Tee to Green

April 1982 | Published monthly by the Metropolitan Golf Course Superintendents Association | Vol. XII, No. 3

COMING EVENTS

WED., May 19	**MGCSA Superintendent/Green Chairman Meeting, Woodway Country Club. Field limited to 108 players for golf.**
June 3	MGCSA Invitational Tournament, Mount Kisco Country Club
June 23	Mass. Turfgrass Field Day, South Deerfield
July 6	MGCSA Superintendent/Manager Meeting — Siwanoy C.C.
July 12	MGCSA Summer Social–Fairview
August	MGCSA Family Picnic
August 25	Univ. of RI Field Day, Kingston
Sept. 30	Chapter Team Championship, Ridgewood C.C. (contact Dennis Flynn for details)

PRESIDENT'S REPORT

On March 5, I was contacted by Steve Cadenelli concerning a bill being introduced to the Connecticut House Environment Committee, which if adopted as law by the Connecticut Legislature would in effect ban the use of 2,4-D in Connecticut by imposing a ban on all herbicides containing dioxin regardless of the toxcity of the herbicide. Steve had been notified by the GCSAA of the National Coalition for a Reasonable 2,4-D Policy. Public hearings were held on March 11 on this bill in Hartford and testimony against the bill was given by myself representing the MGCSA, Steve Cadenelli representing the CAGCS and Bob Osterman representing the GCSAA, as well as by many other associations protesting this bill. Chemical companies also brought in leading national toxicologists who testified and explained why 2,4-D posed no threat to man or the environment. The text of the testimony the MGCSA presented follows this article. The sheer numbers of those present at the hearing as well as the quality of the testimony given definitely impressed the legislators. As a result of the hearing, House Bill #5785 does not seem to stand a chance of passage.

Please note: At the March 25 Membership meeting we had approximately 70 people for lunch, with only approximately 35 reservations. Let's improve on the card response or if some reason your card isn't sent in on time, please call the host Superintendent with your reservation. This will make everyone's job easier.

Michael Maffei

Statement Concerning Connecticut House Bill Number 5785

I am here representing the 200 members of the Metropolitan Golf Course Superintendents Association, Rye, New York. We are not only concerned with the impact this proposal will have on our approximately 50 Connecticut members, but we are also concerned that the passage of this wide-sweeping legislation in Connecticut will lead to the development of similar legislation elsewhere. The impact this law will have on the multi-million dollar turf industry including golf courses, sod farms, parks, home lawns, etc., is indeed great since the end result will be the elimination of the herbicide 2,4-D which is the primary ingredient in our turf herbicide programs. Not only will we lose this valuable tool, there is not a substitute for it.

The problems we see in the proposed legislation are as follows:

1. This is a total ban on all herbicides containing dioxins regardless of the concentrations of the dioxins in the herbicides, and more importantly, regardless of the toxcity of these dioxins. Is it not true that some dioxins are much less toxic than others? Is it not possible also that there is a concentration level above which certain dioxins will possibly cause problems and below which levels no problems can be expected? Why a total ban when quite possibly all formulations presently used contain dioxin levels that are within safe limits? Another point to consider is that not all dioxins are contaminants to the environment. We must be careful not to compare herbicides used here with those used years ago in Viet Nam.

2. This legislation will ban the use of herbicides shown by numerous studies to be safe materials both to the environment and the population and could open up the possibility of the use of far more dangerous materials in the future.

3. There is no mention in the legislation permitting the use of these materials even by certified applicators. The State of Connecticut requires that applicators be licensed to apply pesticides to ensure that they are used safely, but now the State is telling us that even though we are qualified to use these products, they are going to remove them from the market.

We propose that a closer look be taken at all the research that has been conducted on the herbicides in question before legislation mandates a ban on these valuable materials. We in the Turfgrass Industry value our environment as much as you and do not desire to contribute to its harm. However, we must base our final decisions on all available information. In fact, the United States Environmental Protection Agency has concluded

Tee to Green

EDITORIAL STAFF

Pat Lucas, *Co-Editor* . . . . . Office 203-637-3210
Home 203-637-3939
Ted Horton, *Co-Editor* . . . . . Qffice 914-967-6000
Home 914-937-3613

OFFICERS

President . . . . . Michael Maffei, Back O'Beyond, Inc.
Office 914-279-7179; Home 914-278-9436
Vice-President . . . . . Charles Martineau, Whippoorwill Club
Office 914-273-3755; Home 914-273-9112
Secretary . . . . . Peter Rappoccio, Silver Spring Country Club
Office 203-438-6720; Home 203-866-4276
Treasurer Sherwood Moore, Winged Foot Golf Club
Office 914-698-2827; Home 914-234-9469

Publication deadline for *Tee to Green* is 21 days before the regular meeting.

that, quote, "information on the potential adverse health effects of 2,4-D does not support a regulatory action to remove 2,4-D products from the market."

