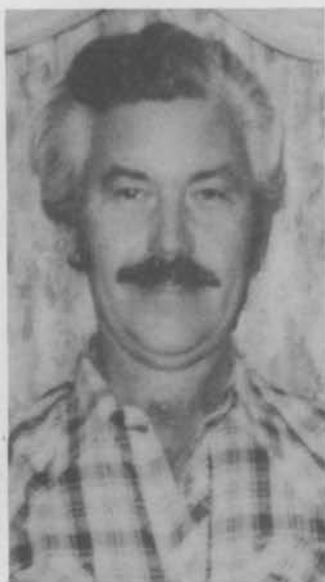


The President's Corner



by Joe Pottenger

I would like to send greetings to all the members of the Northwest Turfgrass Association and especially to those who work so hard year after year.

As the New Year approaches I am sure you will all be busy in your respective plans and services getting ready for a new and better year. Your board of directors has already been working hard the past few months putting together all of the activities for the coming year. We met at Puyallup on December 1 and activated all of the committees and we hope to have some significant happenings during 1979. On top of the agenda of course is the Northwest Turfgrass Association Conference that will be held in September at Port Ludlow, Washington. The program committee is putting together a real good program. A number of excellent program areas and speakers was recommended.

Again, this year there will be a prize given to the person who brings in the most members to the Northwest Turfgrass Association. Please pay attention to the membership application blank that will be published with each issue of *Turfgrass Topics* for your convenience. If you need additional application blanks, contact the NTA director nearest your location who can supply you with these or contact myself or Roy Goss. So, fellows and gals, let's go to work and see if we can't have the best membership drive ever.

If you have anything that we can do to be of help to you in the coming year, feel free to call upon us.

I hope all of you had a Merry Christmas and wish you the very best in the New Year.

Pest Management Short Courses For Western Washington - 1979

This notice serves to inform interested parties in western Washington about upcoming pest management short courses. These short courses are designed to help prepare individuals who apply or deal with pesticides for various Washington State Department of Agriculture license examination requirements. Examinations are scheduled at the end of each session except Bellevue. Holders of licenses are not required to retake exams but are welcome to attend sessions for review purposes if they wish.

Individuals who plan to take one or more of the examinations should own or have access to the Pacific Northwest Pest Control Handbook. This handbook serves as a general reference and study guide and can be obtained from the Washington State Department of Agriculture, 406 General Administration Building, Olympia, WA 98504, for \$8.00 per copy postpaid.

Scheduled locations are as follows:

(Continued Page 2 - Col. 1)

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 APPLICATION FORM

Name of Applicant _____

Address _____

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

Recommended by _____

Northwest Turfgrass Association Membership Dues \$30.00/year.

Make check payable to Northwest Turfgrass Association and mail to:

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

(Pesticide Short Course - Cont'd.)

TACOMA: Sherwood Inn, January 22, 23, 24, 25. If you travel on Interstate 5, take exit 129 going South or exit 128 going North. This course is designed for all license categories. Program and registration forms for this course can be obtained from Mr. William P.A. Scheer, Area Extension Agent, Pierce County Cooperative Extension Service, 2401 S. 35th St., Tacoma, WA 98409. The fees for the Tacoma short course are \$8.00 per day and includes luncheon and coffee each day. **Registration deadline is January 15, 1979.**

MOUNT VERNON: This course will be held at the Mount Vernon Elks on January 29, 30, 31 and February 1 and is located at 2111 Riverside Drive, Mount Vernon, WA. This course is designed for all license categories and is very similar to the Tacoma Sessison. The examinations will be administered February 1 at 1 p.m. For program and registration, contact Mr. Marvin Jarmin, County Extension Agent, County Administration Building, Mount Vernon, WA 98273 or phone 336-9322.

