

September 1976

BORDER

ERIALS

CITIES

1976

GOLF COURSE  
SUPT.  
ASSOCIATION

MICHIGAN

# A PATCH of GREEN

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.



**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.



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.

**FALL/WINTER . . .**

Beat rising prices!  
Check your supply and order **NOW!** Don't be caught next spring without needed chemicals for early and efficient application.

**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 \_\_\_\_\_



## **MICHIGAN AND BORDER CITIES GOLF COURSE SUPERINTENDENTS ASSOCIATION**

### **PRESIDENT**

GEORGE W. PRIESKORN  
BURROUGHS FARM GOLF CLUB  
5341 Brighton Road  
Brighton, Michigan 48116  
Off. 227-1381, Res. 229-9437

### **VICE PRESIDENT**

CLEM WOLFOM  
DETROIT GOLF CLUB  
530 Kendry  
Bloomfield Hills, Michigan 48013  
Off. 345-4589, Res. 338-6375

### **SECRETARY-TREASURER**

ROBERT HOPE, CGCS  
THE LOCHMOOR CLUB  
20740 Marter Road  
Grosse Pointe Woods, Michigan 48236  
Off. 881-8112, Res. 884-8684

### **BOARD OF DIRECTORS**

ROGER GILL  
PINE LAKE COUNTRY CLUB  
1894 Alton Circle  
Walled Lake, Michigan 48088  
Off. 681-1322, Res. 264-6931

DON LAFOND  
BAY POINTE GOLF CLUB  
3635 Union Lake Road  
Union Lake, Michigan 48085  
Off. 363-0144, Res. 363-1142

BRUCE WOLFOM, CGCS  
BARTON HILLS COUNTRY CLUB  
639 Barber Street  
Ann Arbor, Michigan 48105  
Off. 662-8359, Res. 663-9213

JAMES TIMMERMAN  
ORCHARD LAKE COUNTRY CLUB  
2474 Lafay  
Orchard Lake, Michigan 48033  
Off. 682-2150, Res. 682-7234

WARD SWANSON  
PLUM HOLLOW GOLF CLUB  
29642 Westfield  
Livonia, Michigan 48150  
Off. 352-2436, Res. 421-8049

WALTER TROMBLEY, CGCS  
ARROWHEAD GOLF CLUB  
3130 Orion Road  
Lake Orion, Michigan 48035  
Off. 373-5240, Res. 693-2924

### **PRESIDENT EMERITUS**

GERALD GILL  
TAM-O-SHANTER COUNTRY CLUB  
3466 Walnut Lake Road  
Orchard Lake, Michigan 48038  
Off. 626-8325, Res. 851-7904

## **"A PATCH OF GREEN"**

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

*Published monthly by the*  
**MICHIGAN AND BORDER CITIES GOLF  
COURSE SUPERINTENDENTS ASSOC.**

Circulation 1,250

Ted Woehrle, CGCS, Oakland Hills C.C.  
Clem Wolfom, Detroit Golf Club  
*Co-Editors*

*Printed At*  
**BLAKEMAN PRINTING COMPANY**  
Fraser, Michigan

### **MONTHLY ADVERTISING RATES**

Double Page Spread.....	\$100.00
Back Outside Page.....	85.00
Full Page.....	55.00
Half Page.....	35.00
Quarter Page.....	25.00
Elghth Page.....	12.50
Sixteenth Page.....	7.50
Classified Ad (per column inch).....	5.00

DISCOUNT RATES: One Year 10%

## **THIS MONTH'S ADVERTISERS**

Alfco Inc.  
Century Supply Corporation  
Chemagro  
Chipman Division of Rhodia  
W.A. Cleary Corporation  
J.J. Dill Company  
FDS Fertilizers, Inc.  
Golf Car Distributors  
Huggett Sod Farm, Inc.  
Lakeshore Equipment Corporation  
Lawn Equipment Corporation  
Lebanon/Agrico  
W.F. Miller Garden Company  
O.M. Scott & Sons Company  
Sprinkler Irrigation Supply (Sisco)  
Terminal Sales Corporation  
Turfgrass, Inc.  
Turf Supplies, Inc.  
USS Agri-Chemicals  
Wilkie Turf Equipment Company



## Keep your turf in top playing condition. Trust it to Chemagro.

\***NEMACUR 15% Granular** is a fast-acting nematicide that provides months of residual control of all major turf nematodes. Requires no injection—apply with a granular applicator and water in.

\***DYRENE fungicide** controls dollar spot, plus all *Helminthosporium* diseases—melting out, leaf blight, leaf spot. Also controls copper spot, stem rust, brown patch and snow mold. Its small cost offsets the big cost of repairing after disease gets started.

