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## PRESIDENT'S MESSAGE

A survey will be sent out to all Class A and B Golf Course Superintendents in the near future (you may have already received it) concerning different aspects of our business and industry. The purpose of this survey is to provide the Board of Directors some insight as to the direction the MBCGCSA will be pursuing in the future. Also, much of the information resulting from the survey will be of use to all of us at the present time.

I ask all Superintendents to take the time to respond to this survey. In order to obtain the most effective results, close to total participation is necessary. A return-addressed, stamped envelope will be enclosed with the questionnaire and all responses will be kept confidential. Do not sign the returned survey. Once again, please take the time to answer the questions. It will take just a few minutes and your participation will be appreciated. Everyone will receive a copy of the results.

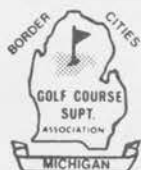
The MBCGCSA & GAM Spring Green Seminar held at the Detroit Golf Club proved once again to be highly successful. Over 160 golf course superintendents, green chairmen and interested parties attended this valuable turfgrass educational session. All of the golf course superintendents on the program, Ted Woehrle, Gary Thommes, Tracey Jones and Jim Timmerman, did an excellent job in presenting their information to the audience. The quality of information was exceptional and this type of exposure elevates our profession to a higher level. Also, Charlie Gaige did an admirable job in developing and moderating the program.

The seminar was used for our first attempt in videotaping a program for education and historical purposes. After reviewing the tape, I feel it has enough quality to be of use to our membership. There were a few problems and that was to be expected. Although not the quality of a Hollywood production it does have some merit. The slide presentations shown in a darkened room are visible and the sound is adequate. With a little more experience I know we will be able to improve on the quality of the tapes in the future. I would like to thank Don Benham for the use of his video camera and his time in taping the seminar.

Copies of the program have been made and will be available for any member who would like to view it. If you would like to purchase a tape or view it at no cost and return the tape to the Association contact Tom Mason or myself for further information. Jim Eccleton, Golf Course Superintendent at Arbor Hills C.C. has offered to produce copies for the MBCGCSA and I would like to thank him for his efforts.

In closing, I would like to congratulate Clem Wolfrom, recipient of the MBCGCSA Distinguished Service Award for 1987. This award, dormant for many years, was given to Clem at the Spring Seminar for his outstanding service and contributions to our Association and the golf industry.

Kevin Dushane,  
President, MBCGCSA



### "A PATCH OF GREEN"

Published Bi-Monthly by the  
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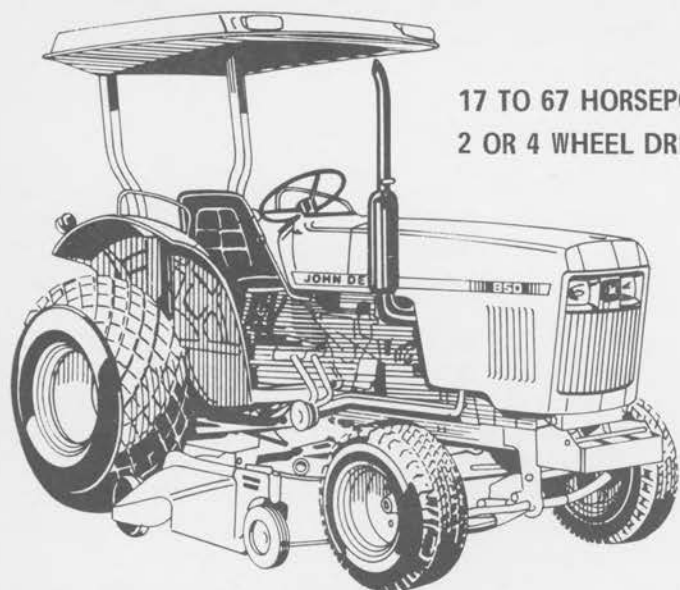
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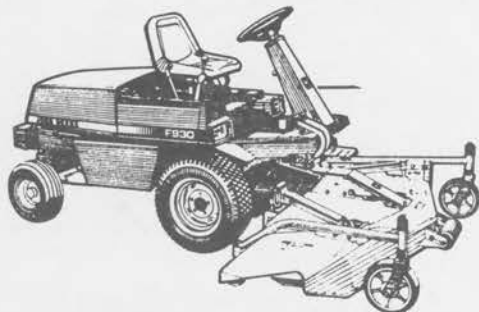
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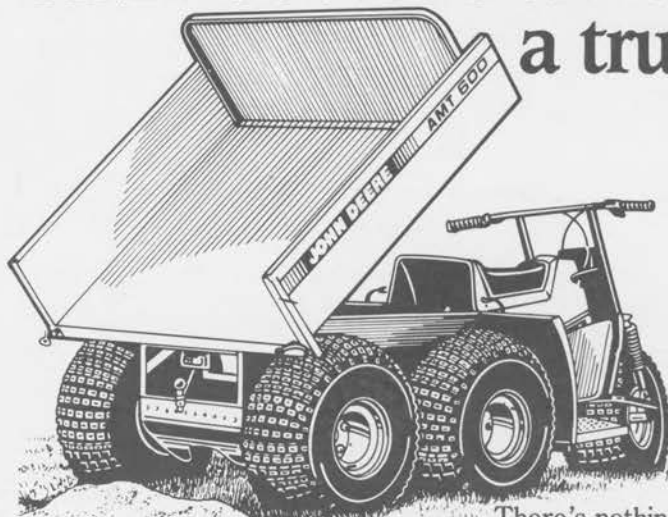
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# Just How Toxic Are The Chemicals We Are Using On Our Courses?

by Paul Sartoretto, Ph.D.  
W.A. Cleary Chemical Corporation

For the past fifteen years I have been going around the country speaking at regional or monthly meetings of the Golf Course Superintendents on the subject of tank mixing pesticides with the emphasis on compatibility and avoiding phytotoxicity. There is a relationship between human toxicity and phytotoxicity as you will see, primarily because of the close similarity of the toughness of the epidermis of the grass blade and our outer skin. The skin of the grass blade has its stomates through which air and water pass in and out. Whereas our skin has pores through which water diffuses.