BELLEVUE: This course will be conducted at the Greenwood Inn on February 8 and 9, 1979. The Greenwood Inn is located off I-405, at Exit 13. The short course will be conducted from 8 to 4 p.m. on both days and the registration fee for both days is \$25 which includes coffee, tee and lunch each day.

PORT ANGELES: March 15. This course is designed only for commercial applicators, private applicators, and public operators. For details contact Dr. Jack Waud, County Extension Agent, 116 West 8th Street, Port Angeles, WA 98362, or phone 452-2371.

A well-qualified staff of instructors will conduct these short courses. These courses will help you to pass examinations for proper qualifications.

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Research Report From B.C.

by Bob Wick, Director, NTA

In early fall each year the members of the Western Canada Turfgrass Association meet for an afternoon with Dr. Doug Taylor at the Canada Agriculture Research Station in Agassiz, B.C., to have a look at his trial plots and be updated on his research. This year the field Day was October 13.

Dr. Taylor's research emphasizes the practical application of the characteristics of varieties to all phases of sports turf. For this reason, all his variety plots are not only graded for their appearance (summer and fall), density, aggressive growth, ease of cut and natural disease resistance, but also for their wear tolerance and recuperative abilities.

To date the following have been found to be best at Agassiz, taking into consideration all the factors mentioned above: Fescue - Belmonte, Diamond, Endarky, Highlight and Frida; Kentucky Bluegrass - Sydsport, Bristol, Cheri and BA 74-501; Bentgrass - Colonial - Bardot, Tracenta and Enate, Creeping - Pencross, EWS2, Emerald and Prominent, Vegetative - Smith 721, Waukanada, Nimisila and Northland; Perennial Ryegrass - Pennfine, Derby, Manhattan and Cebeco 6091-72.

Besides the ongoing tests, new 1978 trials include mixtures of Perennial Rye, Kentucky Blue Fescues and Timothy, in varying combinations, along with 60 Fescues, 64 Kentucky Bluegrasses, 49 Perennial Ryes and 12 Bents. Other ongoing tests include divot recovery, frequent, light sand topdressing (5 continuous years old), fertility and Poa Annua control.

The W.C.T.A. 16th Annual Turfgrass Conference will be held in Vernon, B.C. on February 25-28, 1979. The featured speaker will be Dr. James B. Beard. For a profitable time both educationally and socially, come along! Great skiing nearby also.

ED. NOTE: I highly recommend your participation in this conference if you can make it.

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In order to conduct quality research programs there are several key factors that must be considered. It requires a location with field and laboratory facilities, personnel, and at least minimal operating funds. A number of key people in the Northwest Turfgrass Association have recognized the importance of an ongoing research program and have devoted much of their time and energy in helping to provide funds to operate a research program.

Through the efforts of the Northwest Turfgrass Association we have been able to employ a research associate most of the time since 1975. Tom Cook, presently at Oregon State University, occupied this position from January, 1975 to September 1, 1977. In March, 1978, we were fortunate to obtain Dr. John Roberts to fill the research associate's position. Since the legislatively appropriated University position filled by Roy Goss encompasses both research and extension on a one-half time basis each, it is extremely important to have someone devoting full efforts toward the research program. This is the main reason for our hiring a research associate.

No legislative funds have been or likely will be available to staff a research associate position; therefore, funds for such a program must come from generous and dedicated supporters of turfgrass research through private funds.

The research committee and the directors of the Northwest Turfgrass Association have spearheaded the drive for these private funds for more than 5 years and are, indeed, grateful to the supporters who are listed as follows: 1978 CONTRIBUTORS - NORTHWEST TURFGRASS RESEARCH FUND

- Agate Beach Golf Course
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- Auburn Golf Course
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- Sno-King Grounds Managers Assoc.
- P.G.A. Inland Empire Association
- Spokane County Parks

We hope that any 1978 contributor has not been omitted from this list but if so, please accept our apologies and remind us of our error.

