

Field Notes

THE DILEMMA OF PESTICIDE DISPOSAL

By Ric Lange

Editor's Note: Ric Lange, Golf Course Superintendent at the Reedsburg Country Club, is a 1982 graduate of the University of Wisconsin — Madison with a Bachelor of Science degree in Soil Science and a Turfgrass Management Specialty. He has worked as a staff member at Blackhawk Country Club and Golf Course Superintendent at Edelweiss Chalet Country Club in New Glarus. Ric and his wife Cheryl, an audiologist for a Portage hospital, reside in Reedsburg.

As Golf Course Superintendents, we have a responsibility to our membership and patrons to keep our courses in the finest possible condition. In doing so, we all find it necessary, at one time or another, to employ chemicals to control fungi, insects and weeds in and around the swards of turf that we maintain. In addition to these responsibilities, we also need to concern ourselves with the effect of these materials on the environment.

I feel strongly that Golf Course Superintendents must assume the responsibility to insure that our use of pesticides does not contribute to the pollution of our natural resources. It is my hope that by sharing with all of you my rather limited experience with a situation of this sort that I may shed some light on the proper approach to resolving a similar problem that anyone managing a golf course might encounter.

When I started at the Reedsburg Country Club, I faced many of the challenges that every other new Golf Course Superintendent must deal with at the onset of their position — equipment maintenance, crew organization, development of pesticide and fertility programs, to name a few. I felt prepared to tackle these challenges and confident that things would fall into place. It was during my first day that I noticed a peculiar odor coming from the back of the shop, near the storage shelves. The smell was reminiscent of a phenoxy herbicide, but far more pungent. When I examined the containers on the shelves I found a startling

array of pesticides in leaky cans and water soaked bags, some with labels intact, others without. I honestly did not know where to begin on this one!

After a few calls to friends and colleagues I located a specialist in hazardous waste disposal with the Department of Natural Resources. As a result of my discussions with him I learned the steps necessary to properly dispose of the wastes. The first order was to locate good quality containers to put the leaky cans into, controlling any further leakage. I had three choices of containers. Metal containers, which corrode in contact with many chemicals, were a relatively poor choice. Fiberboard (thick paper) containers that can hardly contain water were even worse. This left rigid plastic as the wisest choice. However, I had never realized how expensive plastic drums could be until I started pricing them from various manufacturers. Somehow I could not justify spending \$200.00 or more for four containers that were intended for disposal. Then I recalled how, at Edelweiss Chalet Country Club in New Glarus, we had purchased large plastic drums from a local meat market and cut the tops off for use as trash receptacles. The drums I used in Reedsburg came from a meat cutter in Sauk City. They are made of a heavy plastic with tight fitting screw-on lids complete with O-ring seals.

The next step was to clear the shelves of the hazardous containers and pack them in the drums. It is important, when packing these materials, that only similar compounds are packed together (e.g., phenoxy herbicides, pre-emergent herbicides, fungicides, and so on). If you have ever seen the product of an incompatible tank mix you can well imagine the results **without** the dilution of water.

After the drums are filled with the hazardous containers, they should be filled with a loose substance, such as sawdust, to make the contents more physically stable. The drums should then be sealed and clearly labeled as "Hazardous Wastes," along with the type of waste they contain, and then they should be placed in a safe location for temporary storage. I was unable to simply

clean the shelves that held the pesticides and ended up disposing of them also. During the entire clean up process I was clad in protective clothing, rubber gloves, a respirator and safety glasses. I would recommend this for anyone attempting to clean up such a mess.

With this task completed, one can rest easier knowing that the work environment is safe. But the job was only half over. At this point a waste management contractor had to be located. After some extensive legwork and an enormous phone bill I found two such firms in the state. One firm, Waste Management Incorporated in Menominee Falls, did not appear very eager to assist such a small waste generator, with less than 100 pounds of waste. The second firm, Waste Research and Reclamation in Eau Claire, was much more open to my problem. They promptly sent me an information package including educational literature and a waste generator's material profile sheet (see Figure 1) to describe the type of waste, and labels to affix to the drums. I learned from a Waste Research and Reclamation representative that our waste would be land-filled in Idaho or Arkansas. Other wastes may be incinerated, chemically destroyed or reclaimed by processing and recycled.

These are environmentally sound methods of hazardous waste disposal and do not come cheap. One drum of waste can cost up to \$500.00 for disposal. On the other hand, improper disposal is dangerous, morally unacceptable and can be seen as even more costly in terms of fines and/or legal action.