\***DEXON fungicide.** Stops *Pythium*. This non-mercurial fungicide is also extremely effective in preventive programs to control cottony blight. It's compatible with other turf pesticides.

\***DASANIT nematicide/insecticide.** Broadcast DASANIT 15% Granular for control of microscopic nematodes that destroy turf root systems, cause grass seedlings to wither and die. Requires no injection that makes turf unplayable for weeks during spring and summer. Easily applied with any conventional granular insecticide applicator. Thorough watering leaches nematicide into root zone for maximum control.

\***DYLOX insecticide.** This fast-acting selective insecticide gives quick

clean up of sod webworms. Dissolves readily in water for application with any type of spray equipment.

\***BAYGON insecticide.** A carbamate insecticide that controls certain turf insects, including many species resistant to chlorinated hydrocarbon and organophosphate insecticides. Safe to Bermuda, zoysia, rye, clover, colonial bentgrass and other common varieties when used as directed.

For great turf that gives your golfers great shooting, order these Chemagro turf pesticides from your chemical distributor.

Chemagro Agricultural Division of  
Mobay Chemical Corporation.  
Box 4913, Kansas City, Missouri  
64120.

BAYGON, DASANIT, DEXON, DYLOX and NEMACUR are Reg. TMs of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.

DYRENE is a Reg. TM of Mobay Chemical Corporation.



**RESPONSEability**  
to you and nature

7659B

# Qualifying for Pesticide Applicator Certification

By ROBERT L. MESECHER  
Staff Assistant, Plant Industry Division  
Michigan Department of Agriculture

The Federal Environmental Pesticide Control Act (FEPCA) of 1972 substantially amends the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947. FIFRA was administered by the United States Department of Agriculture until authority was transferred to the Environmental Protection Agency in 1970.

The 1972 amendments extend Federal controls to the actual application of pesticides by the user by regulating intrastate as well as interstate marketing of pesticide products. FEPCA provides for pesticides to be classified for general use or restricted use. It further provides that private applicators and commercial applicators who use restricted pesticides be certified. To be certified an applicator must demonstrate practical knowledge of the safe use of chemicals, proper operation of equipment, the effects of his applications of pesticides upon the environment, and applicable Federal and State laws.

A private applicator is defined as a person using or supervising the use of restricted pesticides to produce an agricultural commodity on property owned by him or his employer, or (if applied without compensation other than trading services) on the property of another person. Any applicator not meeting the definition of a private applicator is considered to be a commercial applicator.

The 1972 law extends to the states the authority to certify applicators, register pesticides, and initiate programs designed to meet their local needs. In order to assure that Michigan's farmers and the pesticide industry of this state will continue to

have access to commonly used pesticides, it was necessary to change our pesticide legislation to conform with FEPCA.

Michigan's proposed pesticide legislation requires any person who uses a restricted use pesticide to be certified as does the Federal law. It further provides that any commercial applicator engaged in the business of applying pesticides must be certified whether that applicator uses restricted pesticides or not. The state law also requires dealers who sell restricted use pesticides to be licensed. Further controls over restricted use pesticides have been enacted which limit the sales of these materials to certified applicators.

The Michigan Department of Agriculture submitted proposed legislation to the Governor for introduction in the 1975 legislative session. The bill was introduced June 3, 1975 by representative Bela Kennedy as HB 5310. The bill passed the House with no dissenting votes and was referred to the Senate Committee of Consumers and Agriculture. Unless there are serious amendments to the bill in the Senate, passage is anticipated early in the 1976 legislative session.

The FEPCA mandates that states desiring to certify applicators submit a State Plan to EPA giving details of how they plan to certify applicators. The state plan must assure that the State has, or will have, enabling legislation, qualified personnel, and devote adequate funds for implementing

Effective people are solution finders. They go after facts, find them, then use their imagination to come up with positive answers.



certification. The state plan must contain a detailed description of the certification procedure to be used and conform to the standards of competency prescribed by the administrator. The States standards of competency may equal or exceed, but in no case be less than the standards set forth in the federal regulations.

The Michigan Department of Agriculture has submitted an approvable plan for certifying applicators to the Region V EPA administrator requesting approval contingent upon passage of the enabling legislation. The State Plan submitted has adopted the 10 major categories and corresponding standards of competency set forth in the federal regulations plus three sub-categories under agriculture. The three sub-categories are Field Crop Pest Control, Vegetable Crop Pest Control, and Fruit Crop Pest Control. In addition, the state will require additional standards of competency for applicators engaged in aerial application or space fumigation.