Considering the fact that these contributions came from only 40 individual units, just think what could be developed

Cont'd on Page 5, Column 1

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Is your billfold where your budget is? NTA Research Fund

by Mark Snyder, Director, NTA

The purpose and intent of our organization is to inform the members of developments in turfgrass science and related fields which result from research data and field information. It is obvious that these research data are of a genuine value to each of us — or we would not be members of the NTA.

Conversely, we must individually address ourselves to the support needed to fund the research staff and their projects.

Approximately \$20,000.00 has been collected over the last few years and now will be tapped for the funding of Dr. John Roberts in his research work on turfgrass projects important to the industry.


The thesis of this article is this: collectively, we must adequately fund our organization in real dollars.

As landscape and nursery owners, golf course superintendents, and industry executives, each of us is keenly aware of the cost of doing business.

Individuals such as Dr. Chastagner and Dr. Roberts have spent a considerable amount of time and money to realize their degrees, and I for one, am not going to ask them to work for the same income level as an equipment operator on a golf course, or a parts man in a distributor house! We must all help, for our own good, what legislature will not.

So, it is time now to get off our collective "budgets" and plan to contribute a fair share to the success of our own organization. There is no magic involved in this: An annual research fund of \$40,000.00 will occur if the 200 members over four states and British Columbia budget \$200 annually — and this is only a portion of the membership, not to mention the potential.

Certainly a contribution of any denomination is the *key*; but let us begin this budget year to make the NTA research fund a workable reality.



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Growth Regulators in Turf

by John M. Roberts

Mowing is a costly but important management component in maintaining high quality turf areas. Since the mid-1940's, the potential of inhibiting or suppressing vertical turfgrass shoot elongation by chemical growth regulators, thus reducing the mowing requirements, has attracted appreciable attention.

An effective growth regulator should reduce vertical shoot elongation yet not cause a reduction in the lateral stem, rhizome, stolon or root development. This has been difficult to accomplish. In general, the growth regulators developed will retard shoot elongation yet at the same time also impairs other turf growth parameters, such as root development, for example.

Some examples of the areas where growth regulators in turf areas could be used include: steep slopes, stream banks, along fences and border areas where mowing operations are difficult, during wet seasons when mowing equipment cannot be used, and around commercial buildings where labor and machinery may not be readily available. If a growth regulator were used in these areas, mowing might be a bi-monthly instead of the usual weekly operation.

One word of caution when using growth regulators on turf areas is that the recuperative potential of the turf plant is generally reduced following the chemical application. In practical terms this means that the time for the turf to recover from disease, insects, traffic, divots from golf clubs and other stress factors is going to be slowed down. This lack of recuperative potential is a definite disadvantage when using growth regulators on high quality turf areas since there has not been a turfgrass cultivar developed capable of resisting all the various forms of injury that turfgrasses are subjected.

Four growth regulators (Sustar, Embark, Maag R07-6145001, and MBR 18337) were tested in Puyallup on a mature bent and bluegrass turf during the summer of 1978. All of the products suppressed vertical shoot elongation between 10 and 45 percent as compared to the untreated areas. However, in general the growth regulators that would cause the greatest reduction in plant height also impaired the color of the desirable turf the most. For example, the color ratings were reduced 2-3 points on a color scale ranging from 1 to 9 when Embark was applied at the rate of 0.75 lb/A, however, the turf height had been reduced 40 percent. The impaired color ratings were observed 7-14 days following the chemical application; however, the treated areas had generally returned to their normal color 30-40 days after the treatments. It is believed that if 2 to 3 repeat applications of the growth regulators were made during May through September that the necessity to mow these areas would have been minimal.

In summary, the use of growth regulators in turf areas can certainly reduce the mowing operation thus enabling the turf manager to spend more time on other turf management responsibilities.

Cont'd from Page 3

if more of the turfgrass industry were as generous and supportive. Contact your friends and acquaintances who may wish to join the honor roll in supporting turfgrass research. Washington State University is extremely grateful for this support and without it, we could not carry out the type and quality program that we are accomplishing today. Thanks to all of you and the very best for 1979.