Also, we do not believe that a ban is called for, but if the time comes where controls are needed, there should be provisions for the use of these chemicals by licensed applicators.

Thank you.

Mike Maffei,
President, MGCSA

S. O. S.

Perennial Editors' Plea

Please send in articles, new notes, etc. for our newsletter.

—Ted and Pat

"This is your last chance, Agnes where'd you hide my clubs?"

Patronize our Advertisers

IN OUR MAILBAG

Dear Members:

Kim and I extend to all of you our sincerest thanks for your expressed thoughtfulness and support given to us when our daughter, Jennifer, had her open-heart surgery.

The many calls, cards, flowers, toys and personal inquiries were of immense help to us in getting through this trying time.

Jennifer is now convalescing at home and is doing extremely well.

Again, thank you.

Bob Alonzi

Dear Pat,

Each month you seem to be able to put together a very intersting, informative "Tee to Green." I especially like the contributions of articles you receive from members. This month Rachel Therrien did a wonderful job; past months other members have done so.

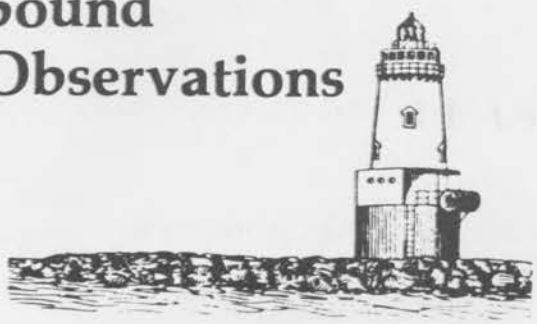
Keep up the good work, the magazine is highly professional and informative and contributes to the good image of the Metropolitan Golf Course Superintendents Association.

Sincerely,
W. "Andy" Androsko

Thanks for the kind words Andy, it's always nice to hear from you.

WELFARE: Please contact Bob Alonzi, 203-531-8910 (office), or 203-531-1930 (home) regarding any hospitalizations, etc. of members of the MGCSA.

Sound Observations



And More Canada Geese Control

By Pat Lucas

After the September '81 article I wrote in *Tee to Green* regarding controlling Canada Geese with artificial swans acting as scarecrows, I received many calls and letters asking for more details. Therefore, the purpose of this article is to update and summarize all information I have learned to date regarding this approach. And if anyone has any additional information regarding control of Canada Geese, please write me and we'll publish it.

To answer the most often asked question: "Do they really work?" I can say, "Yes, IF . . ." Let's look at this like the new chemical on the market. Does it work? Of course it works, providing certain conditions are met. It is the same in the case of the swan/scarecrow approach, it will work providing certain steps are followed. Here they are:

Step No. 1	Remove Existing Geese
Step No. 2	Install Swans
Step No. 3	Make Your Lake/Pond Look Unwelcome
Step No. 4	Maintenance

Step No. 1: Remove Existing Geese

For the program I am describing to succeed, the lake must first be cleared of existing geese. Now, wait just a minute you say, we've tried everything, but they just won't go or come back soon. Remember we're dealing with a couple of basic issues here. One of these issues is "there is safety in numbers," *i.e.* several hundred of geese aren't going to be afraid of a few swans. It's just not going to happen. The second issue is that these geese have been in the area for several months (or in some cases probably several years) and have grown used to the area and feel quite comfortable. They aren't afraid of anything anymore and don't want to be disturbed.

So, the usual techniques of horns, dogs, blank guns, etc. usually will not work. There is however, one method I've used here that works every time. Let's call it the "Hunter Approach." You'll need a loud blank gun (a shotgun with blanks works best) and a trusted member of your crew. Have your 'hunter' slowly begin stalking the feeding geese early in the morning. It may take him 15 to 20 minutes to cover let's say 200 yards approaching the feeding flock. What he's doing is depicting a hunter stalking his prey. Now during this 20 minutes as he slowly works his way towards the flock of geese feeding on your well groomed fairway, several things will begin to happen.

