

Sci

March 1973



SERIALS

1973

MICHIGAN STATE UNIVERSITY LIBRARIES

SCIENCE ROOM USE ONLY

A Patch of Green

LIBRARY - YVARELL
COURA .EN ,ORIGAI .E

Official Publication of the
Michigan & Border Cities Golf Course Superintendents Association

LET THE EXPERTS AT J. J. DILL HELP YOU
MAKE IT
"a green year"

**BUY DIRECT • SAVE MONEY
GET FAST DELIVERIES**

Your budget will buy more — in chemicals and equipment to apply them — when you deal direct with Dill. As manufacturer, formulator and/or distributor, Dill can save you money. Consistently.

Dill offers the most complete line of quality turf chemicals in the midwest . . . complete with application instructions.



Call Dill collect for information, prices, and to place orders. (616) 349-7755

TURF CARE
TIP OF THE MONTH

FREE

VALUABLE CATALOG

Latest edition, up-dated in all respects. Contains a wealth of information. Lists and describes hundreds of chemicals, pesticides and equipment for maintenance of grounds and waters of golf courses, parks, recreation areas and resorts.



J. J. DILL COMPANY Box 788 KALAMAZOO, MI 49005 Dept. PG-4

Gentlemen: Please send your latest Turf Care Catalog.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Dill is headquarters for complete lines of: • Fungicides • Herbicides • Algaecides • Insecticides • Foggers • Sprayers.

PROMPT DELIVERY throughout southern Michigan and northwestern Ohio, including weekly shipment via our trucks covering the Detroit, Flint, Lansing and Toledo areas.

STILL WINTER

Order your snow mold control chemicals now! Don't wait, call us for newest developments and recommendations.

"A Patch of Green"

31823 Utica Road, Fraser, Michigan 48026
(313) 293-3540

Published monthly by the Michigan and
Border Cities Golf Course Superintendents
Association

Circulation 1,050

Ted Woehrle, Oakland Hills C.C.
Clem Wolfrom, Detroit Golf Club

Co-Editors

Blakeman Publications
Graphic Arts/Circulation

ADVERTISING RATES

Double Page Spread.....	*100.00
Back Outside Page.....	65.00
Full Page.....	55.00
Half Page.....	35.00
Quarter Page.....	25.00
Eighth Page.....	12.50
Sixteenth Page.....	7.50
Classified Ad (per inch).....	5.00

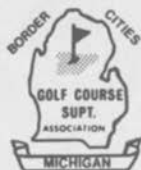
DISCOUNT RATES

One Year 10%

THIS MONTH'S ADVERTISERS

Agrico (Bud Camp)
American Research Corp.
Century Supply Corp.
Certified Laboratories, Inc.
Cowbell Seeds, Inc.
J.J. Dill Company
Gunter Co., Inc.
Lakeshore Equipment
Lawn Equipment Corp.
W.F. Miller Garden
Miller Sprinkling Systems (Sisco)
Milwaukee Sewerage Comm.
Rhodia Chipco Products
O.M. Scott & Sons Company
Terminal Sales Corp.
Turfgrass, Inc. (Agrico)
Turf Supplies, Inc.
Wilkie Turf Equipment Co.

MICHIGAN AND BORDER CITIES GOLF COURSE SUPERINTENDENTS ASSOCIATION



PRESIDENT

TED WOehrLE
OAKLAND HILLS COUNTRY CLUB
Birmingham, Michigan
Off. 644-8352, Res. 646-8512

VICE PRESIDENT

GERALD GILL
TAM-O-SHANTER COUNTRY CLUB
3466 Walnut Lake Road
Orchard Lake, Michigan
Off. and Res. 626-8325

SECRETARY-TREASURER

BOB HOPE
KNOLLWOOD COUNTRY CLUB
6330 Inkster Road
Birmingham, Michigan
Off. and Res. 626-6062

BOARD OF DIRECTORS

C. H. WOLFROM, JR.
DETROIT GOLF CLUB
Detroit, Michigan
530 Kendry (Res.)

ALBERT KALTZ
MAPLE LANE GOLF CLUB
Sterling Hgts., Michigan
Off. 268-2130, Res. 463-2892