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Frozen Turf?

by Roy L. Goss

The winter of 1978-79 has been a calamity for Northwest coast golfers - from the standpoint of the number of "closed days" on the golf course due to frost or frozen turf. The golf course superintendent is losing much popularity and in some cases is taking unnecessary verbal abuse from a few, but vocal golfers who want to play the course 365 days each year regardless of the damage they may cause to golf course. Much of this is due to some golfers not actually understanding the problems of turfgrasses and also problems with soil.

It is the superintendent's responsibility to inform his golfing clientele well in advance of the frost season that "there will be days like this." club papers, bulletin board notices and other means can be used to inform golfers of the problems. It is also the duty of the green chairman and the golf professional to help with this educational process. Surely every golfer wants the course to be in the best possible condition for the test of the game particularly during the good months, but this cannot happen if grass and soil are abused while accommodating only a few extra days of play — under less than desirable weather conditions.

Golf courses should be closed when 1) soil are excessively wet (not a frequent factor in our area) 2) hard frost is visible 3) grass and soil is frozen, 4) the lower profile is frozen and surface is thawed. Damage caused when playing under these conditions is directly proportional to the amount of play. The reasons why we shouldn't play frozen courses are:

1. Grass is essentially dormant and has no recuperative potential when damaged by frost footprinting. This results in ruptured cells and death of the tissue in both leaves and crowns of the plant.
2. Frozen tissue has no resiliency and is easily broken or sheared.
3. Thawed surface 1-2 inches results in root displacement, crown damage and soil compaction and distortion.

No one can actually assess the value of a quality green or a poor green, so why risk extensive damage for a few days of "questionable enjoyment" under these conditions. Consider how fortunate the Coast golfer is compared to other areas. Spokane and many other areas of eastern Washington and Oregon and British Columbia are closed for long periods during the winter. Is 30 to 40 days maximum intermittent closure, on the average, asking too much of the West Coast golfer?

On the bottom line, winter play damage equates to increased budgets (which already are proclaimed to be too high), disruption of play in spring and summer while aeration, overseeding and topdressing have to be accelerated to repair this damage. Or at worst, suffering the substandard conditions during the good months.

If the golf club is willing to provide the extra budget, superintendents can develop small, but acceptable winter greens for the enjoyment of a few who "must assert their membership rights" and play on any day. Some damage will occur, but not as extensively as occurs when playing regular greens. Some damage will occur in confined areas and on the fairways as well.

You must pay your money and take your choice. Is "Winter Roulette" really worth it?

Cont'd from Page 7

An article was written in the February, 1977 issue of the Golf Superintendent by Dr. Paul A. Sartoretto, Director of Research and Development for W.A. Cleary Corporation, Somerset, NJ, which goes in depth on chemical compatibility for tank mixing. I have borrowed by permission two portions of the article for you to consider as guidelines.

There are 4 important rules to remember in tank mixing, according to Dr. Sartoretto:

RULE NO. 1. Never tank mix emulsifiable insecticide concentrates.

RULE NO. 2. All insolubles can be tank mixed without incurring phytotoxicity, providing the products are sprayed at recommended rates of each individual product.

RULE NO. 3. Only one soluble chemical can be tank mixed with any number of insolubles. If two soluble chemicals are tank mixed with or without insolubles the rate of each soluble should be cut in half to avoid phytotoxicity.

RULE NO. 4. Soluble fertilizers and trace elements can be added individually or mixed, provided that the amount will not exceed one ounce solid per gallon tank spray mix.

The following chart from Dr. Sartoretto's article lists the chemical compatibility of certain pesticides and fertilizers used in the turf industry. They are divided into solubles, insolubles, and soluble-insoluble combinations. These will serve as a guide for which to apply the 4 rules.