Re-iterating, the proper way to dispose of unused pesticides or hazardous wastes is to:

- clean up and contain materials,
- secure and label containers,
- contact a hazardous waste management contractor to dispose of the waste.

By using sound disposal methods and a great deal of care with pesticide handling, we are protecting our environment from degradation and ourselves from legal and moral prosecution. Let us all do our share to keep Wisconsin safe to enjoy for years to come.



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Site B: Grand View, Idaho ID0073114654

Please Refer to attached instructions, type or print in ink, and return completed form to address listed above. Photocopy completed questionnaire and retain for your records.

1. GENERAL INFORMATION

A. Generator Name _____ Generator EPA ID No. _____
B. Facility Address _____ Billing Address _____
Phone () _____
C. Technical Contact _____ Phone () _____
D. Business Contact _____

2. WASTE STREAM DESCRIPTION

A. Description or Generators common name of Waste Product _____
If PCB, is Waste Product between 50 - 500 ppm under 50 ppm over 500 ppm PCB solid PCB liquid
B. Process Description _____
C. Projected Annual Quantity _____ Mode of Collection _____
D. Physical Properties (complete as required)
1. Physical State at 70°F: solid liquid
2. Phases or Layers: Homogeneous Bilayered Multi-layered
3. Solids: by weight by volume
4. Viscosity: Low Medium High
Total _____% Dissolved _____% Suspended _____%
5. Flash Point (Closed Cup) _____°F
6. pH (indicate range) _____
7. Density: _____
 lbs/gallon (liquid)
 lbs/cubic foot (solids)
E. Waste Composition (account for 100%) _____

Please indicate PPM or % as required and attach all applicable lab analysis data sheets.

RANGE	RANGE	RANGE	OTHER CONSTITUENTS	RANGE
H ₂ O	HCL	Organics (Specify)		
As	H ₂ SO ₄			
Ba	HF	Pesticides (Specify)		
Cd	HNO ₃	ENDRIN		
Cr	H ₃ PO ₄	LINDANE		
Cr + 6	N ₂ OH	TOXAPHENE		
Hg	Cyanide	2, 4-D		
Se	Pb	2, 4, 5-T		
Ag				

3. HAZARDOUS PROPERTIES

A. Is this Waste Product listed as a hazardous waste as defined in the RCRA Regulations of the United States EPA? yes no
If yes, please include all U.S. EPA Hazardous Waste Numbers (see CFR 40 Part 261) _____
B. Does this Waste Product contain explosive, pyrophoric, radioactive, or shock sensitive materials? yes no. If yes, please specify _____
C. Is this Waste Product reactive as defined by 40 CFR 261.237? yes no
D. Is this Waste Product a hazardous material as defined by the United States Department of Transportation pursuant to the Hazardous Material Transportation Act? yes no. If yes, please specify the following:
1) Proper D.O.T. Shipping Name: _____
2) D.O.T. Hazard Class: _____
3) D.O.T. Identification Number(s): _____
4) D.O.T. Shipping Container(s): _____
[See 49 CFR for Hazardous Materials List and Characteristics]

4. SHIPPING AND HANDLING REQUIREMENTS

A. Mode or Packaging: drum bulk liquid solid other
Size of Container(s) _____
B. Transfer Equipment Requirements (dusty, odiferous, toxic volatile fumes, etc): _____
C. Special Requirements: _____

CERTIFICATION

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed.

Date Title Signature

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Treatment Class _____ Special Handling Requirements: _____
Segregation Class _____
Reviewed by _____
Technical Review Date _____

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WISCONSIN TURFGRASS ASSOCIATION

Monroe S. Miller
3606 Blackhawk Drive
Madison, WI 53705

May 8, 1984

Dear Monroe:

It is with a great deal of gratitude and respect that I would like to thank the Wisconsin Golf Course Superintendents for their recent contribution to the WTA. It is with the steady support of concerned professional organizations such as the WGCSA that the Wisconsin Turfgrass Association can successfully push for better turf research at the UW-Madison.

The golf course superintendents of Wisconsin have so much to gain from a strong research program at the University of Wisconsin. I hope that by this tremendous gesture of support that the WGCSA and the WTA can begin an era of working together for the common good of turf research. I sincerely believe we can with your firm leadership of the golf course superintendents.

Again, thank you very sincerely for all your efforts on behalf of the WTA.