ROGER GILL
ROYAL OAK GOLF CLUB
Royal Oak, Michigan
Off. 549-7125, Res. 578-6859

GEORGE W. PRIESKORN
BURROUGHS FARMS GOLF CLUB
5341 Brighton Road (Res.)
Brighton, Michigan 48116
Res. 227-1381

WILLIAM W. MILNE
COUNTRY CLUB OF DETROIT
220 C. C. Drive
Grosse Pointe Farms, Michigan
Off. 881-8000, Res. 886-9319

DONALD LA FOND
BAY POINTE GOLF CLUB
3635 Union Lake Road
Union Lake, Michigan
Res. 363-1142

PRESIDENT EMERITUS

WARD SWANSON
PLUM HOLLOW GOLF CLUB
29642 Westfield (Res.)
Livonia, Michigan
Off. 352-2438, Res. 421-8049

The President's Message

We are making a change in our circulation coverage with this issue of the Patch of Green. An additional 350 copies are being sent to the Chairmen of the Greens Committees and to their Committee members at all member Clubs of the Golf Association of Michigan.



This is a new policy that will be tried for a period of time. There are several reasons for this change. One, we feel that much of the information contained in our publication will be of value to your Chairmen. He will better

understand our problems if he can read about them. We will also be able to get to him with explanations when we run into bad conditions on the courses in the area.

We also cover the work that is being done at Michigan State and this will help disseminate this information. We need all the supporters of turf that we can get and this action should help to do this.

Many of our National programs are discussed here in the Patch of Green and they too need some supporters. We hope to gain a few new members.

Last but not least we need supporters in our local endeavors and we hope to gain support in many of our projects such as National Golf Day and the annual golf outing used to raise funds for turf research.

Your President,
Ted Woehrle

YOU'RE ENTITLED TO THE BEST
Call Us For Your Needs

**GOLF COURSE
CHEMICALS**

(You'll get it — and more!)

**Herb Carson
Marvin Rothman**

AMERICAN RESEARCH CORP.

11840 MAYFIELD AVE.
LIVONIA, MICH 48150
(313) 522-2400
Ext. 2401/2402

GAM Moves Headquarters

On March 1, the Golf Association of Michigan moved its Headquarters from downtown Detroit out to 29563 Northwest Highway, Southfield, Michigan, 48076. The telephone number is 313 353-0330.

They are sharing the office complex with the PGA, Michigan Section. Their address is the same as the GAM but their telephone is different. If you want the PGA office, dial 313 356-7272

There is additional office space available for allied associations that may want to use the facility from time to time for meetings and perhaps the office equipment when available.

We welcome the GAM out to the golfing community. Good Luck.



Protect Against Late Winter Injury

Keep the golfers off soft greens or you may end up with a green looking like the green above.

This is the time of year to protect your course from late winter injury.

The two pictures accompanying this note are to illustrate some of the things we should do if there is a sudden thaw of the ice and snow that may still be around in certain parts of Michigan. Get the excess water off the turf to help prevent a soaking of the tissue and possibly setting the stage for cold temperature kill if the temperatures drop suddenly. The other picture is to remind you to keep the play off the greens if conditions are too soft for play or you may end up with greens looking something like this. This picture was taken at a course where the players decided to play despite the requests made by the Superintendent. The greens were



never smooth again for the remainder of the season. Just a reminder.

Before you can discipline others successfully, you must discipline yourself.

— William Feather

Welcome All Readers

Joint Meeting with PGA and GAM

On April 4, 1973, we will be holding a joint meeting with other golf oriented associations in Michigan. We will be meeting with the PGA members of the Michigan Section and the GAM representatives from the member Clubs here in Michigan. The meeting will concern a short Irrigation Symposium covering the following subjects and speakers:

Introductions of speakers by Ted Woehrlé, President of the Michigan and Border Cities Golf Course Superintendents Association and the Golf Course Superintendent at Oakland Hills, Birmingham, the host Club for this meeting.