In my talk I make a general broad statement that all the insoluble pesticides can be tank mixed and sprayed and you will not incur phytotoxicity. The reason is obvious. Even though the insolubles have to be ground down to micron size in order to get them

to disperse in water, the micron particles are too large to diffuse through the stomates. They have to be thousands of times smaller, actually molecular in size and in solution to diffuse into the cells of the grass blade.

The same principle applies to our outer skin. The insolubles cannot be absorbed through our pores because the particles are too large, and only the solubles that are molecular in size can diffuse through the skin.

You can take a certain amount of comfort in knowing that you work with a large number of insolubles and that they cannot penetrate our tough outer layer of skin, and can conclude that epidermal toxicity with insolubles (wetable powders and flowables) is non-existent to a very high degree.

CONTINUED PAGE 19

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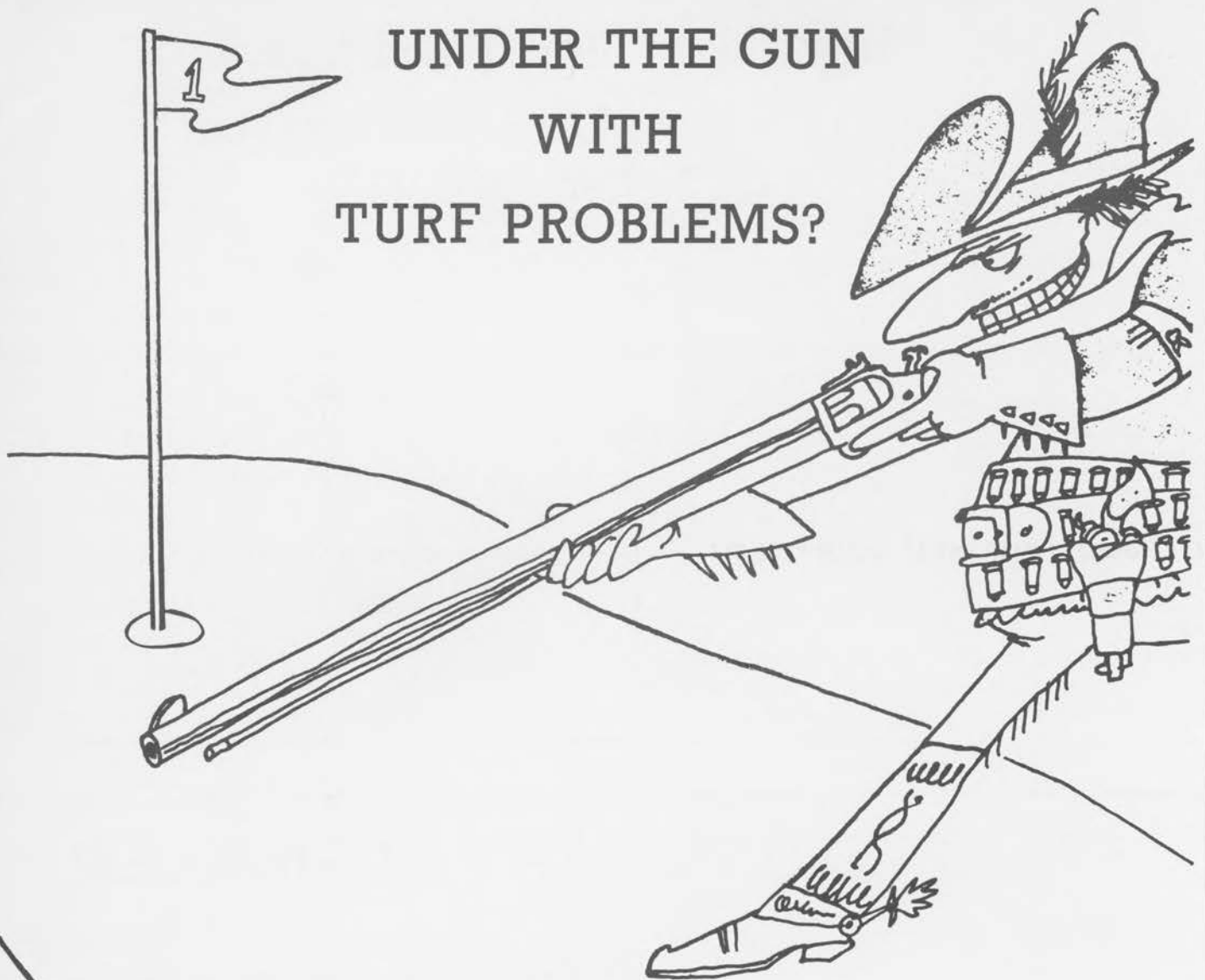
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# IN MEMORIAM:

## Walter Buetikofer

Walter Buetikofer, 81 retired President of Ideal Mower Sales, Inc. of Ferndale, Michigan died April 10, 1987 in William Beaumont Hospital.

Mr. Buetikofer founded the firm in 1936 when power lawn mowers were almost nonexistent for home consumer use. In the beginning Ideal carried only commercial turf equipment - mowers for golf courses, municipalities, etc., but early on Walter saw the potential for consumer markets and was instrumental in the development of the Reo power lawn mowers for home use.

In his early years he was very active in the Michigan and Border Cities Golf Course Superintendents Association and a supporter of the Michigan Turfgrass Foundation at Michigan State University. In about 1940, Walter started the first Christmas Party for the

Greens Superintendents and their wives at his office.