Respectfully,

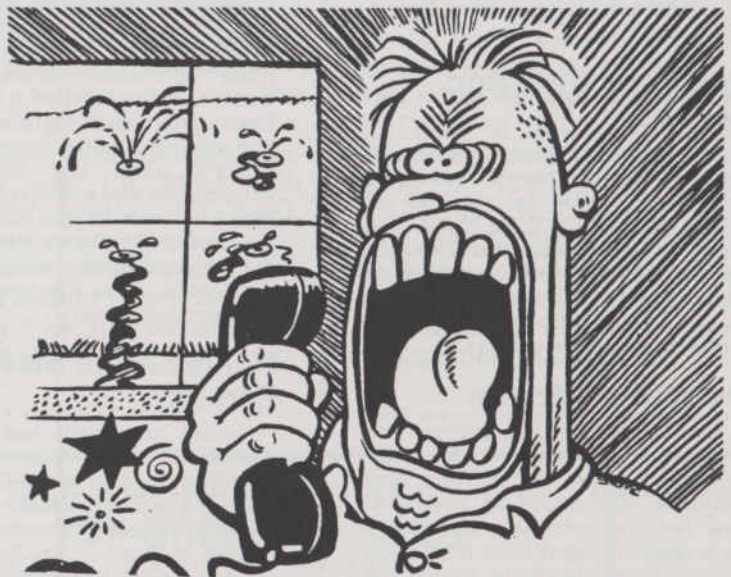
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UW-Madison Diagnostic Labs

The UW-Madison has a service that can be of great help to Wisconsin Golf Course Superintendents. The Departments of Entomology and Plant Pathology operate an insect and plant disease diagnostic laboratory, in the capable hands of Entomologist Phil Pellitteri and Plant Pathologist Sister Mary Francis Heimann. The lab was established to provide accurate insect and disease identification and control recommendations.

The procedures to follow include sending the sample through your Agricultural or Horticultural Extension Agent — this will give results back to you more quickly than sending them to the lab directly.

The service is free of charge. A real effort is made to return the diagnosis quickly, and results are usually forthcoming in two to three days.

Speakers Needed

Jim Prussa has requested volunteers to participate as speakers at the 1985 GCSAA Convention and Show to be held in Washington, D.C. If you are interested, and many of you have the talent to do so, contact Jim at GCSAA Headquarters in Lawrence, Kansas.

Reminder from Rod Johnson

Rod Johnson wants to remind all WGCSA members of the weekend get-a-way planned for this fall at Devil's Head Lodge in Merrimac. The outing is scheduled for October 12th and 13th. More details and specifics will be sent to everyone during August. Keep that weekend open for a really great time!

News from Scotts

Tom Wentz and Dick Evenson are very enthusiastic about several new products on the market and now available from Scotts. A couple of new fertilizer materials, introduced as a result of input from many Golf Course Superintendents around the country, are now available. There has been a lot of interest expressed for a low N/high K fertilizer, as well as for a sulfur-coated product. The R&D Division of Scotts has responded with a 16-0-30 product with K_2SO_4 as the potash source. Their new sulfur-coated product is unique in that it is a slow release encapsulated fertilizer (SREF) with no wax or earth coating needed to hold the material together and to maintain its proper physical properties. Scotts has also entered the flowable fungicide market with a fluid product that has a fairly wide

spectrum of control. Both Dick and Tom were pleased that Scotts were also able to release another granular fungicide for pythium control. This product has Subdue as its active ingredient.

Evenson, chair of the WGCSA Golf Committee, is also doing a fair amount of grousing about his "lousy" golf game!

Wisconsin Fourth in New Golf Courses

The National Golf Foundation released figures on new golf course construction for 1983, and Wisconsin ranked fourth on the list with new courses opened for play in 1983. The only other cold-weather state in the top six was Minnesota. Florida finished first, to no one's surprise, and Texas came in second. It was curious that California, with all of its warm weather, tied Wisconsin for fourth, along with Arizona.

Suzanne Bell's Article to Appear in GCM Magazine

Suzanne Bell and the Editor of **GRASSROOTS** have given permission to *Golf Course Management Magazine* to reprint her article from the May/June 1984 issue of the **GRASSROOTS**. The article was entitled "Confessions of the Wife of a Golf Course Superintendent." Christopher Caldwell, in a conversation with this editor, commented on Suzie's warm and comfortable writing style and added that this subject had been written about before but probably never as well. The article is tentatively scheduled for publication in the July issue of GCM. Congratulations!

Hanley Adds Staff Person

Hanley Implement has hired an additional Sales Representative for their Turf Division. He is Dean Lund. Dean is a recent graduate of the UW-Madison where he earned a B.S. degree in Agricultural Engineering. He has a farm background and has worked in agricultural-related businesses during summers while he was attending college.