The first and most obvious is that the 'sentinel' geese will begin to look over in the direction of the approaching hunter. Next, the majority of the flock will begin to stop feeding and everyone will begin to 'aim' in one direction. And all this time your hunter is inching closer to the flock and they are beginning to get nervous. (Probably for the first time in years.) Then everyone will begin squalking and flapping their wings. It's at this point that they are all ready to go. And your hunter has gotten real close so that the blank blast will be real loud. BAM! And away they go. Step No. 1 is complete. You have also achieved an added bonus. According to my research, Canada Geese are unlikely to return to a spot once they have been ambushed there.

Step No. II: Place Out Swans

The first question is how many to use. Well, they should definitely be in pairs, 10 to 15 feet apart. Our lake here at Innis Arden is four to five acres and we have three sets, each covering a third of the lake. I understand that swans are more vicious when they have young around so we plan to place baby swans (painted grey) among the pairs. Exact number of swans needed will be determined by the size and shape of the lake, and also the flight pattern approach available to the geese. If your lake or pond already has tall trees on one side, that's a built-in obstacle

already. The swans therefore can be shifted slightly towards the unprotected side. In this whole thing, you must learn to think like a goose. How does your lake look from the air? Check your aerial photo in determining how and where to place out your swans. What flight pattern approach have they used in the past? Remember, the name of the game is deception!

Step No. III: Make your lake look unwelcome for geese

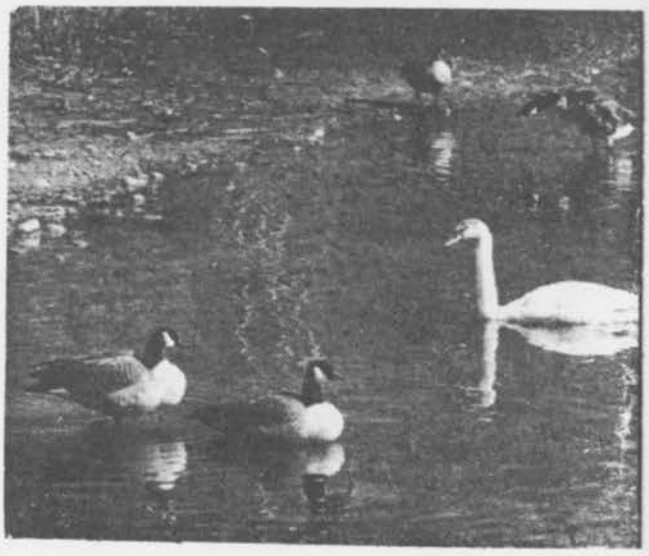
You have already begun to do just that with your swans. Now remember, these geese are going to be looking for "signs" from the air telling them that all is well below, it's o.k. to land. Your job is making your lake or pond look unwelcome. Consider any ducks in your lake as contented ducks swimming around are one "sign" that geese will be looking for. Get rid of them by any means you can. Also, consider wires or ropes strung across flight paths to add obstructions to their landings.

Step No. IV: Maintenance

Here's where it's all at, the game will be won or lost right here. So right now you're all ready to go. You got rid of the geese, installed groups of swans in strategic locations, and chased away any ducks. When you've done all this, nine out of ten flocks flying over will not land. However, some flocks may land, usually on a fairway near the lake. The geese will slowly work their way to the edge of the water, but not go in.

Right here is where one of two things will happen. The first and most desirable thing is that the person responsible when checking the course will see the geese. Now don't forget, they have just landed (probably at dusk the night before) and are unsure of the local situation. But the local situation certainly doesn't look good. They don't see any other geese around, no contended ducks swimming around, but a lake full of big bully swans. No, it certainly doesn't look good. They are easily spooked. All of a sudden someone comes bearing down on them with a Cushman, a shot rings out and away they go. Gone because they were unsure of local conditions and were never made to feel comfortable.

Or, we can have situation No. 2, the geese landed and are sitting near the waters edge, afraid to venture out into the water because of the swans. After a while, a brave, highly decorated goose will "test the water." He'll swim very close to shore seeing the reaction of the swans. The timid followers will begin to do what they do best, follow. After a while the geese will be swimming among the swans, rapidly becoming at home. You guessed it, soon other flocks will fly over, see their buddies below enjoying the water and land and get in on the fun. And you will be back to point zero, or worse.