Why Water - (The Agronomics): Dr. James Beard, MSU turf expert

The frustrations of the Superintendent: Bill Milne, Superintendent Country Club of Detroit

What irrigation equipment is being used today in the Michigan area: James Vince, Sprinkler Irrigation Supply Company, Royal Oak, Michigan

If we change to Automation, How do we go about it?: Ed Shoemaker, Rainbird Manufacturing Corp., Glendora, California

Lessons we have learned: Walter Wilkie, Wilkie Turf Equipment Co., Southfield, Michigan

The Economics of Automatic Irrigation: Ernie Hodas, Century Supply Corp., Berkley, Michigan

Questions and Answers to follow.

This meeting is on a Wednesday evening. Cocktails will start at 6:00 and dinner will be served by 6:30.

The whole evening should be very educational. Please try to attend and bring your Greens Chairman. It isn't necessary to come for dinner but we certainly would like to see you there about 8:00 PM for the meeting. Please make reservations through our Association or by using the card sent by the GAM.

Remember, Oakland Hills Country Club, Wednesday, April 4, 1973. Cocktails and dinner followed by the meeting.

Although men are accused for not knowing their own weakness, yet, perhaps, as few know their own strength. It is in men as in soils, where sometimes there is a vein of gold which the owner knows not of.

— Jonathon Swift



**GOLF COURSE
CONSTRUCTION**

GUNTER CO., INC.
D-12495 DIXIE HWY.
HOLLY, MICHIGAN
313-634-4812

COMPLETE GOLF COURSE CONST.
REMODELING EXISTING COURSES
IRRIGATION SYSTEM INSTALLATION
CONVERSION OF EXISTING SYSTEMS



Agrico
puts you
eighteen
up on the
competition,
before the
competition
even
begins

Agrico Country Club fertilizers will help you get the most out of your golf course . . . the most people, the most wear, the most green. We've spent a lot of time developing a custom-tailored program for your golf course. We sincerely believe that it's the best there is. If you want a greener, thicker golf course, use Agrico. And you can stay eighteen up all year long.



Agrico Representative:
Bud Camp Phone (219) 485-6828

See your Agrico Country Club Products Distributor



Carl's Comments

by CARL H. SCHWARTZKOPF

Mid-Continent Agronomist, USGA - Green Section

With the metric system being used in turfgrass research and many of the results being given in publications and at conferences in kilograms per hectare or kilograms per square meter, it can be a little confusing, but it need not be.

The metric system is based on units of ten, thereby making it easier to work with than the present system of inches, feet, yards, miles or quarts and gallons. Since the time is coming, possibly sooner than you think, when the metric system will be used instead of the present method of measuring, the following conversion units may be helpful in your understanding of the metric system:

1 yard =	.914 meters
1 kilogram (kg) =	2.2 lb.
1 hectare (ha) =	2.5 acres
1 acre (43,560 ft ²) =	.4 hectares
1 kg/ha =	.9 lb/A
10 kg/ha =	9.0 lb/A
1 meter =	39.4 inches
1 kilometer =	.6 miles
3 ton/acre =	7000 kg/ha
4 ton/acre =	9000 kg/ha

How many kg/ha of fertilizer did you apply the last time the fairways were fertilized?

The metric system will not only be used by Golf Course Superintendents, but by club members and your family as well. Imagine a member saying he missed a 40 cm putt on number 14 for a birdie, or your wife telling the butcher she needs a roast that weighs 2 kilograms, only to have your son come home from little league to say he hit a home run that was 55 meters long. It could happen in the near future!

Cost of Best Job

A Superintendent produces a product that is measured in terms of golfer satisfaction, a difficult standard to measure. The result, in terms of specifying appropriate costs levels is either to do the "best" job with whatever funds are budgeted or to do the "best" job and see how much it costs.

The problem focuses on determining this range; to establish a reasonable budget level; determine how to allocate among cultural operations, and then produce the "best" job.

Boils down to the turf user, his motivation and his willingness to pay.

RAIN  BIRD

IRRIGATION SYSTEMS.

SPECIFICALLY DESIGNED TO MEET THE MOST DEMANDING WATERING REQUIREMENTS OF ANY GOLF COURSE.

Century
Supply Corp.