Wisconsin Turf Honored

Distributor of the year honors were awarded to Wisconsin Turf Equipment Corporation at the GCSAA Convention and Show in Las Vegas last February. They received both the Sales and the Service Awards in the same year, an accomplishment that is very unusual. The award was presented to them by the Jacobsen

Division of Textron Inc. Congratulations to Curt Larson and his staff.

Kienert Article Appears In GCM Magazine, Too

Mark Kienert's article on the Rubigan/overseeding program at North Hills Country Club that appeared in the last issue of the **GRASSROOTS** was also printed in the May 1984 issue of *Golf Course Management* magazine. Mark joins Bill Roberts and Bill Rogers as recent contributors to the official GCSAA journal.

Horst Receives Industry Awards

Horst Distributing of Chilton, a WGCSA member and **GRASSROOTS** advertiser, recently received word of two industry awards for 1983. They received the Turfco-Sodmaster Sales Achievement Award and were presented the Lebanon Sales Achievement Award. John Mortimer and his staff have a long tradition of recognition from the companies and manufacturers they represent. They also received a Jacobsen Turf Service Award, their eighth such note in the last nine years, and this included the top service award in 1980.

John also is proud to announce that Greg Kallenberg will be joining the company to assist Ron Schumacher and Dennis Robinson in serving customer accounts. Greg and his family will reside in Eagle River and he will work with the northern Wisconsin and Upper Michigan regions. Greg has golf course experience at Pine Hills C.C., Camelot C.C. and Port Washington C.C.

Plans for the Horst Field Day and Golf Outing are firmed up, and the event is now scheduled for September 11. Details will be forthcoming to Horst clients.

Brayton Meetings Announced

Jay Powell, Sales Rep for Brayton Chemicals, Inc. has released information about their first Wisconsin Summer Meetings. A morning meeting will be held on August 15 at Edelweiss Chalet Country Club in New Glarus. The meeting will begin at 8:00 and the guest speaker will be Dr. Robert Shearman from the University of Nebraska.

There will be an afternoon meeting on the same day. This meeting will be held at the Public Events Center on the University of Wisconsin Arlington Experiment Station. The speaker at this meeting will be Dr. Bob Newman, Professor of Horticulture at the UW-Madison. Dr. Newman will be speaking on herbicides and will lead a tour of turfgrass research plots at the Arlington Farm.

Brayton will be sending a mailing to all Wisconsin Golf Course Superintendents that will detail these meetings.

2,4-D Politics: How To Win In An Impossible Setting

By Russel R. Weisensel

After the seizure-prone son of a Vietnam veteran suffered a seizure across the street from where a Madison, Wisconsin parks crew had sprayed 2,4-D, Madison's mayor ordered an immediate stop to the compound's use. An alderperson set up a press conference with the boy's mother, and on the same day a resolution was introduced to make the mayor's temporary ban permanent.

The first hearings on the resolution were before the City Public Health Commission which unanimously recommended the ban, and before the Commission on Environment which also recommended the ban. It is interesting to note that the Public Health Commission had absolutely no medical evidence relating either to the incident or to 2,4-D submitted as a part of their record.

Following these actions, the Wisconsin Agri-Business Council was made aware that a resolution had been introduced and was about to be referred to the City Council with two recommendations for passage. Facts from the Agri-Business group were sent to all members of the Madison City Council. One additional chance for a public hearing was before the Madison Parks Commission.

The Agri-Business Council contacted many groups who were using, and knowledgeable, about 2,4-D. For the first time the meeting was jammed with other than Vietnam Veterans Against the War, environmental organizations, and concerned University of Wisconsin students.

Agriculturalists talked about the 35 years of safe usage in Wisconsin. Agronomy and horticultural professors from the College of Agriculture and Life Sciences at the University talked about not only 2,4-D's safety record, but also its benefit to the consumer and home owner. A representative from a lawn care firm noted the number of doctors with young families who were using his weed control service. A Vietnam veteran with four healthy children noted that both his father and his father-in-law

used 2,4-D on their farms. The veteran, who regularly used 2,4-D in his job as groundskeeper of a golf course and who had been exposed to Agent Orange in Vietnam, stated he felt the herbicide's use was one of the reasons he could address the group tonight. Because he rode shotgun on supply convoys through Viet Cong territory, he felt the wartime defoliation was necessary for survival.

WHAT'S NEEDED?

