest, of course, is increasing in the use of sand on sports fields as well. A considerable amount or research is being done at the Department of Scientific and Industrial Rsearch where I am located with respect to sand quality available in New Zealand. I feel that they are definitely approaching the problem right by learning everything possible about the porosity, infiltration and permeability rates and waterholding capacity of these soils. They also know the nutrient supplying power and the deficiencies of these sands as well. When these factors are well in hand, the rest is simply a management program.

New Zealand agriculture has a policy at this time not to introduce any of the fine leaved turftype perennial rvegrasses. It is my opinion that this is a mistake unless breeding and development of these grasses can proceed locally at an excelerated rate. Unlimited quantities of the Kentucky-type bluegrasses, fine leaved fescues and bentgrasses are available but New Zealand does not need the fine leaved fescues since they have ample quantities of their own and the New Zealand Brown Top seems to be doing about as good a job as Penncross or some of the other bentgrasses. The bluegrasses are not well adapted to New Zealand conditions, much the same as in western Washington. Therefore, this leaves a broad market possibility for turftype perennial ryegrasses to the vast number of acres of playfields and golf courses in this country. A considerable amount of interest is being generated today in overseeding playfields particularly with machinery very similar to the slicer-overseeder available in the United States.

This is enough rambling at this time and we will have an additional report for the April issue of Turf Topics.







HIDDEN COSTS

repair work when an automobile is brought to him for repairs. If a repairman does not meet this standard and his failure to reasonably inspect and repair, or warn of unrepaired defects, causes an accident, the repairman is held liable for the damages occasioned by his negligence."

Another case in point is that of an operator who was injured while operating a 22-inch greens mower which we had sold to a golf course. A cap screw flew from the clutch assembly and struck the man in the eye, which he subsequently lost. The attorneys tried to prove that we and the manufacturers were responsible for selling a defective replacement cap screw.

As it turned out, the golf course mechanic had purchased a will fit screw instead of a factory part. The final outcome of this case is not known except that the mechanic will have a judgment brought against him for some unknown dollar amount, and you can assume that the superintendent would be in the same predicament had he instructed the mechanic to go ahead and purchase a will fit part.

In 1965, the average award in product's liability suits has been estimated at \$11,644.00. By 1973, this amount had risen to an estimated \$79,940.00, a six fold increase in just eight years. Today, awards range in the six and seven figures.

• The following figures represent cash payments, medical benefits and insurance losses paid by private insurance carriers. California had \$58.5 million dollars in 1950 compared to \$841.8 million dollars in 1976. The United States had \$614.7 million dollars in 1950 compared to \$7,462.2 million dollars in 1976.

I would like to mention the section of the "General Industry Safety Orders," Division of Industrial Safety which is Section 432.110.5, Title 8, Paragraph 3563, and which deals with safety standards for power mowers. I feel that it would be to your benefit to review and possibly insure an adherence to this standard when purchasing your equipment, and when reviewing your maintenance standards.

Should an accident occur and should your employer, (and even possibly you) become a plaintiff in a products liability action, your ability to show by repair records and specifications for newly purchased equipment, etc., that you have followed an accepted safety standard could save those involved hundreds of thousands of dollars.

One factor that might negate or at least minimize your liability, should an accident occur, is record for each piece of equipment as to repairs and a record for each man in relation to his being tested on the safe handling of each piece of equipment which you allow him to operate. I have recently become involved in a product liability claim by an equipment operator for a local southern California city. The individual was run over by a rotary type mower and has undergone several operations. As you can imagine, he is looking toward everyone for responsibility and recompense except himself. We feel that he does not have a leg to stand on for three reasons: (1) the city gave him eight hours of instruction on that particular piece of equipment, (2) they made sure that the list of safety precautions on the machine itself was maintained in one form or another, and (3) they do keep their equipment in good repair. We would, however, feel more confident of our position if they had a record indicating the operator's acknowledgement of having satisfactorily been checked out on the equipment, as well as the repair records which the city keeps.

We find, unfortunately, that many mechanics and/or operators permanently remove or neglect to replace such things as a kill switch or shroud, etc. because of the so-called inconvenience which they represent. So, when you observe this type of tampering, remember this: how much value does one place on a man's hand, or foot or eye? It is too late after the accident to start spending money on shields, guards or safety programs.



BEST°Turf Gold° with features never before available in a single fertilizer.