WHOLESALE DISTRIBUTORS
(313) 543-7730

3890 WEST ELEVEN MILE ROAD
BERKLEY, MICHIGAN 48072

Utilizing Earthworms

by TED WOEHRLE

Since moving to Oakland Hills Country Club in the Detroit area in 1968, I have noticed that growing *Poa annua* is not the problem that it was in the Chicago area. At first I believed that it was entirely due to porous sandy soil and the good drainage. These, of course, are very important, and no doubt have a great deal to do with the success of growing healthy *Poa*, but I also had some sandy, well-drained areas in Chicago, and I couldn't keep *Poa* during these times of stress.

In taking a closer look at a few other variables, I noticed the absence of thatch - I noticed deep roots - more dollarspot because of leaching - an enormous earthworm population, and different cultural practices used in the past in comparison to Chicago. This reminds me of a question I used to ask many of my fellow superintendents in Chicago - WHICH CAME FIRST, POOR SOIL OR POOR GRASS? Did we ruin our soils with poor management practices of over-watering, over-fertilizing, and the over-zealous use of pest controls?

First, we killed grass by over-watering - a great thing this irrigation. Wet soils and grass make a great place for diseases to do their dirty work. The grass dies, the weeds come in and, of course, *Poa annua* is right there with the rest of the weeds. We killed the cutworms and other insects, and inadvertently killed our old friend - the earthworm.

The Oakland Hills C.C. have almost a pure *Poa annua* turf. We've killed all the other weeds chemically - dandelions, chickweed, knotweed and clover, along with crabgrass and goosegrass.

From what I understand about the history of my Club, we were about to have the 1951 U.S. Open Golf Tournament, and it was a disastrous year for turf. Several members went to Canada and purchased enough *Poa annua* to seed all the fairways. They got good germination, good survival, and the Club ended up with the finest playing fairways. To this day we still have good *Poa* fairways. Sure, we lose some turf to winter desiccation or ice damage, but seldom do we lose *Poa* in the summer.

A cross-section of a turf sample has deep white roots on the *Poa* almost at any time during the summer, usually around 5 or 6 inches deep. There just isn't any thatch. In checking past records insecticides have rarely been used. There is a great abundance of earthworms - (Polish aerifiers as we call them).

I became interested and began asking questions, reading some old textbooks. Then Jack Welch of Scotts sent me a collection of research papers from around the world, and I was amazed to find out that these little critters are indeed the most important tool we have on the course. Dr. Jack Butler at the University of Illinois, and the Turf Department of Michigan State University have been doing thatch studies, including the effects that the earthworms have on the control of it.

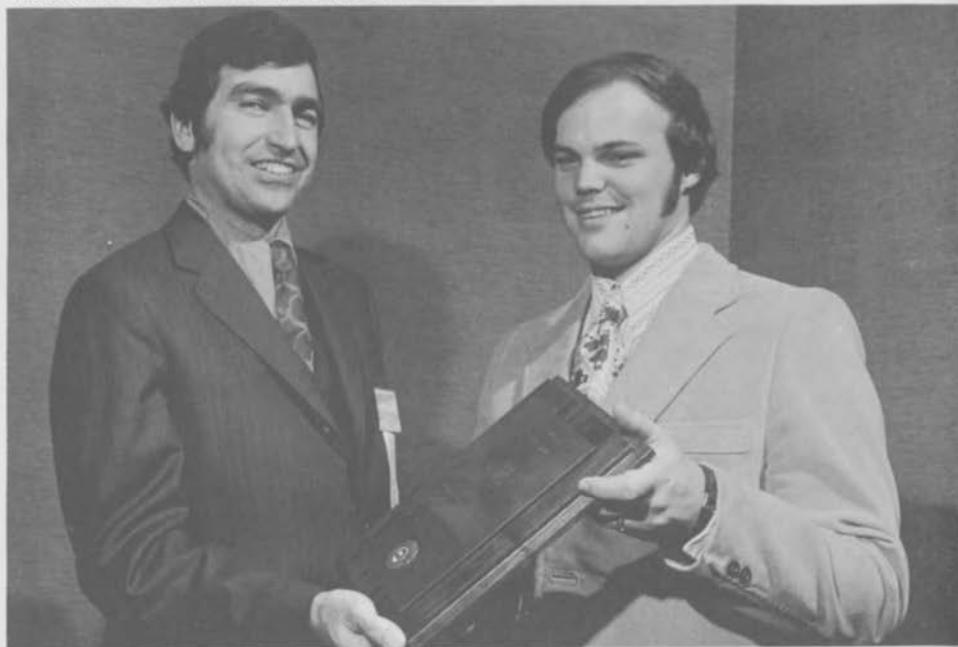
Let me take you on a little trip through the land of the worm by reviewing some of the findings that have come about by scientists around the world. Incidentally, most of the work on worms has been done in England, Germany, Russia, and Australia.