Facts
Warm Bodies
Coordination
Persistence
More Persistence

The Parks Commission opposed the ban by a vote of 7 to 1. The resolution went back to the Commission on Environment. Again the Agri-Business Council made certain that a number of people with good information were present to make statements. The environmental Commission reversed its action on the total ban and adopted a city park staff report which recommended a reduction in the use of all herbicides, but not a total ban and not a condemnation of one particular product.

Prior to action before the Madison City Council, each Madison area Agri-Business Council member was furnished with additional information on 2,4-D. Our members were asked to contact their alderpersons and any other alderpersons they knew.

Following a lengthy debate, and in spite of a location in the City of

Madison with its basic anti-chemical bias, the City Council adopted the park staff report and killed the total ban by one vote.

One hard fought victory, however, does not settle the issue. Additional hearings on 2,4-D's use are taking place because "D" has been detected in one of Madison's lakes at 1.9 parts per billion.

Other Wisconsin areas also are attempting bans. In a quick action in the spring of 1983, the City Council of Stevens Point, Wisconsin, by a vote of 7 to 5, banned the use of 2,4-D on city playgrounds, athletic fields, and school grounds.

The ban was supported by a Vietnam veteran who now breaks out in a rash when working in his garden because, he believes, 2,4-D was used by a previous owner; and by an expectant mother who stated to the Common Council, "I don't think you people here want to be responsible for the death of my child." In Stevens Point, as is often the case in smaller communities, the issue went through very fast and there was not time to organize factual appearances to counter the emotional arguments. Careful and continuous monitoring of governmental actions at all levels is imperative if the use of 2,4-D is to be continued. Persistence in contacts with elected officials is absolutely necessary; with the best contact being an informed local resident.

Russel R. Weisensel is Executive Director of the Wisconsin Agri-Business Council. He also serves as Executive Secretary of the Wisconsin Environmental Pest Management Association.

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100	0.15	18.0
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Wisconsin Pathology Report

Poa decline and crown problems—during an “ideal spring”?!

By Dr. Gayle L. Worf

We've had the best spring for growing grass that I can recall in recent years. Rains have been plentiful and generally well spaced. Temperatures have been pleasant and not too warm. Surely there has been little environmental stress to date. Conditions like these make the business of examining weak turf more interesting and possibly more informative from a plant disease perspective, than when we also must sort out

the complications of heat and drouth stress, soil compaction and other environmental pressures. When we see thin turf and weak crowns, and also find certain fungi associated with them, we generally have more confidence that a pathogenic problem is occurring.

We found such evidence recently while looking at the black crowns and lower stem area of some declining fairway Poa. Roots in surrounding areas were still firm, of a good white color, and were several inches deep. But patches didn't look right—they were thinning, somewhat off-color, and scattered individual plants were turning tan and dying. There was fungal growth on the crowns that strongly resembled *Lep-tosphaeria korrae*, which is the apparent casual organism of necrotic ring spot. (It requires isolation and some study at this point in time to sort that fungus out from *Gaeumannomyces*—the Take-all pathogen—and some similar organisms.) We've come to associate that problem with Kentucky bluegrass, but we've wondered quietly about its possible involvement with some of our golf course problems as well. We

have isolated the fungus from Poa on a couple of occasions, and we have also demonstrated its pathogenicity to Poa several times in the greenhouse. (Perennial ryegrass and bentgrass were much less affected by the fungus.) But we've wondered whether the fungus was “primary” or “secondary” with Poa. We still wonder, but it seems time to speculate more openly about it now.

What would Embark treatments do to it? Will the supposed root strengthening that comes with such treatments help stave off such crown rot? Does it become involved with summer heat stress or anthracnose? Anthracnose is a foliage disease that can cause damage by itself, but root problems would certainly exacerbate the situation! We may have a chance to look at these questions in the Oconomowoc trials this year.

Incidentally, Daconil, and to a lesser extent, Bayleton and Rubigan, controlled anthracnose in last year's trials. Chipco 26019 and Actidione TGF had no effect, while Vorlan tended to increase anthracnose.