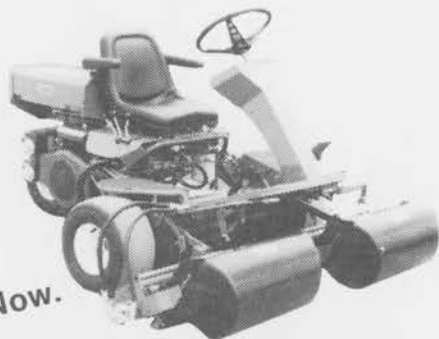
Walter was also active in the Ferndale Exchange Club and the Zion Lutheran Church Building Fund where he also served as choir director.

He is survived by his wife Isabel, two daughters Ruth Botsford of Union Lake and Rosemarie Draudt of Royal Oak, brother George of Ferndale, sister Dorothy of Erie, Pennsylvania, six grandchildren and eight great-grandchildren.

Memorial services were conducted April 13, 1987 at Zion Lutheran Church in Ferndale by Reverend Paul Gateman. Memorials may be made to Zion Lutheran Church, Albany at Woodward, Ferndale, Michigan 48220 or to Michigan Turfgrass Foundation, Michigan State University, P.O. Box 275, Okemos, Michigan 48864.

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# THE 1987 MIDWEST REGIONAL TURF CONFERENCE

Clark Throssell

The 1987 Midwest Regional Turf Conference was a successful event. More than 300 individuals attended the Conference, which represents a 30 percent increase in attendance over last year. Most individuals were pleased with the educational sessions and felt the speakers did an excellent job. A wide array of topics were scheduled to try to accommodate the diverse needs of professional turf managers.

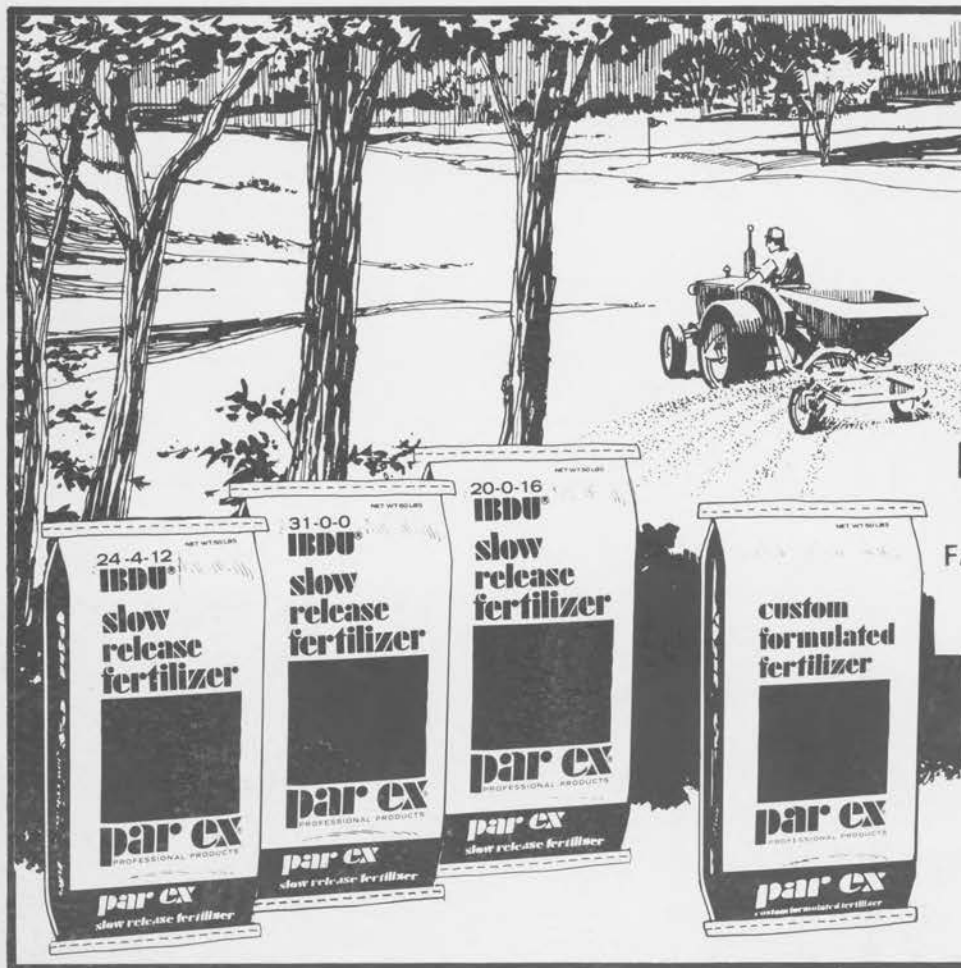
The banquet on Tuesday evening was a special occasion. The Midwest Regional Turf Foundation honored Dr. Ray Freeborg for his fine career and his many contributions to the turf industry in Indiana and nationwide. Dr. Bill Daniel recounted many of Ray's contributions both professional and personal. The MRTF presented oak deck chairs to Ray and his wife Erma, as an expression of appreciation. The banquet speaker was Mark Hermann, former Purdue University quarterback and currently playing for the San Diego Chargers. Mark spoke about his athletic career and life in the NFL. He answered questions

from the audience about NFL players, the state of college athletics and his views about artificial turf.

Thirty-five companies had displays in the Tabletop Trade Show. The response from the Tabletop Trade Show was very enthusiastic from both distributors and professional turf managers. We plan to make the Tabletop Trade Show an annual event. One complaint we did receive was that the room was too small. We are currently trying to resolve a larger room for next year to expand the size of the show and to make it more comfortable for the participants. The Tabletop Trade Show was added to improve the quality of the Conference and to make it more attractive to potential attendees.

Although the 1987 Midwest Regional Turf Conference was a success there are many areas that can be improved upon. One area that we are going to change for the 1988 Conference is the development of the educational program. We will be asking pro-

CONTINUED PAGE 15



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# GAM & MBCGCSA HOLD JOINT MEETING

On March 28, 1987 the annual joint meeting of the Golf Association of Michigan - Green Section and the local Superintendents Association was held at the Detroit Golf Club.