Continued on Page 13

NORMAN W. KRAMER AWARD

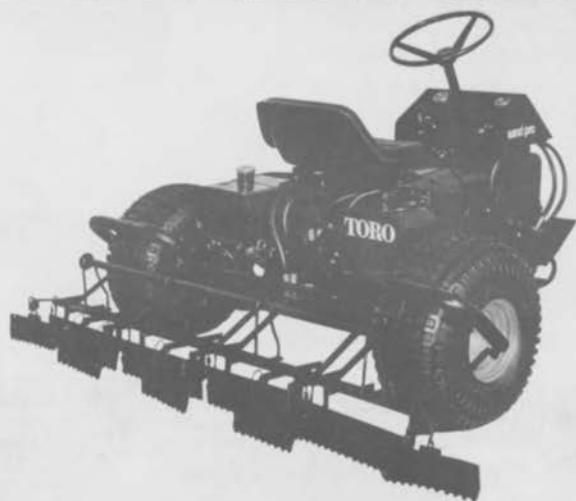


President Clem Wolfrom, on left, presenting the NORM W. KRAMER AWARD to the top scholastic student in turf, Roger Southworth.



David Heiss, Director of the Michigan Turfgrass Foundation, on left, presenting the OUTSTANDING STUDENT AWARD to Don Ratcliff, a second year turf student.

THE NEW TORO SANDPRO



The Toro Sandpro *more* than cuts trap maintenance time in half. Because one man with a Sandpro can rake an average of 15 traps an hour. Easily.

That means your whole course is finished in four to five hours.

And you've got better looking traps in the bargain — cleaner and dressier.

The *professional* trap maintenance machine is here at last, and it's called the Sandpro!

Wilkie Turf Equipment Company
The Anderson Division

23455 TELEGRAPH RD., SOUTHFIELD, MICH. 48075 • PHONE: 353-5300

**SISCO
SALESMEN
at your
SERVICE**



MIKE BYRNES has been on the Sisco sales team for seven years and has had specialized training in field installation of irrigation systems. Any questions you may have regarding piping products, sprinklers and valves in your irrigation system, dial for Mike at 548-7272.

Sprinkler Irrigation Supply Company,
Division of A. J. Miller, Inc., 1316 N. Campbell Rd.,
Royal Oak, Mich. 48067, (313) 548-7272
Chicago (312) 629-7730, Kalamazoo (616) 381-0506,
Columbus, Ohio (614) 888-1782

Sisco
ENGINEERED RAIN

ARE YOU INTERESTED IN JOINING THE
MICHIGAN AND BORDER
CITIES GOLF COURSE
SUPERINTENDENTS
ASSOCIATION?



ALBERT KALTZ
Maple Lane Golf Club
Sterling Heights, Michigan 48077
Phone:
Off. 268-2130, Res. 463-2892

Fill in the questionnaire below and mail to:

DATE _____

NAME OF INTERESTED PERSON _____

MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

Or you may contact the next golf course supplier who calls on you and give him the information needed for application.

Utilizing Earthworms Cont.

As early as 1882, Darwin recognized the fact that earthworms play a part in the formations of agricultural soils. Since that time, some investigations have been made on the effects of earthworm activity on the physical, biological properties of the soil. Workers concluded that the air capacity of soils was increased by earthworm activity, and the aerobic processes, especially nitrification, were stimulated.

Earthworms eat soil and organic matter, excrete casts, and make holes, thereby perforating and granulating the soil. Aside from the pure mechanical aspects of earthworm activity, it has been shown that the water stability of soil aggregates is increased in soil worked by worms.

It appears probable that earthworms are important in maintaining good soil physical condition; thus, water infiltration rates are higher (3 to 4 times

more rapid) where they occur in large numbers. Hopp and Hopkins report several populations for ordinary field conditions of over 1/2 million worms per acre.