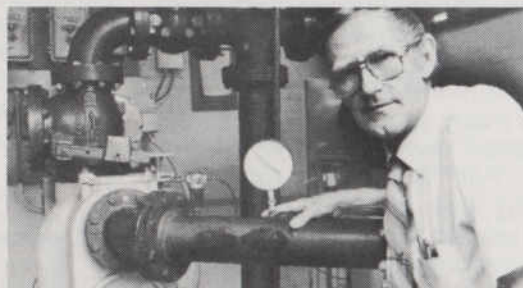
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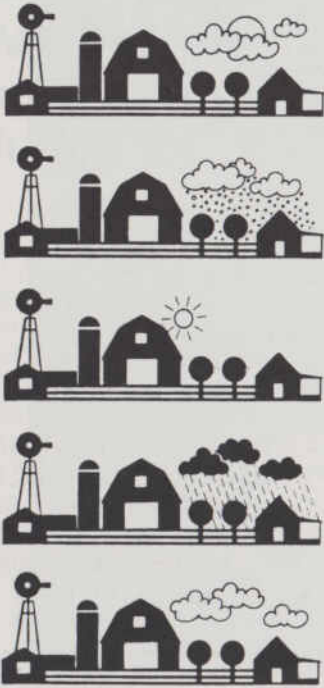
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Wisconsin Weather



Book Cover of "Wisconsin Weather"

WE AREN'T THE ONLY ONES

Apparently Golf Course Superintendents aren't the only people affected by the weather. Researchers at the University of Delaware have discovered what many of us, as well as many other employees and supervisors, were pretty sure of already — the weather affects our work, and even whether we show up at all.

The new study by Delaware geographers doesn't deal with weather disaster — which would obviously affect work attendance — but rather with day-to-day changes in summer weather.

Using five years' worth of daily work records of 6,000 people in 30 cities, it was discovered that rainfall during the morning rush hour brings absenteeism of 2 to 3 percent.

Unmotivated or dissatisfied employees probably find the an-

ticipated stress of driving in rain an easy excuse while others feel rainfall is depressing and reduces motivation to work.

It was found that the timing of the rain is important. When rain is forecast but doesn't fall, during rush hour, attendance wasn't affected. Also, daytime weekend rain leads to a dip of 2 to 3 percent in Monday work attendance, but weekend rain at night has no effect. This may result from a loss of relaxation "recharge" time when it rains in the daytime on weekends, or so it was speculated.

Believe it or not, hot weather does not lead to added absenteeism. In the Sun Belt, attendance may actually rise, undoubtedly due to air conditioning in the work place. But work attendance in these areas drop off when the weather cools and people can enjoy the out-of-doors in their free time.

On the other hand, heat waves in northern cities lead to declines in work attendance, although isolated hot days do not. The major factor in lowering work attendance in these areas seems to be hot, muggy nights that lead to sleeplessness and stress for people unused to the heat.

This study concentrated on middle- and upper-income employees who worked indoors in large cities. Now if they really want to find out how weather affects "normal" people, they should concentrate a study on WGCSA members!

A.M. Weather Is Worth Watching

The kind of accurate and thorough television weather reporting and forecasting that is important to Golf Course Superintendents generally isn't available during local news telecasts. We usually need more information than is put forth. The best way to get really good weather information that is current and short term is from a private consultant. However, there is an interesting public television program that

reports weather information not available on commercial television. It is called "A.M. Weather." It's a 15 minute report televised Monday through Friday mornings. This doesn't help much for weekends, but it does offer a comprehensive look at the national weather picture for the work days of the week. The beauty of it that I enjoy is that it focuses on agricultural weather, an umbrella we easily fit beneath. It is financed, at least partially, by the Continental Grain Company. They made an underwriting grant for the program to help insure that these excellent forecasts will continue to be available to the nation's farmers. We may as well take advantage of it, too.

Check your local television schedule to see if the public television station in your area carries the program. It usually is shown in the earlier morning hours.

BRACE YOURSELF!

The National Weather Service released its 90 day weather outlook on June 1st, and it looks as though it could be another long, blistering summer. For the second consecutive year, the Eastern and Midwestern states are in for a long, hot summer that could be bad news for Golf Course Superintendents. If the NWS's long-range forecasters are right, hotter than normal weather will plague the Corn Belt from Iowa to Ohio, the Great Lakes states, and the East Coast from South Carolina to New England during June, July and August.

Once again, the hot zone will be centered over Iowa and northern Illinois, areas that were seared by last summer's near record drought.

"Summers have a tendency to resemble each other for a number of years," chief NWS long-range forecaster Donald Gilman commented. "It happened that way in the 1930's and the 1950's and it looks like its happening again. The summer of 1984 looks like it's going to be a replay of the summer of '83. Gilman added that the NWS really worries about their forecast for Iowa and surrounding states, including Wisconsin.

REFRESHING WORDS

For an issue of the **GRASS-ROOTS** that covers the two hottest and driest months of the year, and an issue that is placing emphasis on the weather, the following poem seemed to be perfect for a moment of enjoyment. It was written by Henry Wadsworth Longfellow.