The Department has been working through the present interagency pesticide advisory committee with Michigan State University Cooperative Extension Service in developing training materials to assist applicators in becoming certified. The training materials will consist of a core manual for private applicators and a core manual for commercial applicators, plus unit manuals for each of the categories. The manuals will be auto-tutorial, or self-teaching, and contain a study guide to assist the applicator in studying. This system of preparing for certification is believed to be more practical than attending classroom training sessions. It allows the person

to study at his own pace and eliminates the inconvenience of attending formal training sessions.

The training manuals are in various stages of development but are expected to be ready for distribution between July and September of 1976. Private applicator manuals will be made available at each of the County Extension offices and the six Regional offices of the Michigan Department of Agriculture. Commercial applicator manuals will be available only from the Regional offices of the Michigan Department of Agriculture.

Competence in the safe handling and use of pesticides will be determined by written examination. Private applicators will be examined at various locations and dates to be determined at a later time. A certification packet will be distributed with the manuals and contain an application form, fee receipt card, and a sheet of instructions for completing the form. A list of examination sites will be included in the packet. When the applicator feels ready to take the examination he must submit the application form, \$10.00 certification fee and the fee receipt card to the Department of Agriculture. The fee receipt card will be returned and advise him of the examination site and date. The fee receipt card will serve as identification authorizing him to take the examination. Upon successful completion of the examination the applicator will be provided with a certification card authorizing the purchase of restricted use pesticides. Commercial applicators will make application in the same manner, however, examinations will be scheduled by appointment and

**HUGGETT SOD FARM, Inc.**



Wholesale Growers of  
QUALITY LAWN TURF



Nuggett + II  
Kentucky Blend  
Huggett's Shade Mix

Warren's A-34  
Warren's A-20  
Bentgrass Sod

4114 E. MARLETTE  
MARLETTE, MICH.  
48453  
Phone (517) 635-7482

administered in the Regional offices.

Congress recently passed HR 8841 further amending FIFRA in various respects and extending the deadlines for full implementation to October 21, 1977. We don't know at this time what impact these amendments will have on our pending legislation, although it is anticipated that HB 5310 will take immediate effect when it is passed. Language in the bill will allow commercial applicators currently licensed under existing law to continue operating until the expiration of the licensing period. Certification of commercial applicators will be required at the beginning of the 1977 licensing year if the proposed legislation is passed. Certification for private applicators will be available during the winter of 1976 and 1977 and be mandatory by October 1977.

One of the amendments to FIFRA is a self-certification provision for private applicators. The term self-certification is misleading and entails

much more than the farmer signing his name to an affirmation form that he is competent. The language of the amendment provides for the administrator to assure that such form contains adequate information and affirmations to carry out the intent of the act. The reading that we get from EPA is that a self-certification system for private applicators and proposed by a State will require mandatory training. In consort with the Interagency Pesticide Advisory Committee and the Cooperative Extension Service we are planning to continue with the examination system for private applicators.

I have tried to give an overview of the coming applicator certification program resulting from the mandate of congress. I realize my observations have been brief and will entertain any questions at this time.

As empty vessels make the loudest sound, so they that have the least wit are the greatest babblers. — Plato



*Featuring CUSTOM BLENDING  
to suit your needs!*

NEW FOR FALL

8-12-24

With 8% Sulfur and  
100% Sulfate of Potash

ANNOUNCING . . .  
The addition of chemicals  
by the

**W-A-CLEARY**  
CORPORATION  
SOMMERSET, N.J.

Fungicides, Herbicides,  
Specialty Products

FERTILIZERS MANUFACTURED BY  
**THE ANDERSONS**

CALL **FRED SPEIER**  
**(313) 681-9336**

**FALL . . .**  
**PMAS (10%)**  
**SPECTRO**  
**BROMOSAN**

*"Premium Products — Economically Priced"*  
5324 W. BLOOMFIELD LAKE W. BLOOMFIELD, MICH. 48033

# Maples method for measuring greens

By PALMER MAPLES, Jr., C.G.C.S.  
The Standard Club, Atlanta, Georgia

Greens Superintendents can get into serious difficulties if they do not apply proper and specific amounts of seed, fertilizer and fungicides to their greens. In order to apply proper amounts, however, they must know the exact square footage to which the items will be applied.

My method of calculating the greens area is easy and accurate. Materials required are a two-foot square of plywood, a 100-foot tape, and some graph paper.

A large circle is drawn on the board and marked at 10-degree intervals. A small screw in the center acts as a measuring point. Four small nails through the corners of the board will help hold it in place on the green. The board is placed near the center of the green with 0 degrees pointing to the rear of the green and 180 degrees and pointing toward the fairway.