Studies show that it normally takes a worm about 1 and 1/2 hours to burrow into the soil. 22% of the surface four inches moves through the earthworm's bodies each year. Up to 25 tons of dry weight per acre of earthworm casts are deposited annually on the soil surface. Not quite equivalent to 1/4 inch of top-dressing per year.

Worms are prolific reproducers. The average worm has 50 to 60 cocoons, or hatching, per life span, mostly during the spring. The heaviest worm populations are found in spring and early summer. After July 1 there is a steady decrease. After October 1 we noticed the population again increases. The eggs are hatched during the summer.

Continued on Page 16



TURFGRASS, INC.

SOUTH LYON, MICHIGAN 48178

Phone: Area 313 437-1427

Wandering Tee Shots

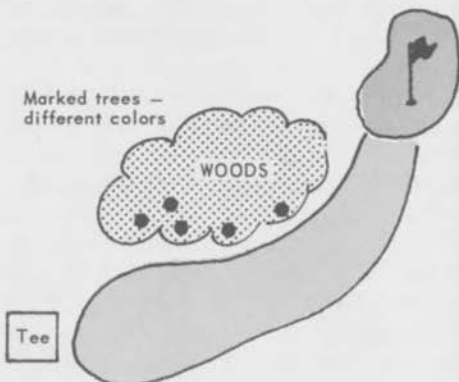
by BILL MADIGAN

With the use of electric carts and fewer caddies used on golf courses today; play has slowed somewhat due to misplaced shots and players not being able to locate their golf balls, especially on courses with a high amount of play from non-members or public play.

The reference system of locating golf balls can be a problem in densely wooded areas. The player, watching his shot, and using a tree or object as a point of reference for location, can have a problem when he gets into his cart and approaches the area where his shot landed. His visual perspective changes and he can have a problem locating his reference point.

In order to aid this player, I suggest using something to offer this player a better reference point. In wooded areas, trees could be marked with different colors that are visual from the tee. Paint could be used or 6" plastic bands placed around the tree at a reasonable height, 6 - 7 feet. They could be marked vertically using high visibility colors that don't interfere with course rules and aid these players. Only a few are needed

in the primary drop zones, parallel or perpendicular to the fairway. Such as:



This is one of the few small things that we, as superintendents, could do to speed up play on our courses.

CLASSIFIED ADS

IRRIGATION SALESMAN

Fine opportunity with established irrigation equipment distributor in several Midwest areas. Salary, commission, expenses and good benefits. Send resume to, or call Austin Miller at (313) 548-7272.

SPRINKLER IRRIGATION SUPPLY CO.

1316 N. Campbell Road
Royal Oak, Michigan 48067

**No synthetically produced fertilizer can compare with
MILORGANITE**

Golf Courses Use More

MILORGANITE

Than Any Other Fertilizer



TERMINAL SALES CORP.

12871 EATON AVE.
DETROIT, MICH. 48227
(313) 491-0606

Teddy Temper

We can't do anything about Teddy Temper.
But when weed, insects and disease show up on your
turf, we have something for almost everyone of them.

Chipco Turf Kleen. Chipco Turf Herbicide MCPP.
SUP'R-FLO Maneb Flowable. Chipco Microgreen Liquid.
Chip-Cal Granular. And Chipco Spot Kleen.

Everything to help keep your greens (and fairways) in
the pink.

From Rhodia Chipco Products.



"He's not just another duffer. He's chairman of the greens committee."



Utilizing Earthworms Cont.

Most of the worms found in the fall are immature worms.

Other Factors Affecting Population

Soil pH seems to affect the earthworm population. Few worms are found in very acid soil (lower than pH 5), and this could be nervous sensitivity to soil acidity, or of nutritional requirements which acid soils fail to meet. It has been shown that worms tend to neutralize soil pH. They can make acid soils more alkaline, or they can make alkaline soils more acid.

NOW, A NATURAL QUESTION

Do earthworms increase soil productivity, or merely live in greater abundance in the better soils without contributing to productivity? It has actually been proven that where poor soils have been inoculated with worms, there was considerable improvement in the soil in a short period of time - 2 years.