Let's just stop and think for a while. What do we do when we go away with the family on vacation or take a day trip in unfamiliar territory? We're driving along at three or four in the afternoon and the kids begin to complain. "We're hungry," "I'm thirsty," "I have to go to the bathroom," etc, etc, etc. Well, as you're whizzing down 'ol unfamiliar Route ?? you begin looking for a place to stop. It's got to have food, drink, and a bathroom. You soon pass "Hugo's Place," no business whatsoever! You don't stop there. A few miles down the road we see "The Meeting Place" drive-in with five zillion motorcycles parked under the oak tree with a couple dozen toughs outside guzzeling beer. Not there, of course, so on you go. A couple of miles further down the road you see "The Family Drive-in."Looks

clean and neat, a moderate number of cars, many families enjoying their food on picnic tables in the adjacent grove.

Well, where are you going to stop?

Wanted To Buy

New or used Buckner #17 quick-coupler valves.

Contact: Pat Lucas, Innis Arden Golf Club
(203) 637-3210

Used 1" and 1¼" Quick Coupler Valves and Keys, preferably Buckner.
Contact:
Todd Polidor,
Heritage Hills of Westchester (914) 276-2000

For Sale

115 used Febco 270 impact drive irrigation sprinklers $15.00 each. 2 new 4" dolphins. 1 used 3" dolphin. 1 used 6" dolphin.
Contact:
Scott Niven, Siwanoy C.C. (914) 961-8698

2-1981 Toro Greenmaster 21 w/Wiehle Rollers. $1,800 each.
Call Steve Finamore, Wykagyl C.C. (914) 636-0331

Lucky winner of the MGCSA Scholarship Fund raffle, Dave Dwinell of Winged Foot Golf Club.

LIME & GYPSUM USE ON TURFGRASS

By Dr. A. Martin Petrovic
Department of Floriculture and Ornamental Horticulture
Cornell University, Uthaca, NY 14853

Limestone and gypsum are two soil amendments commonly used on turfgrass. Even though both supply calcium, they effect soil differently and therefore, will be discussed separately.

LIME

In many parts of New York, ground limestone ($CaCo_3$) is routinely applied to turfgrass to raise the pH of the soil in the range of 6.0 to 7.0. It is strongly recommended to have soil pH's in this region because of two factors. First, all major nutrients required by plants are more available at a pH between 6.0 and 7.0.(see Fig. 1).Second, the accumulation of thatch is much greater when soils have a pH below 6.0. An example of this principle from two Long Island locations is shown in Table 1. In each case where lime was applied to raise the pH above 6.0, it was found that less thatch occurred.

Table 1. Effect of several treatments on soil pH and thatch

	Pinelawn Mem. Park Thatch (mm)			Mill River Club	
Treatment*	Daily Water	Irregular Water	pH	Thatch	pH
Control	13 ab	13 ab	4.7 c	18 a	5.0 cd
+ Wetting Agent	13 ab	14 ab	—	—	—
Gypsum	10 bc	12 ab	5.9	17 a	5.9 ab
+ Wetting Agent	10 bc	17 a	—	—	—
Lime	5 cd	7 cd	6.5 a	12 b	6.3 a
+ Wetting Agent	2 d	13 ab	—	—	—
Core Cultivation	—	—	—	16 a	5.1 cd
Urea	—	—	—	16 a	4.7 d
Hydrated Lime	—	—	—	16 a	5.4 bc

*Wetting Agent: Agua-Gro G; Gypsum: Ampel Pelletized; Lime: Easy Flo Dolomitic.
Applied since 1979, spring and fall.

Lime can be applied almost anytime during the year. However, it is usually recommended to be applied in spring or fall when environmental stresses are minimal.

In recent years there have been several new type of liming material to hit the market place. Little if any information exists on how fast these materials change the pH of the soil and for how long.