*"How beautiful the rain!
After the dust and heat,
In the broad and firey street,
In the narrow lane;
How beautiful the rain!
How it clatters along the roofs,
Like the tramp of hoofs;
How it gushes and struggles
out
From the throat of the over-
flowing spout."*

WEATHER WISDOM AND FOLKLORE

*A sunshiny shower
Won't last half an hour.*

*Rain before seven,
Fair by eleven!*

*The South wind brings wet
weather,
The North wind wet and cold
together;
The West wind always brings us
rain,
The East wind blows it back
again.*

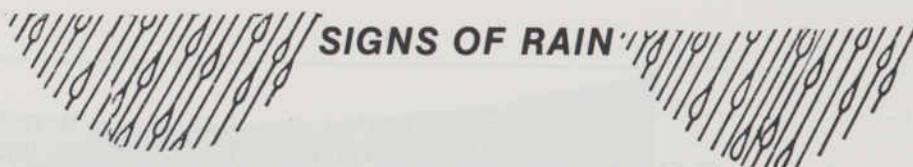
*March winds and April showers
Bring forth May flowers.*

*Evening red and morning gray
Set the traveler on his way;
But evening gray and morning red
Bring the rain upon his head.*

*Rainbow at night is the sailor's
delight;
Rainbow at morning, sailor's, take
warning.*

*If bees stay at home,
Rain will soon come;
If they fly away,
Fine will be the day.*

*When clouds appear like rocks
and towers,
The earth's refreshed by frequent
showers.*



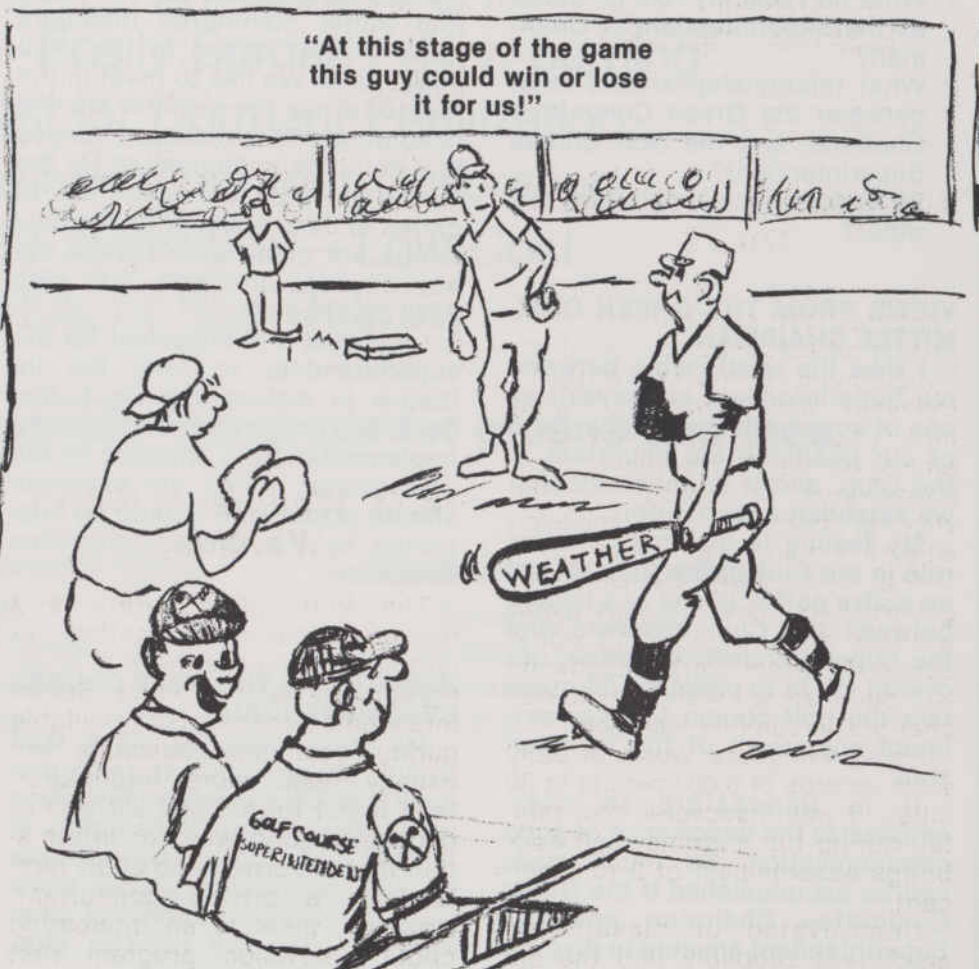
SIGNS OF RAIN

Here is an old rhyme that is so crowded with weather lore evolved from accurate observation that you can almost feel the rain gathering and getting ready to fall.