BEST Turf Gold has all the advantages of a non-burn fertilizer, plus Sulfur Coated Urea. You get a controlledrelease 32% nitrogen plant food containing 24% water insoluble and 8% water soluble nitrogen. TURF GOLD's high sulfur content gives a remarkable improvement in the color, density, composition, and drought tolerance of turfgrasses. You can apply TURF GOLD without worry of fertilizer burn. Release of elements is controlled for 48 to 72 hours, or until thoroughly washed off by water.

You get results with BEST



Contact your BEST Products Distributor today.

- Nulife Fertilizer Co. Tacoma, WA 206-272-5171
 Bob Pirie Max Smith
- Pacific Agro Ken McKenzie Renton, WA 206-228-6565
- HJ Stoll & Sons Norm Whitworth Portland, OR 503-235-8946



BEST PRODUCTS

Western Division, Box 267 Lathrop, CA 95330 (209) 858-2541 Northwest Region Res. Ph. (206) 256-5375 19329 N.W. 112th St. Brush Prairie, WA 98606



CLIPPING REMOVAL AND FERTILIZER LOSS

Have you ever wondered how much fertilizer you mow off the day after you fertilize your turf? Even though we've known for years that clipping removal mines the soil for nutrients it wasn't until recently that anyone reported on the immediate potential loss from mowing shortly after fertilizing. The following abstract summarizes the findings of researchers working from ChemLawn Corp. in Columbus, Ohio. This report was given at the 1977 ASA meetings in Los Angeles, CA.

Removal of N Applied to Turf by Clipping Collection. J.F. Wilkinson, and C. Forth, ChemLawn Corp., Columbus, Ohio.

Removal of N after application to Kentucy bluegrass (Poa pratensis L.) by collection of clippings was studied in relation to N source, liquid vs. dry application, irrigation, time of mowing after application, and number of clipping returns prior to collection. Up to 47% of the applied N was removed by a single mowing. A large portion of the N applied through a liquid delivery system remained on the foliage and was removed by mowing. Granular N fell below the mowing height, resulting in small N loss if mowed within 24 hours of application. However, rapid uptake of soluble, granular N resulted in as much N removed as with the liquid application if mowing was delayed 48-72 hours after application. UF applied through a liquid system had a greater sticking tendency than urea, resulting in greater N loss through clipping collection. When a liquid urea application was followed by irrigation, most of the N washed off the foliage and mowing within 24 hours removed little N. However, if the turf was mown 48-72 hours after application, irrigation stimulated N uptake, resulting in more of the applied N being removed than in unirrigated plots. If clipping collection is desirable, at least two clipping returns should be made after N applicatoin to avoid large N losses.



ROOTING DEPTH OF KENTUCKY BLUEGRASS SOD

Studying root growth of turfgrasses is difficult. Over the years people have tried many different techniques for measuring root growth including digging the turf up and weighing the roots, growing turf in solution culture, and more recently constructing underground observation rooms where roots are observed through glass. In a recent paper from the University of Wisconsin a novel approach was reported that utilized N fertilizer buried at different depths ranging from 0 to 18". As turf roots reached the N at a given depth the turf showed a distinct color response. Using this technique the reseachers determined changes in rooting depth over a period of 5 years.

Initial observations after sodding the test area indicated the sod quickly produced roots down to the 3" depth and had reached 6" by the end of the summer. During the second season major root activity was observed at the 3" to 6" depths. By the end of the experiment after 5 years significant rooting had occurred as deep as 15". These results indicate that at least under the conditions of this test that Kentucky bluegrass sod is capable of producing roots as deep as 1½ feet. It would be interesting to see what results would be if turf was subjected to systematic wear and compaction during the course of the experiment.

Reference-

Rooting Depth of Kentucky Bluegrass Sod as Measured - - by N Absorption. L.A. Peterson, R.C. Newman, and Dale Smith. Agronomy Journal 71:490-492. May-June 1979.



FREE PUBLICATIONS

OSU — EXTENSION CIRCULARS

Several new circulars were recently published by the OSU extension service. Now when people ask you for information on establishing and maintaining lawns you can refer them to the apropriate bulletin.

Extension Circular 966 Establishing Lawns by Sodding Ray A. McNeilan, Extension agent OSU

Covers site preparation, installation, turf varieties, and care and maintenance after planting.