The audience was made up of interested club officials from member clubs of the GAM and their superintendents. Over 160 attended a well planned program offering a diverse mix of timely and informative subjects featuring 10 speakers.

Such subjects as "Trees and their use on Golf Courses", "Chemical Safety" and the new topic for 1987 "The Black Layer" which was discussed by Dr. Joe Vargas, Plant Pathologist from Michigan State.

Jeff Rivard, the Executive Director of the GAM made some comments about the importance of the continuation of this joint meeting and the appreciation they have for the generous support of the program by those in attendance.

A very informative presentation about the renovation of the water supply at Red Run Country Club was one of the highlights of the program.

TYPE & MORE PHOTOS CONTINUED PAGE 17



JEFF RIVARD, EXECUTIVE  
DIRECTOR - GAM



DR. JOE VARGAS, TURF  
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# 90 PERCENT ARE HARMLESS!

by Mark E. Esoda  
Public Relations Committee  
Georgia Turf Grass News

How often do you hear statements from club members such as "That darn greenskeeper won't let us off the path and it hasn't rained at my house in two weeks"? Or, "Why couldn't that dern greenskeeper have waited one more week to put holes in the greens"? or, "The greenskeeper says the only way to grow grass is to cut down all the trees on the course!"

Of course, as golf course superintendents we would not say or do anything without some reason but what we say and do is perceived differently by different people. When someone says, "To promote a healthier turfgrass stand in this area we must raise the canopy and remove a few trees to increase air circulation," member Joe hears this to be, "Cut all the trees (the biggest and best) down and buy giant fans to give the grass artificial respiration!" Of course this exciting news has to be passed on to member Jack who in turn tells it to wife-member Judy who just happens to be chairwoman of the Grounds Committee for the Ladies Golf Association. By the time the fire burns circle back to the golf course superintendent he is now recommending that all trees on the golf course be cut down and purchasing a fleet of helicopters to circulate! This may be an exaggeration, nevertheless it gives us a good idea on how rumors get started.

Ninety percent of rumors are harmless but the other 10 percent can escalate to make an already tough job impossible. The golf course superintendent doesn't always have to be the source of the "rumor fire." Rumors arise in different places which include the first tee on Saturday morning, articles in the newspaper as well as crew members. The first tee is a great place to tell stories. "Last week I shot a 69 at Golf Club and they didn't have holes in their greens. They said they didn't need to put holes in their grass!" Or, "I read in the paper last Sunday you should only water your lawn once a week for best results." And a club member may question a crew member and get, "My boss told me ta do dis 'cause da grass is dying. So we hafta put holes in it ta give it artificial respratory, or somtin like dat." One can imagine the stories that can come from statements like that. Although most of this kind of talk is harmless it is a good idea to anticipate and apply preventive measures on more harmful rumors.

Use all available public relations tools to your advantage when attempting to prevent the spread of rumors. Do not fail to take every opportunity to enhance information about your golf course, giving full explanation in simple terms. The club newsletter is a great place to start by letting your members know why you are going to aerify two weeks before the

club championship. In a situation of that nature a phone call to the chairperson of the tournament would be a great way to stop rumors before they get started. If possible, be at the first tee on Saturday morning and/or play golf with members once in a while to answer questions that come up during a round. Attend clinics when possible and set up your own clinics on golf course care. The golf professional at your club can help you stop rumors, if he is well-informed (by you', as well as being able to correct your slice! A marker board in the pro shop can be used to explain to the golfers what to expect before they go out and play. Attend all meetings (grounds, golf or governing board) whenever possible and use trade publications to bolster your reasoning and explanations. You cannot expect someone else to get your message. The more direct the information the less likely it will get twisted into a rumor.

Good public relations and education to everyone involved in your club can keep a tough job becoming impossible. Remember - when Crewman Joe says to member Judy, chairwoman of the Grounds Committee of the Ladies Golf Association, "Da bossman told me ta put da holes in da grass 'cause its gonna die and we hafta give it artificial repratory, or somthin like dat" - 90 PERCENT OF RUMORS ARE HARMLESS!