Here are other factors affecting the worm population. A 35 year study in England showed that of 16,000 worms examined, there were 10 species found of which 5 species made up 95% of the total. Their plots have been treated with six cultural practices, or factors alone, and in combination with each other.

Sulfate of ammonia and sulfate of iron both decrease worm populations slightly. When applied in combination, they become synergistic in nature, and almost eliminate the worms completely. Lime applications, topdressing with organic matter, and spiking or aerifying improve the population immensely. Also, superphosphates improve the population. They still use Mowroh Meal on greens to thin populations, but not kill them completely. Some herbicides kill worms - not certain how - perhaps killing food supplies.

Insecticides controlling worms -

Continued on Next Page

Remember . . . How Good Your Golf Course Looked
When You Last Used . . .

G & F ?

Well Borden's Famous G & F (Greens & Fairways)
is Available in Michigan Again for '73 . . .

**IN NOT JUST ONE, BUT SIX G & F's - TO GIVE YOU ULTRA-MODERN,
HIGH ANALYSIS, NON-BURNING FERTILIZERS IN SUPER-UNIFORM,
DUST-FREE PELLETS.**

GREENS & FAIRWAYS	16-5-11, 50% Organic with all needed trace elements.
"THE GREENSKEEPER"	13-3-9, 65% Organic, Fine Texture, all trace elements.
GREENS & FAIRWAYS	16-8-8, All Mineral, Uniform Fairway Pellets.
GREENS & FAIRWAYS	16-8-8, 25% Organic with all needed trace elements.
GREENS & FAIRWAYS	15-0-15, "No Phos", with trace elements.
GREENS & FAIRWAYS	10-0-0, All Natural Organic, Odor Free leather tankage.

LIBERAL QUANTITY AND EARLY SHIPMENT DISCOUNTS

Turf Supplies, Inc. 6900 PARDEE ROAD, TAYLOR, MICHIGAN 48180
PHONE 291-1200

Utilizing Earthworms Cont.

Carbaryl - quick results, poor persistence

Chlordane - slow reacting, but quite persistent

Dieldrin and Aldrin - useful

Lead and calcium arsenate - good long lasting control

If you want to thin populations, use chlordane up to 4 & 5 lbs/A, and in two years you will be back to normal.

In conclusion, earthworms do very definitely improve soil structure by increasing aggregate content and porosity, thus facilitating aeration, water absorption, root penetration and drainage. The main benefit, chemically and biologically, of earthworm activity is the digestion of plant material and its intimate mixing with mineral soils.

OSHA Guide for Chain Saw Safety

1. Pick the proper saw for the job.
2. Have a thorough knowledge of the operating procedures for the saw you intend to use, and be sure you can make normal operating adjustments.
3. Be sure the saw is properly adjusted and ready to run.
 - a. All screws, nuts and bolts should be snug.
 - b. The handles should be in good condition.
 - c. The muffler must be operational.
 - d. The chain must be sharp and properly adjusted.
4. Use the correct fuel mix and chain oil.
5. Be sure your fuel can has a prominent label and a filler hose.
6. Dress properly with snug clothing, safety shoes, hard hat, gloves, eye guards, and hearing protectors.
7. Make sure you know cutting techniques before you begin.

Continued on Next Page

CALL LAKESHORE COLLECT

(216) 651-1600

FOR ALL YOUR TURFGRASS SUPPLIES

- CHECK OUR PRICES -
- QUOTATIONS ON REQUEST -

LAKESHORE
EQUIPMENT & SUPPLY CO.
10237 BEREA ROAD
CLEVELAND, OHIO 44102

You Can
RELY ON



LABORATORIES, INC.