The tape is placed on the center screw and a measure is made to the edge of the green over the 0 degrees mark and recorded. Next a measure is made over the 10 degrees mark to the edge of the green and recorded. This procedure is repeated at each 10 degrees interval, giving a total of 36 measurements.

If desirable, permanent sprinkler

heads can be located and mapped by measuring to them and estimating the degree of their measuring line.

Measurements for each green are then recorded on graph paper, either 8 or 10 square graph paper does well.

A small circle is drawn in the middle of the graph paper with marks at 10 degree intervals, the same as the large circle on the board. Using the proper scale (1" equal 10 ft. or 1" equal 16 ft.) measure from the center of the circle in a line with each 10 degree mark and make a dot at the recorded distance.

After all measurements are recorded by dots on the graph paper, a line is drawn connecting the dots. This forms a true outline of the green. This outline could be used to record drain lines and cup positions.

To determine the area of the green, add the 36 measurements and divide the total by 36 to get an average of the measurements. This average figure is then multiplied by itself to get its square. This figure is then multiplied by 3.1416 and the answer is the total square feet in the green.

#### Example:

1. Sum of 36 measurements 1,440 ft.
2. 1,440 divided by 36 equals 40 ft. average.
3.  $40 \times 40$  equals 1600 Sq. Ft.
4.  $1600 \times 3.1416$  equals 5026.56 Sq. Ft.

***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



# NEW 12 HP TURF RUNABOUT.

The economical way to haul supplies and equipment over your grounds.

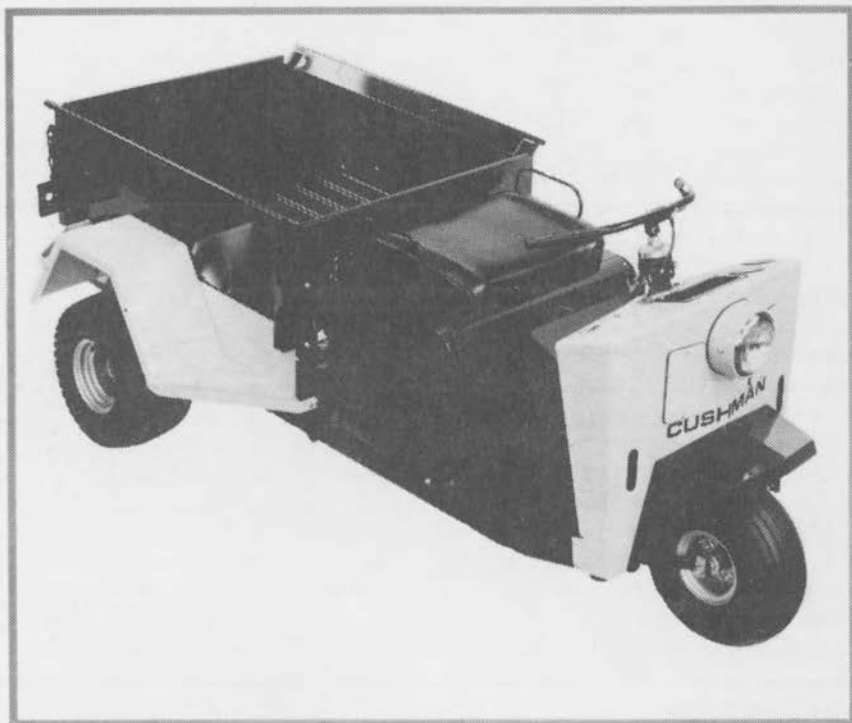
The 12 hp Turf Runabout provides basic transportation and light hauling capabilities at a price that will fit any grounds keeper's budget. It will move a man and his equipment from job to job around your grounds much quicker than walking and more conveniently than with a tractor. With a Cushman Turf Runabout he can get more work done in less time.



The vehicle is powered by a 12 hp, air-cooled, 4-stroke engine. With the 3 speed transmission, it provides plenty of power, yet is economical to maintain.

Standard equipment includes handlebar steering, wide turf Traction Tread tires, and the step-side pickup box that measures 46" x 34 $\frac{1}{2}$ " x 12".

Ask your Cushman dealer about the 12 hp Turf Runabout and the varied line of Turf Truckster vehicles and turf-care accessories.