Extension Circular 967 Fertilizing Home Lawns Norman Goetze, Extension agronimist OSU

A brief run down on the basic nutritional needs of turf. influence of soil pH, fertilizer materials, and application techniques.

Extension Circular 968 Controlling Weeds in Home Lawns

Norman Goetze, Extension agronomist OSU

Covers control of common broadleaf weeks, annual grasses, and weedy perennial grasses.

Extension Circular 970 Grasses for Oregon Lawns Thomas W. Cook, Asst. prof. of Hort. OSU

Summarizes adaptation and limitations of the commonly used turfgrasses. Lists selected varieties and outlines seed mixtures for a variety of situations.

All of the above publications are available from county extension offices or from the OSU extension bulletin room, Corvallis, Oregon 97331.

ONW NEWSLETER - James L. Green, editor

This a bimonthly publication that touches on just about every subject you can think of related to the ornamentals industry. I feel that anyone in the turf or landscape business will find this free publication interesting and useful. To get your name on the mailing list all you have to do is drop a line with your name and address on it to James L. Green, Horticulture Dept., OSU, Corvallis, Oregon 97331.

(Continued on Page 9)

SOD

LAWNS - TEES - APRONS BEAUTIFUL - DURABLE

Ask us for price FOB Sumner or your location

Emerald Turfgrass Farms

RT. 1, BOX 146A, UN 3-1003

SUMNER, WASH, 98390 VE 8-9911





E. 9919 - Montgomery Avenue

Chas. H. Lilly Company 7737 N.E. Killingsworth St.

Portland, Ore. 97218

GREEN REQUIRES ENERGY

by Roy L. Goss

Agronomists across the nation and around the world for that matter have often said that deep green does not necessarily signify best quality. All golfers know you cannot putt color, and by the same token the lushious most deep green play and recreational turfgrass areas may not always be the most wear tolerant and in all likelihood are not. The reason for this article is to point out some of the relationships between color and quality. The writer of this article has always supported a deep green turf justified only by the following statement: "Color, in general, is an indicator of the vigor or metabolic and physiologic status of a turf during the optimum growing season." Turfgrasses with dark green color are generally more pleasing to look at and are considered to be in better vigor than those with lesser color or in the shades of yellow to brown. The biggest problem today is "Can we afford the luxury of the deep green?"

Green does take energy. To develop the best color in green there is a considerable amount of energy applied in a number of directions, a few may be listed as follows:

1. Fertilizer. Large amounts of fossil fuel are required for the production of nitrogen. In general, grass color proceeds from light green to dark green with increased applications of nitrogen fertilization. In order to help conserve energy we must reduce the amounts of nitrogen.

2. Mowing energy. Direct consumption of fuel is the result of excessive growth or fast growth of turfgrasses. Grasses will grow faster in the spring than during the hotter part of the summer and in the late fall or winter whether we fertilize them or do anything to them or not. Certain practices that we carryout will, however, increase the growth rate of grasses. If we can slow the growth rate of grasses down there are considerable savings to be made in mowing energy or the frequency at which we mow turfgrasses. Notably among these is reduction in the fertilization program.

3. The second most important area is reducing the amount of applied irrigation water. Reduction in irrigation may be viewed with mixed emotions. Reduced irrigation water will mean a certain amount of brown area while the major part of the area will remain somewhat green. In other words, there will be a loss in aesthetics. This is not all bad news because on golf courses the golfer will get a longer drive or more roll on the ball. Therefore, his game should improve. Parks and cemeteries may find that their mowing schedules will reduce with little or no sacrifice in turfgrass quality during a good part of the year except for color. It is obvious that all heavily trafficed areas must be kept in a state of growth; otherwise, turfgrasses will be lost through tramping, wear and compaction.

4. Growth regulators can reduce energy requirements. There is no reason in the world why growth regulators at a cost from \$25-40 per acre cannot be used to decrease the mowing frequency and the reduction in fuel consumption. The biggest problem with growth regulators is a general reduction in color for a brief period after the growth regulators have been applied, and of course, the expense of the material for application. One further disadvantage is that they should not be used on areas subjected to heavy traffic since new tissue must be produced to replace worn out tissue. There are areas such as little-used parks, cemeteries, certain parts of golf fairways and roughs which should respond very well to growth regulator treatment.