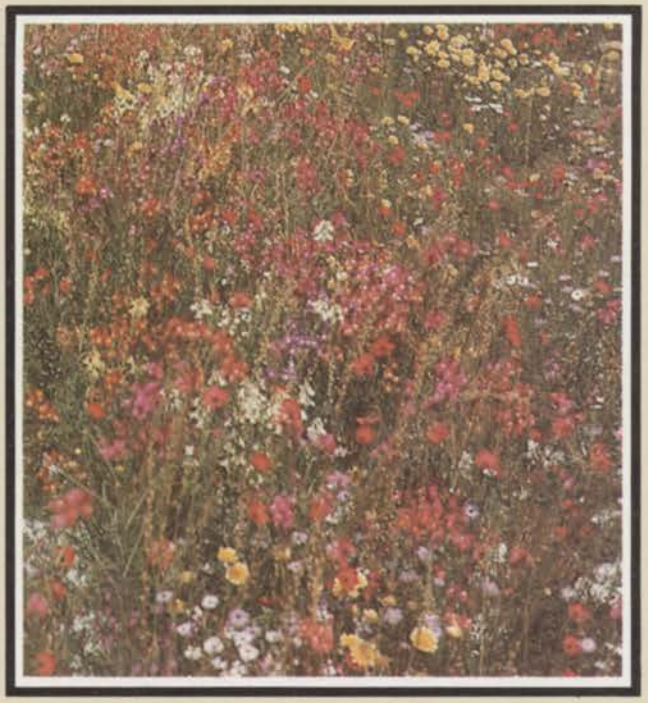
Traditionally, turfgrass managers apply ground limestone to raise soil pH. Generally, one application will be adequate for several years since limestone of this type takes considerable time to breakdown. Very finely ground limestone has been shown to work much faster but is very difficult to handle. Two new types of liming materials, namely slurry and pelleted limestone, take advantage of the potentially faster acting properties since they are very finely ground limestone, while being easier to apply. The pelleted limestone is similar to a granular fertilizer and can be applied with a centrifugal spreader. The slurry limestone contains about 30% moisture and can be sprayed with a normal power pesticide spray.

Research has been conducted the past two years to determine what effect several new liming materials have on changing the rate of pH increase as compared to regular agricultural ground limestone. This can help turfgrass managers select the proper liming material for a given site or situation.

The test was conducted at the Phillips Laboratory grounds in Westchester County. The site was composed of a mature sward of tall fescue, fine fescue and a Kentucky bluegrass mixture maintained under low maintenance condition. The initial pH ranged from 4.7 to 6.3. The materials and rates used in this study are shown in Table 2.

Since liming materials vary in their acid neutralizing potential, the amount of material applied varied between lime sources. However, the amount of $CaCO_3$ equilvalent used was identical between sources at the 3 rates. The middle rate was de-

Create a Colorful Difference



WITH

Pinto BRAND WILD FLOWER MIX . . .

the colorful and decorative answer for low maintenance landscape areas.

A multi-colored blend of annuals and perennials like Chicory, Scarlet Flax, Bachelor's Button, Baby's Breath and Painted Daisy. A blend that reseeds itself for lasting beauty year after year.

Pinto is ideal for any landscape — parks, roadsides, golf course roughs, home gardens, industrial and landfill sites. And perfect for areas where you don't have to mow.

Available either as 100% wild flowers, or mixed with a fescue as Meadow Mix to aid soil stability.
It's custom blended in a Northern or Southern mix. So wherever you live, your Pinto order will be perfectly adapted for your climate. It will make this year the start of many colorful years to come.

Pinto Wild Flower Mix: the easy, low-maintenance way to naturalize your surroundings.

For more information or to place your Pinto order, call:

- **John Morrissey or Marie Pompei of Lofts Pedigreed Seed, Inc. at (800) 526-3890**
- **Sam Ellington of Sunbelt Sunbelt Seeds, Inc. at (404) 491-1311**
- **John Sours or Grant Jurgensen of Jacklin Seed Company at (208) 773-7581**

LOFTS

Lofts Pedigreed Seed, Inc.
Bound Brook, New Jersey 08805
(201) 356-8700 • (800) 526-3890

Jacklin Seed Company
Post Falls, ID 83854 (208) 773-7581

Table 2. Materials and rates of application used in lime study

Material	Source	Rate lbs/acre
Agricultural ground limestone	—	2225, 4450, 8900
Hydrated lime	—	1225, 2450, 4900
Slurry limestone	Omya, Inc.	1825, 3650, 7300
Hydrocarb 30 Hydrocarb 65	Florence, VT.	
Pelleted limestone	Ampel Co.	1940, 3880, 7760

termined to be the lime requirement for this soil or the amount of limestone required to raise the pH to 6.5. Applications were made on August 4, 1980 and soil samples taken every six weeks later. The agricultural ground limestone, hydrated lime and pelleted limestone were applied with a drop-type fertilizer spreader, whereas, the slurry limestone was applied with a small powered pesticide sprayer.

The first full year of results are shown in Table 3. This table contains the materials and minimum rates needed to change pH by 1 to 2 units with a given time frame. For example it was found that 4450 lbs/acre of agricultural limestone was required to raise the soil pH by 1 unit which occurred 38 weeks after application. In comparison, only 1225 lbs/acre or about 25% of the amount of hydrated lime was needed. The two slurry limestones and pelleted limestone also changed pH with less material than the agricultural limestone. This was especially true for the H-30 slurry which has a slightly finer particle size distribution than the H-65. Hydrated lime was used in this test only for comparison and *is not* recommended for liming because it is caustic and difficult to handle. The results suggest when using the slurry or pelleted limestone, that the rate of application should be about half or less that of agricultural ground limestone. When it is desirable to raise the pH within a short period of time, these two materials must be applied at similar rates to agricultural ground limestone. Both materials were found to still be effective in changing pH after one year. Therefore, yearly application with these materials appears *not to* be necessary.