I can wholeheartedly agree with Dr. Sartoretto in his advice to turfgrass managers with regard to tank mixing. "When an individual embarks on a new formula, it would be wise for him to practice on small areas." This should be done sometime in advance of when you would wish to apply two materials to a larger area so you can observe for any phytotoxicity or other detrimental effects and also determine the efficacy of your treatment. This, of course, is not always possible, particularly if you are concerned with disease outbreaks or sudden insect infestations. In order to determine tank mixing in this case, it would be good advice to consult persons known to have expertise in this area.

Finally, when in doubt, spend a little more money for labor and apply materials individually.

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Chemical Compatibility For Tank Mixing Pesticides

by Roy L. Goss

Due to the rising costs of labor for the application of pesticides, it is sometimes advantageous to apply more than one pesticide in a single spray application. Frequently an occasion arises where it becomes necessary to control two pests with two chemically different materials in a short period of time. Therefore, tank mixing more than one material is advantageous not only in labor savings but in timeliness of application also. Applicators concerned with treatment of large areas, particularly with total spray solution volumes of 50 gal per acre or more, find this to be a rather slow, tedious job on turfgrass areas. Most spray tanks do not have the capability of servicing more than 3 to 5 acres at best, and some even less. Hence, a significant amount of time is spent travelling to and from water sources and mixing pesticides.

TO MIX OR NOT TO MIX

There are many controversies over the issue of tank mixing pesticides. There have been at least 5 incompatibilities defined by various investigators with respect to pesticide application. Not only are some of the chemicals incompatible, forming gels or solids in the spray tank, but one may nullify the effect of the other. Occasionally synergistic effects may occur between two chemicals to produce disastrous effects. Either chemical applied alone may produce the desired effect, but adding the

two together may cause a serious problem. Another type of incompatibility could be called placement. One material should remain on the grass blades whereas another should be placed into the soil. If irrigation water is applied to force one material to the soil surface, then the effect of the other is destroyed since it is washed from the leaves. This is the major problem with some weed and feed formulations. Frequently, the proper amount of herbicide is included in the formula to kill the weeds claimed on the label, but the amount of fertilizer supplied is not adequate to significantly improve the quality of grass. A most frequently omitted element in such formulations is potassium since there is just so much salt that can be applied to turf without getting a burn that nitrogen is included at the expense of potassium simply to get a greenup or growth effect. If the herbicide happens to be a root absorbed type then the fertilizer and herbicide would be very compatible in placement.

Some years ago we attempted to devise a compatibility chart of the commonly used pesticides for turfgrass managers in the Pacific Northwest. This chart would have included herbicides, fungicides, insecticides and fertilizers. Approximately 75 chemical companies and specialized individuals were contacted and the amount of information obtained was insufficient to even begin to fill out the chart. The major reason was that most people don't fool around with each others products and there are so many variables that can affect toxicity, misuse or misapplication. Even such things as time of the year, temperature, genus species and variety of turf, soil factors and water quality all enter into the compounding picture.

Cont'd on Page 6

CHEMICAL COMPATIBILITY CHART

Solubles		Insolubles	Soluble-Insoluble Combinations
		FUNGICIDES	
PMAS		Tersan 75	Fore
Cady		Tersan LSR	Maneb
Cadiminate		Tersan SP	Zineb
Actidione		Spotrete	Captan
		Bromosan	Daconil 2787
		Spectro	Dyrene
		1991	
			Calo-Clor
			Kromad
			Actidione RZ
			Actidione Thiram
			Thimer
			Cadtrete
		INSECTICIDES	
Dursban		Diazinon	
Diazinon		Dursban	
Chlordane		Sevin	
Sevin		Malathion	
Malathion			
Proxol			
Dylox			
		HERBICIDES	
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2,4,5-T	MSMA	Tupersan	
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Communications concerning content of this paper should be directed to Dr. Roy Goss, Editor, Western Washington Research and Extension Center, Puyallup, Washington 98371.