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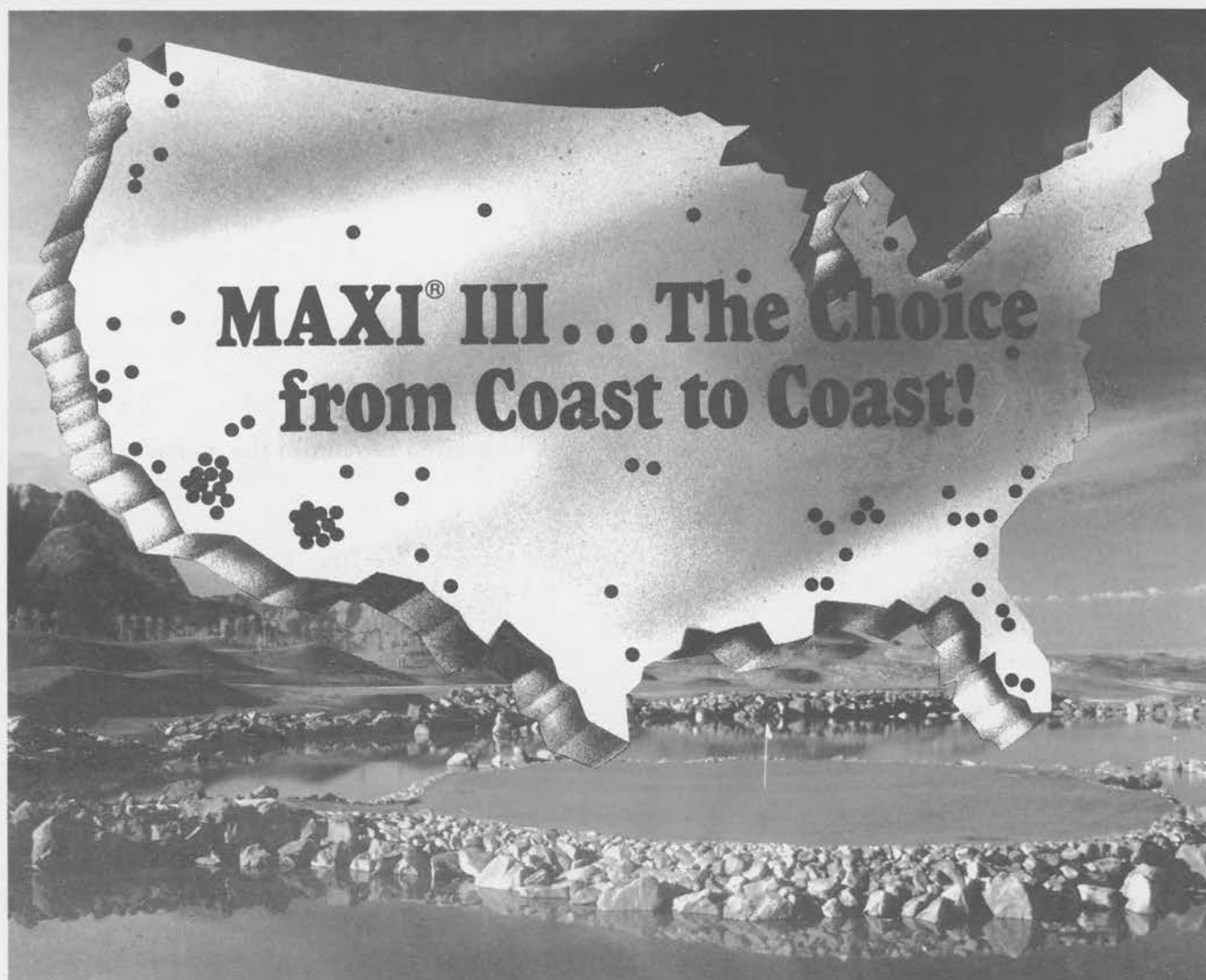
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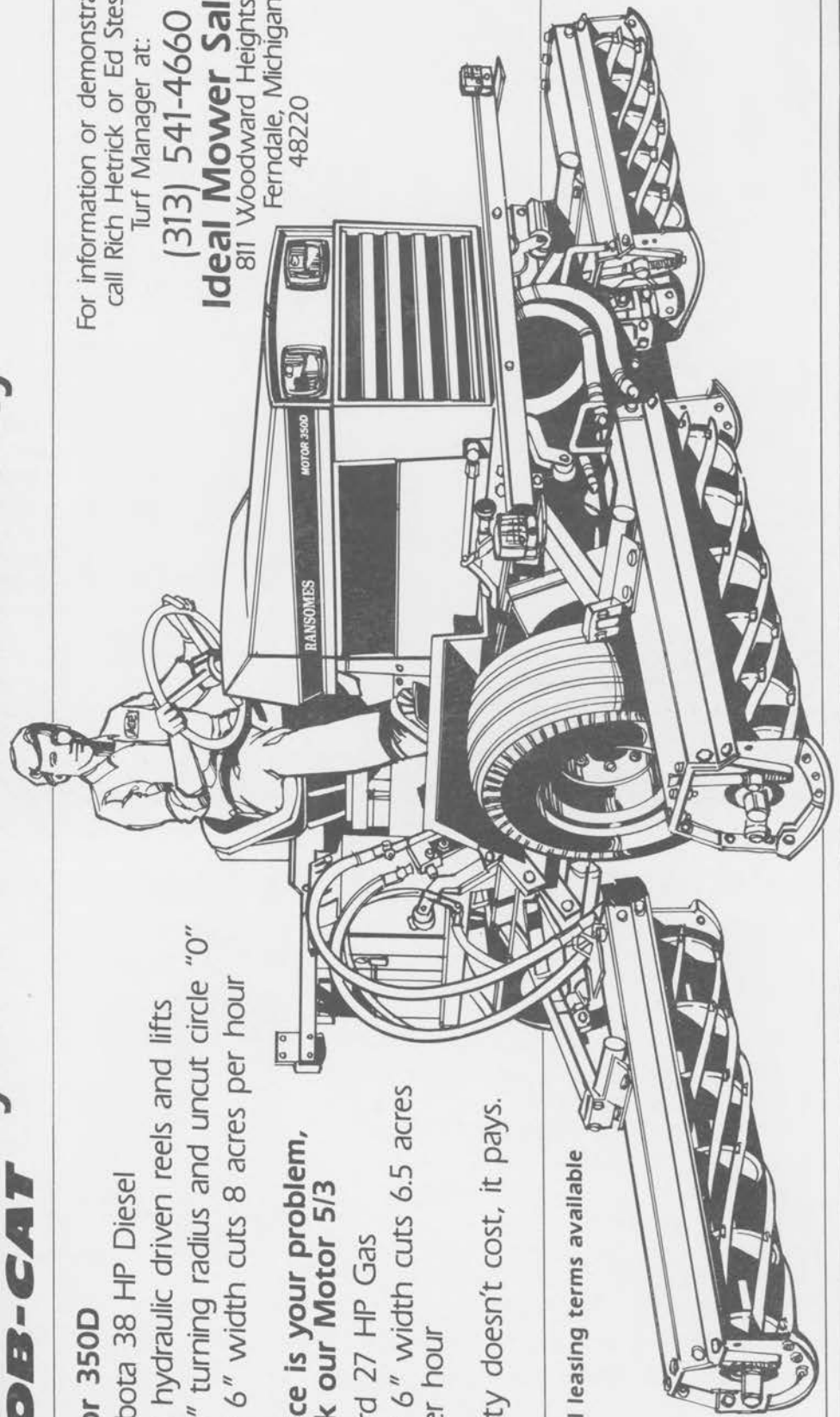
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## FAIRY RING CONTROL

Fairy rings on golf course greens are an unsightly problem. It had been thought that only fertilization, aerification, watering and wetting agents could reduce the color contrast and recurring rings.