One word of caution. This was just one year's data from one test location. Further research is under way on other sites to see if these findings are valid.

Table 3. The effects of various liming material and rates on time required to raise *soil ph.*

Material	Rate, lbs./acre	Time in weeks to raise pH one unit	2 units
Agricultural limestone	› 4450	32	—
Hydrated lime	1225	32	—
	2450	6	—
	4900	6	—
H-30 slurry limestone	› 1825	6	—
	7300	6	—
H-65 slurry limestone	1825	38	—
	› 3650	6	—
Pelleted limestone	1940	38	—
	› 3880	6	—

Gypsum

The use of gypsum on turfgrass has been advocated by some for many years. A close inspection of the usefulness of gypsum

for New York needs further explaination. Gypsum or calcium sulfate ($Ca\ So_4$) provides both calcium and sulfur to the soil and is available for plant uptake.

Calcium is required by plants for normal growth and development. Also, calcium helps bind clay particles together causing a better soil structure. Calcium is commonly applied to soil as either ground limestone ($Ca\ Co_3$) or gypsum. Seldom are northeast soils deficient in calcium without having a low pH. As explained earlier in the lime section, ground limestone is used to raise soil pH. The proper soil pH provides for better plant growth which will increase the soil organic matter. Improvements in soil structure are easily seen from additions of organic matter. Gypsum, however, is a neutral salt and has little effect on pH. Therefore, more benefits can be obtained by limestone application to acid soils then from gypsum.

Sulfur is also needed to a large degree by plants. Seldom has a positive response been observed in the northeast from sulfur applications. This is mainly a result of sufficient sulfur levels occurring from atmospheric pollution supplied to use from the midwest. In event that atmospheric sulfur contamination is illuminated, then gypsum as a source of sulfur might prove necessary. It is unlikely that the sulfur pollution will disappear in the distant future because of the increased burning of coal.

Gypsum has also received attention as an improver of soil physical conditions on alkali soils. Some, therefore, feel it may help protect turfgrass from road salt damage. Gypsum can help speed up the leaching of sodium from soils if drainage is adequate. It is unlikely, however, that the road salt damage can be prevented by a more rapid removal of sodium since the damage many times has already occurred before the ground has totally thawed. Gypsum might help make for a quicker reestablishment of the road salt damaged areas by causing the sodium to be leached much faster.

In summary, gypsum is of little use when compared to the benefits obtained from lime. Liming will improve the soil pH which in turn provides for better fertilizer efficiency and less thatch, and improved soil structure by more organic matter. All in all, turfgrass quality will be enhanced by lime not gypsum.

DON'T GET BEAT BY THE HEAT

As you get older, your body becomes less able to respond to long exposure to heat or cold. During hot and humid weather, a buildup in body heat can cause heat stroke or heat exhaustion, particularly in the elderly. This is especially true of those with heart and circulatory diseases or diabetes.

Heat stroke is a medical emergency requiring immediate attention and treatment by a doctor. Among the signs and symptoms are faintness, dizziness, elevated body temperature [often 104°F (40°C) or higher], rapid pulse and hot, dry skin due to absence of sweating.

Heat exhaustion or heat prostration is the most common of the heat-related disorders. A heat collapse usually occurs suddenly and may be preceded by weakness, heavy sweating, nausea and giddiness. It is usually brief and relieved by placing the victim in a prone position in a cool place.

The National Institute on Aging's *Age Page* offers the following tips to remain cool in hot weather:

- Stay out of direct sunlight and avoid strenuous activity.
- Wear lightweight, lightcolored, loose fitting clothing that permits sweat to evaporate.
- Drink plenty of liquids such as water, fruit and vegetable juices, and iced tea to replace the fluids lost by sweating.
- Take cool baths or showers.
- Cool yourself with icebags or wet towels.
- Try not to drink alcoholic beverages or fluids that have too much salt, since salt can complicate existing medical problems, such as high blood pressure.
- Above all, take the heat seriously, and don't ignore danger signs like nausea, dizziness and fatigue.

Credit: Aetna

Something to think about . . .