*The hollow winds begin to blow;
The clouds look black, the glass
is low,
The soot falls down, the spaniels
sleep,
And spiders from their cobwebs
peep.
Last night the sun went pale to
bed,
The moon in halos hid her head:
The walls are damp, the ditches
smell,
Closed is the pink-eyed pimper-
nel.
Hark how the chairs and tables
crack!
Old Betty's nerves are on the
rack;
Loud quacks the duck, the pea-
cocks cry,
The distant hills are seeming
nigh.*

*Low o'er the grass the swallow
wings
The cricket, too, how sharp he
sings!
Through the clear stream the
fishes rise,
And nimby catch incautious flies.
The glow-worms, numerous and
light
Illumined the dewy dell last
night;
And see yon rooks, how odd their
flight!
They imitate the gliding kite,
And seem precipitate to fall,
As if they felt the piercing ball.
'Twill surely rain, I see with
sorrow,
Our jaunt must be put off
tomorrow.*

All the signs and portents in this poem can be sensed and observed before a rainfall, and although the poet did not know the scientific explanation of them, he recognized them as reputable weather signs.



GOLF COURSE SUPERINTENDENT/GREEN COMMITTEE CHAIRMAN RELATIONSHIP

By Bruce Worzella
Golf Course Superintendent

and

Gerald Ebel
Green Committee Chairman
WEST BEND COUNTRY CLUB

The working relationship between a Club's Golf Course Superintendent and the Green Committee Chairman is critical. Our thoughts that we have included in this article define how we work together — they are not intended to judge one another. We used several questions as a focal point for this brief discussion. Those questions are:

1. What do I feel my role is, either as the Superintendent or Chairman?
2. What relationship should exist between the Green Committee Chairman and the Golf Course Superintendent?
3. What does each expect from the other?

VIEWES FROM THE GREEN COMMITTEE CHAIRMAN

I view the relationship between our Superintendent and myself as one of cooperation and unity. Both of our positions are important in the Club, and it is important that we establish a team effort.

My feeling is that my principal role in the Club, other than that of an active golfer, is one of a liaison between the Club members and the Superintendent. Together, our overall job is to prepare and maintain the golf course for the maximum enjoyment of the membership.

It is impossible to over-emphasize the importance of good communication. So much more can be accomplished if the Green Committee Chairman and the Superintendent are able to discuss

and exchange ideas concerning the care and improvement of our golf course.

In addition to our frequent discussions, I like to have the Superintendent meet with the Green Committee two or three times per year. It is important to have a good membership cross section on the Committee. This helps clarify misconceptions about the golf course operation that either committee members have, or that others in the Club might have. We like to meet in the Fall to review the summer playing conditions and to discuss changes that could be implemented for the following year. We also like to gather in early summer to see how things are going and if there are any unusual problems that may have cropped up.

I feel that it is important for the superintendent to take the initiative in making the day-to-day decisions on the operation and the implementation of changes on the golf course. I feel his expertise should prevail and should be supported by the Green Committee Chairman.

VIEWES FROM THE GOLF COURSE SUPERINTENDENT

My main objective, as a Golf Course Superintendent, is to produce the best playing conditions within my ability. One's ability is limited, at times, by adverse weather conditions, limited working capital or any number of other variables. On the positive side,

ability also means **knowledge**. Knowledge is an ability that cannot be affected by variables. It can only be improved by education and experience. This is a responsibility a Golf Course Superintendent should have.

There are many important ways that your ability has to be used. One of the most important is in the education of staff, so that each one of them is a positive example of your skills. Communication is another ability that has to be put to good use. It is essential to communicate your views and your decisions to the Green Committee Chairman.

The relationship between the Superintendent and the Chairman should be friendly, but business-like. Hasty decisions must be avoided and one of the best ways to accomplish that is a good working relationship between the Superintendent and the Chairman.

The Green Committee Chairman's most important job, I feel, is informing the membership about the golf course operation. This makes communication between the two individuals even more important.

If we are to have a smooth running operation, it is important that a healthy relationship between the Superintendent and the Green Committee Chairman exists. It is important to have an understanding of each other's responsibilities and duties. Finally, mutual respect inspired confidence in one another and helps us accomplish our common goals successfully.