Now, control of fairy rings has been observed when using Bayleton. It has not been determined if the effects are fungicidal or just masking, but superintendents in Ohio, New York, Oklahoma, Pennsylvania and Georgia have reported to Mobay Corporation that they obtained control of fairy rings on golf course greens with applications of Bayleton.

Bayleton is not yet labeled for use on fairy rings and different application methods and schedules have been used. Hand gun sprays at 2, 4 and 8 ozs. per 1,000 sq. ft. produced a visible result in about two weeks. Full applications at 1 and/or 2 ozs. per 1,000 sq. ft. on two-week intervals have kept rings from occurring on historically bad greens.

Mobay is interested in any experiences you have had with Bayleton and fairy rings. Their research objective is to document the effectiveness of Bayleton in controlling fairy rings on the golf course. Good results will mean we may soon have a product labeled to control this unsightly problem.

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We wouldn't worry so much about what other people thought of us if we knew how seldom they did.

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### MIDWEST CONFERENCE, CONT.

Professional turf organizations to be responsible for one of the educational sessions. The organization would select the topics they are interested in and suggest potential speakers. The MRTF would be responsible for the speakers' expenses. Hopefully, this will make the educational sessions more responsive to your needs. Organizations such as the Indiana Golf Course Superintendents Association, Hoosier Turfgrass Association, Indianapolis Lawn Care Association, the Sports Turf Managers Associations and others will be invited to organize an educational session. The MRTF would be responsible for the general sessions.

The Midwest Regional Turf Foundation belongs to all of the members; it is truly our organization. All of the activities of the MRTF are open for your input. If you have suggestions for ways to improve the MRTF please contact me or any Board member. Your help is vital if the MRTF is to grow and become stronger.

## SAFE HANDLING OF PESTICIDES ON GOLF COURSES

Hazards associated with exposure to chemical, physical and infectious agents are commonplace in today's environment. Serious injury, illness and even death can occur if we are not informed and aware of the potential risks we come into contact with every day.

A training package for golf course operations titled "Hazard Communication: Your Right to Know" is now available to members of the Golf Course Superintendents Association of America.

The package contains two VHS video cassettes and a master file binder containing extensive training and chemical information.

Included in the program are the following:

- Glossary of Terms
- A Generic Preparatory Presentation
- Reference Materials Listing
- Safe Handling Guidelines
- Chemical Terminology
- Training Guidelines

This program has been designed to assist pesticide users in complying with Occupational Safety and Health Administration standards and State Right-To-Know-Laws.

In providing those who deal with potential hazards the information needed to work safely with reduced exposure to chemical and physical risks, this program describes chemical labeling, types of toxicity and symptoms, methods of exposure, chemical agents, first aid, Material Safety Data Sheets and much more.

Manufacturers are required to make Material Safety Data Sheets or the equivalent for each hazardous agent in the workplace. The program indicates the importance of this information and how to understand the knowledge that it provides.

This overall training program should be instituted for a safer and healthier environment at home and the workplace.

For additional information, contact the Associate Executive Director, GCSAA Headquarters, 1617 St. Andrews Drive, Lawrence, KS 66046.

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## JOINT MEETING, CONT.

John Read, President of the Michigan Turfgrass Foundation thanked all for their support of the Research Programs at MSU. Pete Green, top amateur golfer from Orchard Lake Country Club shared his views on "What Makes a Golf Course Playable and Enjoyable". Tracey Jones, Superintendent of the Lochmoor Club discussed enjoyability. A surprise of great importance and quite newsworthy was a special presentation from the Michigan and Border Cities Golf Course Superintendents Association to Clem

Wolfrom - a handsome wall plaque denoting "The Distinguished Service Award" was presented by the eloquent Jim Timmerman (ex pupil of Clem's), Past President of the local chapter as well as Past President of the National Association and good friend - to a well-deserving and humble recipient.

Clem was honored for his many years of devotion to his profession as well as his Association. He served 25 consecutive years on the Board - twice as President. His golf course always reflects his professionalism and he is highly respected by his members and his peers.

Congratulations Clem, we're all proud of you!



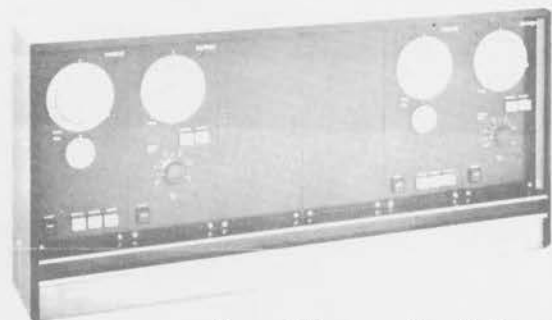
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## DR. SARTORETTO, CONT.

From what you have learned thus far you can see how doubtful the claim was that a golfer died as the result of dermal exposure to Daconil 2787 which is an insoluble and was sprayed on the grass. No way could Daconil have diffused into his body. It could be argued that Daconil vaporized and that he breathed in a sufficient amount of it to poison him. I will now show you how doubtful this mode of toxicity is with respect to Daconil.

Whereas the grass plant breathes through stomates and receives nutrition not only through the stomates but also the roots, we humans breathe through our lungs and receive nutrition through our mouth, and then via the alimentary canal, by digestion into the blood stream. We measure toxicity primarily by the minimum lethal dosage necessary to kill an animal by ingestion. Let us use aspirin as a bench mark to compare with our pesticides. It takes 1750 milligrams of aspirin for every kilogram of body weight to kill 50% of the animals ingesting it. The MLD50 of aspirin is 1750 - that's about 6 aspirin tablets. An adult weighing 50 kg (110 lbs.) by extrapolation would die from 50 times the dosage or 300 aspirin tablets. In actuality 10 times the dosage or 60 aspirin is fatal - 17.5 grams about 2/3 of an ounce. Reference is Merck Index.