5. Additional energy is required to treat for insects and diseases as well as the cost of the pesticides through overstimulation with nitrogen fertilization and watering. Drier turf has many fewer disease and pest problems than rapidly growing lush green turf.

Pumping water to irrigate large turfgrass areas requires a significant amount of electrical or fossil fuel energy. Again, a reduction in the irrigation program will result in significant savings in this type of energy.

These are a few ideas that may be considered in energy savings in the turfgrass industry and certainly does point out that green equates to energy.



8

BOOKS OF INTEREST

The Pruning of Trees, Shrubs and Conifers

George E. Brown. Faber and Faber, London 1977

One of the main differences between mediocre books on pruning and good ones lies in the quality of the encyclopedia of plant pruning requirements. Most books just say "prune lightly in the spring" or "cut old shoots to the ground periodically." Both of these sound good but really don't tell you much. On the other hand Mr. Brown offers considerable information for most of the 450+ genera he talks about. Details include such things as natural forms, differences in species, how to enhance flowering, suitability for special uses, etc.

In addition to the pruning encyclopedia several chapters on basic principles of pruning are included. The information is generally accurate although some is dated in view of recent research findings. All things considered I think you'll find this book well worth the purchase price of 3.95 British pounds for the paperback edition. Order from:

Arboricultural Association

52 Hilliard Road Northwood, Middlesex HA 6 1SW ENGLAND

Manual of Site Management Environmental Design Press 1978

This book is essentially a collection of articles contributed by various experts in fields related to landscape maintenance. The most valuable information presented concerns aspects such as staff vs contract maintenance, contract bidding, specifying and estimating, and tips on management of time and people. It even has a section on maintenance manuals for specific sites.

The publisher is quick to point out the difficulties in assembling articles from varied sources and locations, and warns the reader to consider the source before jumping to conclusions. I view the book as a source of ideas rather than a wource of specific information. People in commercial landscape maintenance will probably find it more useful than most golf superintendents. The worst part of the book is its price (\$75.00). If money is no object I think you'll find it quite interesting.

Order from: Environmental Design Press P.O. Box 2187 Reston, Virginia 22090

Nutrient deficiencies, weeds, diseases, thin turf, insects.

For the superintendent who has everything ... or anything ... or who just wants to make a good thing better ... ProTurf offers research tested, golf course proven professional turf products. Just give me a call.



O. M. Scott & Sotts N. 8320 Carolina Way Spokane, Wash. 99208 Telephone: 508/326-4344

> Craig Lewis 15530 Poplar Drive White Rock, B.C., Canada V4A 5H8 Telephone: 604/538-2638

> > 9

MEMBERSHIP IS THE KEY TO AN ORGANIZATION'S SUCCESS

Without membership, organizations would not exist. There are many benefits in belonging to the NTA and you too can help advance the technology and recognition of the turfgrass industry. A valuable prize will be awarded the individual who brings in the most new members in 1979. Use the blank below to sign up your new member. Additional application forms can be obtained from John Monson or the Editor.

MEMBERSHIP APPLICATON FORM

Name of Applicant

Address _

City _____

Type of business or firm (Individual, school, golf course, park, cemetery, etc.)

_ State ____ Zip __

Recommended by _

Northwest Turfgrass Association Membership Dues \$30.00/year.

Make check payable to Northwest Turfgrass Association and mail to:

John Monson, Treasurer

P.O. box 274, Redmond, WA 98052

Dues include: 1) reduced conference registration, 2) Turfgrass Topics, and other mailings.



Mr. Tom Cook Dept of Horticulture Oregon State University Corvallis, OR 97331



NORTHWEST TURFGRASS ASSOCIATION

P.O. Box 274 Redmond, WA 98052

Officers of the Northwest Turfgrass ASSOCIATION

Earl Morgan President
Dick SchmidtVice-President
John Monson Treasurer
Dr. Roy Goss Exec. Secretary
NORTHWEST TURFGRASS TOPICS is spon-
sored by the Northwest Turfgrass Association and
financed through funds of this organization. Any communications concerning distribution of this paper or association business should be directed to John Monson, P.O. Box 274, Redmond, WA 98052, or Roy
L. Goss, Western Washington Experiment Station, Puvalum Washington 98371
Communications concerning content of this paper

should be directed to Dr. Roy Goss, Editor, Western Washington Research and Extension Center, Puyallup, Washington 98371.