Practice does not make perfect; perfect practice makes perfect.
—Vince Lombardi

TERSAN® 1991 +Daconil 2787

Put the proven performers together for even better control of brown patch, dollar spot and other serious diseases.

TERSAN® 1991 fungicide and Daconil* 2787 are two of the most effective disease control products on the market. And now, these proven broad-spectrum fungicides are labeled for tank mixing. Together, they give you even better control of major turf diseases than with either product used alone. You get improved control, yet without the problem of phytotoxicity common with some tank mixes.

A TERSAN 1991/Daconil 2787 tank mix will give you consistent performance against brown patch and dollar spot—the two most troublesome diseases on turf each summer. You'll also get strong action on leaf spot and other important diseases. It's the kind of performance superintendents depend on when a quality course can't be compromised.

Tank mixing brings other advantages, too. With TERSAN 1991 in your tank, you get systemic action for protection from within the turf plant. Disease control is longer lasting and is less affected by rainfall or frequent irrigation. Tank mixing fungicides with different modes of action also reduces chances of benzimidazole resistance. You help insure the long-term effectiveness of TERSAN 1991 in your disease control program.

This year, plan on using TERSAN 1991 in combination with Daconil 2787. It's the tank mix turf diseases can't match.

*Daconil 2787 is a registered trademark of Diamond Shamrock Company.

With any chemical, follow labeling instruction and warnings carefully.

DU PONT

REG. U.S. PAT. & TM. OFF.

The following calibration guide was received courtesy of John Wistrand of Metro Milorganite Inc.

OFTANOL CALIBRATION GUIDE

The following chart can be used as a guide in establishing accurate rates of OFTANOL 5% granular. The listed settings should provide an application rate of .9 lbs. per 1,000 sq. ft. or 40 lbs. per acre.

Spreader	Swath Width	Setting
Cyclone B-1	14 feet	2.5
Scotts R X-7	12 feet	D
Scotts PF #1	21-inch drop	3
Scotts 100-4	36-inch drop	3
Lely-(Tractor Mount)	20 feet	4.5

In order to check the calibration of individual pieces of equipment, the following steps can be taken:

1. Determine swath width of equipment being used to apply OFTANOL 5% G, using approximate settings as shown on chart.
2. Using the width measurement of the primary setting, determine the distance to travel to cover 1,000 sq. ft. of surface and mark each end of this lane.

(Example: 10 foot swath × 100 foot strip = 1,000 sq. ft.)

3. Carefully weigh the amount of OFTANOL 5% granular which will fill the applicator one-half full and make one trip in the calibration lane.
4. Carefully weigh the remaining amount of OFTANOL 5% Granular in the spreader — .9 lbs. of product should have been used.
5. Adjust the setting to reflect the increased or decreased amount necessary, and re-do steps 3, 4, and 5.

If further refinement of the rate is necessary, the setting can be calibrated to apply one-half the recommended rate and apply in a twice-over application at right angles to each strip.

Spring — On Hold!

Tardy Winds feigning as a Bird's wing,
Whipped across the khaki Terrain
And suppressed (at the dawn of Spring),
The vivid color of Green.

—Frank Paladino

GCSAA MERCHANDISE CATALOG

The Golf Course Superintendents Association of America has long been recognized as a proud and professional group of individuals; a unified organization that projects an image of dedication and direction.

The GCSAA will be involved in creating a merchandise catalog for its members and friends that will further promote the image of the Association. It is anticipated that the catalog merchandise program will be available to the membership some time within the next twelve months.

Input and ideas concerning various offerings that should appear in the GCSAA merchandise catalog are requested from members. Please consider items for the home, office and personal use. Don't forget the women and children, as they will want to display the GCSAA logo, too.

Please write to GCSAA with your suggestions or considerations for the catalog.

WHO'S THE BOSS HERE

When the boss says, "Do it," how often does it actually get done?

Only about 50 percent of the time, reports J.B. Ritchie, a professor of organizational behavior at Brigham Young. After studying 30 large and small corporations, Ritchie offers three principal reasons for employee inaction.

First, people often don't understand exactly what they're supposed to do. Second, rewards (and punishments) aren't spelled out. Third, is the "bean" or "red light" theory of human behavior. "If you tell a four-year-old not to put a bean in his ear," says Ritchie, "he'll go ahead and do it just to rebel. And people will run a red light to assert their independence and not have their behavior dictated."