But Daconil 2787 has an LD50 of 10,000 mg. That is six times safer than aspirin. That golfer would have had to ingest 100 grams or over 3 ounces of Daconil to have killed him. That's unlikely.

In my speech on how to avoid phytotoxicity, I generalize by saying insolubles cannot burn, but solubles can and you must exercise caution in their use. We have been comparing an insoluble Daconil with a soluble aspirin. Aspirin is a safe soluble, but there are a number of solubles that you use that are not as safe as aspirin but keep in mind the LD50 of aspirin as a bench mark.

You may have read recently about a fanatic that has been killing a lot of household pets in North Carolina by lacing pet food with the pesticide DISYSTON, an insecticide you don't use but farmers do. The LD50 of DISYSTON is about 3mg. per kg. A cat or dog doesn't weigh much more than 3 or 5 kg., so a lethal dose is not much more than 20 mg. which is the equivalent of a couple pinches of salt. DISYSTON is a thiophosphate insecticide not much different than the thiophosphate insecticides that you are using, except yours are safer. Oftanol is 10 times safer with an LD50 of 32; Dursban is about 50 times safer with LD50135; and Diazinon is 100 times safer with LD50300. Nevertheless, these are low LD50's and the concentrates are potentially dangerous. They act on the insects and humans in the same way poisoning the nervous system.

Ironically, Granular Diazinon which is the safest of the three has been suspect for use on golf courses in some areas because of unfortunate misuse. They are usually formulated as emulsifiable concentrates dissolved in an organic solvent with an emulsifiable agent added. These in turn are to be mixed with large volumes of water, sprayed on the golf course with a

CONTINUED NEXT PAGE

further recommendation that they be watered in to get to the grubs. The same emulsifiable concentrate can be mixed with a granular carrier such as corn cobs or vermiculite so that they can be applied with a spreader with further recommendation that they later be washed into the soil with large volumes of water. If the corn cob is laced with Diazinon it becomes a tempting poisonous morsel for a bird. Birds weigh less than a kilogram, so all they have to ingest is about the amount of Diazinon that is equivalent to the amount of a baby aspirin.

Unlike the insolubles, the solubles can be absorbed through the skin. As a rule one need not worry about the diluted spray, but has to exercise caution in handling the concentrates. Wear protective clothing and a respirator when preparing the diluted mixture in the spray tank.

Let's consider a prominent soluble fungicide which has been around for many years and has a startlingly high toxicity. Yet you have used it successfully for a couple of decades without any fear that it could have been hazardous. This product is Actidione TGF - an antibiotic! Antibiotics are safe; haven't we all taken antibiotics, prescribed by doctors? Well, this one has a LD50 of 2 mg. per kg.! But, Upjohn, the manufacturer, did an excellent job of formulating the product so that you received it in a form that was non-poisonous. A product must bear a skull and crossbones label if the formulated material has an LD50 50. By diluting Actidione with inerts so that you received a 2% mixture the formulated product then had an LD50 100. You, in turn were asked to dilute the product with water at the rate of 1 oz. per 3 gallons of water. The diluted spray then had an LD50 37,500.

This example emphasizes the importance of exercising great care and caution with the formulated concentrate and at the same time demonstrates the minimal danger of handling the diluted spray. Actidione was taken off the market because EPA challenged the risk factor and Nor-Am made the business decision to drop the product.

Following is a table providing you with LD50's of all the pesticides available to the Golf Course Superintendent. This data was taken from W.T. Thomson's Agricultural Chemicals 1985-86 Revision. Bear in mind that the LD50 refers to the pure active ingredient so that if you want the LD50 of the formulated product you divide by the percentage of active. For example, Caddy is 20% Cadmium Chloride solution. Since Cadmium Chloride has an LD50 88, dividing by 0.2, the LD50 of Caddy becomes 440.

Nothing in my talk should be interpreted as a suggestion that you can ignore safety in using pesticides. Read and follow the label instructions carefully! Read the Material Safety Data Sheet carefully! Follow the manufacturers recommendations on personal protective equipment required. It is better to be overly safe than sorry.

CONTINUED NEXT COLUMN

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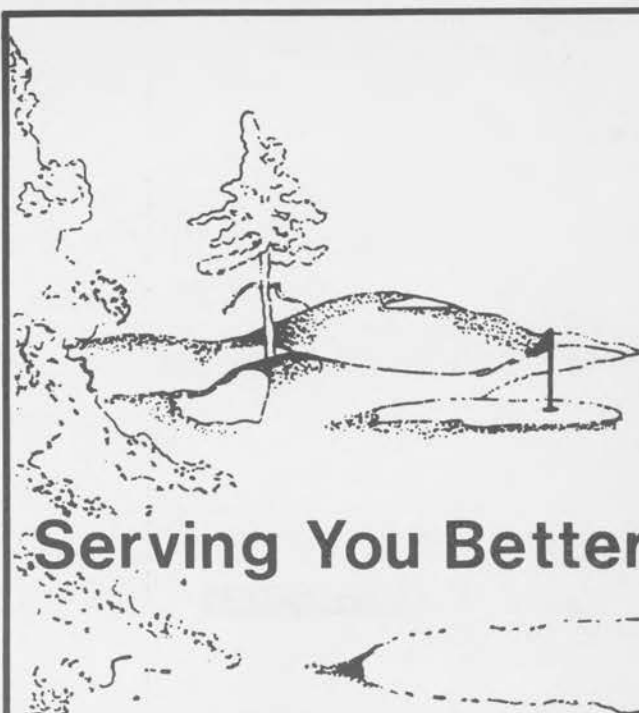
DASANIT	4
NEMACUR	15
OFTANOL	32
MOCAP	62
DURSBAN	135
DIAZONON	300
PROXOL	450
SEVIN	500
METHOXYCHLOR	6000