**FOR TURF CHEMICALS CALL
ARNIE COLLENS**

27848 KENDALLWOOD
FARMINGTON, MICH 48024
PHONE: (313) 477-4595

**America's
foremost
turf fertilizer**



TURFGRASS SPECIALISTS

TWO COMPLETE SEED INVENTORIES

Merion
Baron
Winter Green

Fylking
Nugget
Norlea

WAYLAND
MICHIGAN 49348

BRIGHTON
MICHIGAN 48116

*Gold Tag Sod Quality Blends
Special Mixes for your particular need*

COWBELL SEEDS, INCORPORATED
Telephone • Wayland 616-792-2291 • Brighton 313-229-6169
Grand Rapids 616-877-4814

Turf Care the GRANULAR WAY

**Controlled Release Fertilizers
Fertilizer - Pesticide Combinations
Fungicides/Herbicides/Insecticides**

—●—
**Granular Spreaders
LELY / SCOTTS / GANDY**

—●—
**Turfgrass Seed
High Quality / Wide Selection**



Charles Croley
1120 Jefferson Street
Lapeer, Michigan 48446
Phone: 313/664-8266

*It's unwise to pay too much, but
it's worse to pay too little. When
you pay too much, you lose a little
money — that is all. When you pay
too little, you sometimes lose
everything, because the thing you
bought was incapable of doing the
thing it was bought to do.*

— John Ruskin

OSHA Chain Saw Safety Cont.

8. Inspect the job before you begin to work, and establish an escape route.
9. Clean up debris before working if it poses a hazard.
10. Make sure other workers stay clear of the saw operator.
11. Refuel safety - shut off the saw, choose a clean area, do not smoke and keep the fuel off the muffler. Move away from the refueling area before starting the saw.
12. Use extreme care when using a saw aloft in a tree.
13. Don't rush and stay alert.

The Average American

Head held high stands five feet, eight
Hundred and a half is his average
weight

Faces his duties with never a frown
A credit to his nation, his state and
his town

Called to the colors when the need was
most

Served with honor and dignity though
nothing to boast

A God-fearing man, his fill of confla-
gration

Proud of his heritage, his state and
his nation

Now with a wife and four kids for
which to provide

A mortgage on the home in which they
reside

A family and home of which he is
proud

With no outstanding features, just one
of a crowd.

When the flag passes by, he stands
erect

Hand over heart with proper respect

His claim to fame is not material worth

His type is known as "the salt of the
earth."

EARL LOGAN
23871 Manistee
Oak Park, Michigan

TRAPMASTER

THE LABOR-SAVER

THE TRAPMASTER TRAP
RAKE DOES THE WORK
OF 3 OR 4 MEN.



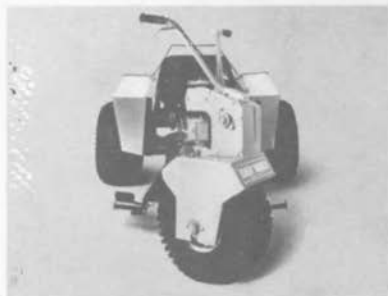
CALL FOR A DEMONSTRATION
(313) 398-3636



LAWN EQUIPMENT CORPORATION
520 WEST 11 MILE ROAD
ROYAL OAK, MICHIGAN 48068

- LESS THAN 3 FT.
TURNING RADIUS.
- ALL FOUR WHEELS
DRIVE.
- 8 H.P. BRIGGS &
STRATTON ENGINE.
- 500 LBS. IN WEIGHT.
- 5 FT. FULL-FLEX RAKE.

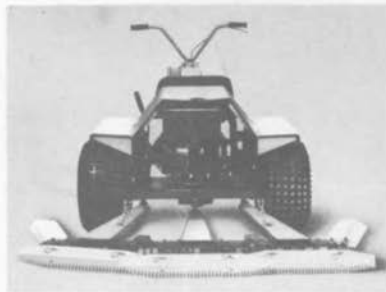
SMITHCO inc.



Minimum turning radius

EASY RIDER...

EASY RIDER—Model No. ER-85



Adjustable 5' rake



Best bank-climbing ability

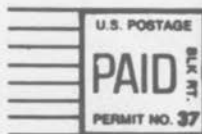
the fastest and most maneuverable trap rake in the world. Turns on a dime, like a tricycle, with full power in all three wheels!

W. F. Miller GARDEN AND LAWN EQUIPMENT COMPANY

1593 S. WOODWARD AVE. BIRMINGHAM, MICHIGAN 48011

TELEPHONE: (313) 647-7700

"A Patch of Green"
31823 UTICA ROAD
FRASER, MICHIGAN 48026



MICHIGAN STATE UNIVERSITY
LIBRARY - SERIALS
E. LANSING, MI. 48823