Ritchie adds our narcissistic belief that "I know better" is at an all-time high and confidence in our superiors is at its lowest. For the first time in 15 years, a majority of managers see themselves as more competent than their bosses. "People don't like to obey anymore," he notes. "They must be given clear, credible reasons why they should do something, or it simply won't get done."

—Credit: *Family Weekly*

IRA INDUCEMENTS DON'T ACCOUNT FOR INFLATION'S HARM

How much is an Individual Retirement Account *really* worth?

Figures compiled for The Associated Press show that if you had been able to open an IRA 30 years ago, you could be collecting more than $11,000 a year today.

You couldn't have opened an IRA in 1952, of course. They didn't exist until the mid-1970s and workers who were covered by company pension plans couldn't open an IRA until this year.

But the AP asked the U.S. League of Savings Associations to look at what might have happened in the past in an effort to put future IRAs into perspective.

The ads for the tax-deferred retirement accounts have been critized for painting a false picture. Those ads say, for example, that $2,000 a year invested at 12 percent interest compounded annually will yield more than half a million dollars in 30 years and about a million in 35 years.

But the ads don't tell you—and no one knows—what a million dollars will be worth in 30 or 35 years. If the rate of inflation decreases, so will interest rates. If the rate of inflation doesn't decrease, higher prices will eat away the value of those IRA dollars.

To test the growth of an IRA in terms of spending power, the AP asked the League of Savings Associations to draw up a hypothetical account opened in 1952 by someone who was then 35 years old.

Economists for the league found that contributions and interest to that hypothetical account would total nearly $70,000 today. The account would provide an annual payout, before taxes, of $11,509. This is about half the median family income and more than double the average Social Security benefit.

The economists made several assumptions:

- The account started with an annual contribution of $584. That's the equivalent of $2,000 today.

Tee to Green

Pat Lucas, Editor
81 Tomac Avenue
Old Greenwich, CT 06870

• Contributions rose gradually, with inflation, reaching the $2,000 level last year. The law governing IRA's sets the maxiumum contribution today at a flat $2,000 and does not provide for increases, but many people have suggested that the investment level will be raised in the future to reflect inflation.

• The interest rate was tied to the interest rate on three-to five-year U.S. government notes. It started at 2.5 percent and rose gradually to 14.2 percent in 1981. Interest was compounded annually.

• The account holder began withdrawals in 1982 at age 65. While contributing, he or she was in a 30 percent marginal tax bracket.

The league economists said contributions to the account over 30 years added up to $27,225. Interest was worth $41,109. The total in the account at the end of 1981 was $68,334.

The law requires withdrawals to be made at a fast enough pace so that the money in the account will be exhausted by the time the holder has reached his or her life expectancy. In the case of the holder of the hypothetical account, the league economists said withdrawals would have to be made over an 11–year period.

Since the money in the account keeps earning interest, the person drawing on the hypothetical IRA would actually wind up with $126,599 in 11 years at the rate of $11,509 a year.

The law allows you to defer federal income taxes on IRA contributions and interest until you start withdrawals. You cannot make any withdrawals until you are 59½ or you must pay a penalty.

The league economists calculated that the holder of the hypothetical account paid $33,000 less in federal income taxes than would have been paid if the money, including interest received, had been taxable.

At the 30 percent marginal tax rate, the after-tax value of $11,509 would be $8,056 a year. Federal income taxes over the 11–year payout period would total about $38,000 — the $33,000 in deferred payments, plus taxes on the interest that kept accumulating during the payout.

Credit: *The Advocate*, Tuesday, Mar. 23, 1982

CONVERSION TABLE FOR LIQUID FORMULATION

(Lbs. acre to Ozs./ 1,000 sq. ft.)

Lbs. Acre	Concentration of Active Ingredient in Formulation Lbs. Gal.						
	1	2	2.5	3	4	5	6
	Rates in Ounces per 1000 sq. ft.						
P	2.9	1.5	1.2	1.0	.7	.6	.5
2	5.9	2.9	2.3	1.9	1.5	1.2	1.0
3	8.8	4.4	3.5	2.9	2.2	1.8	1.5
4	11.7	5.9	4.7	3.9	2.9	2.3	1.9
5	14.7	7.3	5.9	4.9	3.7	2.9	2.4
6	17.6	8.8	7.0	5.9	4.4	3.5	2.9
7	20.5	10.3	8.2	6.8	5.1	4.1	3.4
8	23.5	11.7	9.4	7.8	5.8	4.7	3.9
9	26.4	13.2	10.6	8.8	6.5	5.3	4.4
10	29.4	14.7	11.7	9.8	7.3	5.9	4.9