### HERBICIDES

PARAQUAT	150
2,4DP	300
2,4-D	375
DSMA	600
MSMA	700
BETASAN	770
MCPP	930
DICAMBA	1040
PENDIMETHALIN	1250
DACTHAL	3000
BALAN	10,000

### FUNGICIDES

ACTIDIONE	2
PMAS	40
CADDY	88
BAYLETON	363
CADMINATE	660
THIRAM	780
BANNER	1517
KOBAN	2000
RUGIGAN	2500
CHIPCO 26019	3500
DYRENE	5000
ALLIETTE	5800
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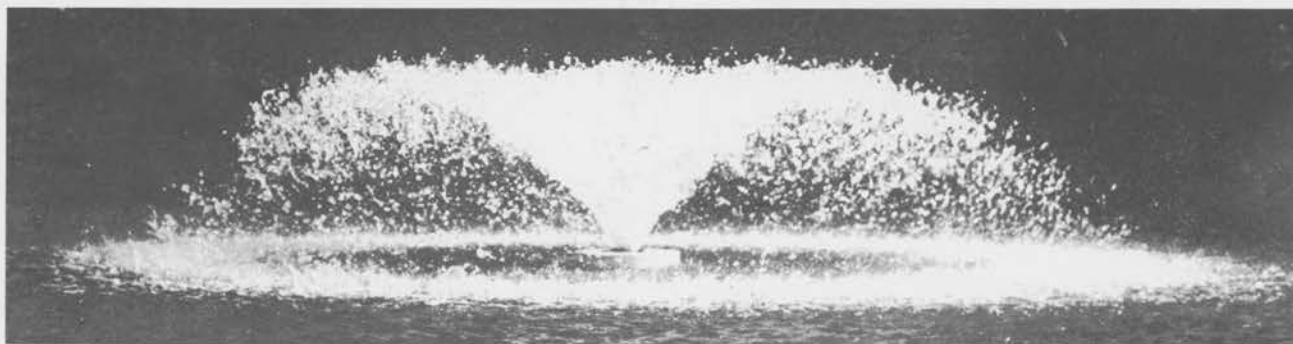
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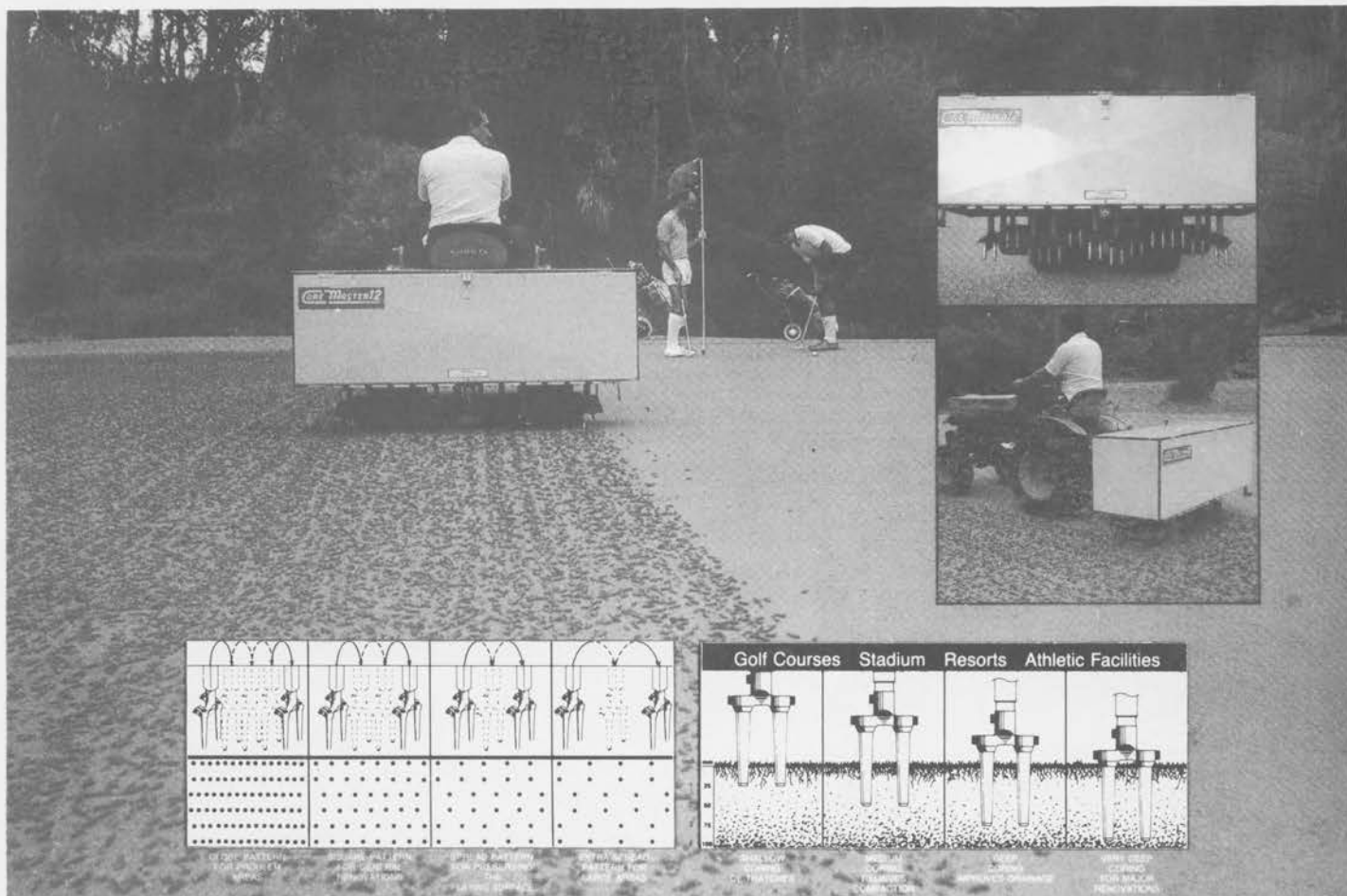
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