## GOLF CAR DISTRIBUTORS

1980 W. Wide Track Drive (U.S. 10)

Pontiac, Michigan 48058

Phone: (313) 338-0425

# A Word of Caution

From the BULL SHEET, August 1976

It will be recalled by some superintendents that when plastic PVC pipe began being used in golf course water distribution systems some 20 years ago, it gave considerable trouble by joints pulling apart and pin hole leaks appearing in the wall of the pipe. This all happened even when the pipe was "snaked" in the trench to allow for pipe movement due to temperature changes. In some instances the trench was not back filled until the cool of the evening, the idea being to bring the pipe material to a minimum of contraction due to a reduction in temperature. Despite all of these precautions there were some colossal plastic pipe failures and this type of pipe was outlawed for several years on Chicago golf courses; however, numerous investigations eventually proved that the trouble did not lie with the pipe, instead it was traced to the method in which the pipe was installed.

It should be borne in mind that PVC pipe has a thermal expansion, or contraction, of 2" per 100 ft. per 50 degree F change in temperature. This indicates that if a 50 degree F temperature change takes place in 1000 ft. of PVC pipe in the winter time, this length of pipe would be 20 inches shorter. This contraction makes the

pipe pull apart or stretch the walls so they become weakened and produce pin hole leaks.

In those early days the PVC pipe was fabricated with solvent welded joints and no provision was made for pipe movement due to temperature changes. Today's method of installation is to fabricate the pipe in 20 ft. lengths with push-on joints, each joint acts as an expansion joint, this has eliminated the troubles we encountered in former years.

In view of all the above, I am apprehensive of some recent construction methods where the plastic pipe is being pulled into the fairways. In order to do this the pipe must be fabricated with solvent weld joints for the modern push-on joint cannot be used. In other words, no provision is being made for movement due to temperature changes. ARE WE HEADING BACK FOR THE SAME TROUBLE WE RAN INTO 20 YEARS AGO BY PERMITTING PIPE TO BE PULLED INTO THE FAIRWAYS?

C. E. (Scotty) Stewart  
Homewood, Illinois

Isn't it amazing how clearly we see in others the faults we ignore in ourselves?



## Helping the superintendent through turf research...

- Controlled Release Fertilizers
- Fertilizer/Pesticide Combinations

**SCOTTS • LELY • GANDY SPREADERS**

Finest quality turfgrass seed—Fairways • Greens • Tees • Roughs  
Scotts Windsor and Victa blends

- Fungicides—Herbicides—Insecticides
- Soil Testing—Weed & Disease Identification

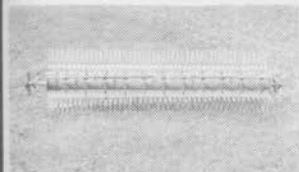
## Ted Mulcahey

Technical Representative  
7205 S. Jennings Road  
Swartz Creek, Mich. 48473  
Telephone: 313/655-4702

# TORO



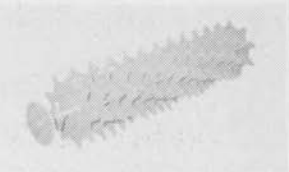
## RAKE-O-VAC



**FLEX-TIP REEL**



**HARD SURFACE BRUSH**



**THATCHING REEL**

Features and benefits of this versatile turf rake and vacuum include: a patented Flex-Tip reel with 552 extruded nylon teeth that gently lift litter off the turf and whip it into a vacuum stream that carries it into the rear of the hopper (picks up everything from pine needles to paper plates). An optional sweeper brush cleans hard surfaces. And an optional thatching reel renovates turf as the vacuum carries away the debris.

Why buy three machines when this one does it all?

The RAKE-O-VAC (in engine-driven or PTO driven models) is backed by Toro people, Toro parts and service, and by our new one year warranty.

- DISTRIBUTED BY -

**WILKIE TURF**  
Equipment Company

1050 OPDYKE ROAD PONTIAC, MICH. 48057  
(313) 373-8800



FORE-PAR MANUFACTURING  
CHICOPEE MANUFACTURING CO.  
3M ENVIRONMENTAL PRODUCTS  
AGRICO FERTILIZERS  
FOX VALLEY MARKING SYSTEMS  
E. I. DUPONT

ACTI-DIONE PRODUCTS  
VELSICOL CHEMICALS  
CONTAINER DEVELOPMENT  
CYCLONE SEEDER COMPANY  
MALLINCKRODT CHEMICALS

- DISTRIBUTED BY -



**TURFGRASS, INC.**

Phone: Area 313 437-1427

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

Fill in the questionnaire below and mail to:



**BOB HOPE**  
The Lochmoor Club  
20740 Marter Road  
Grosse Pointe Woods, Mi. 48236  
Off. 881-8112, Res. 884-8684



NAME OF INTERESTED PERSON      DATE \_\_\_\_\_

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.

# SULPHUR

## The forgotten turf nutrient

By ROGER A. BROWN, Sales Manager  
The Andersons, Lawn Fertilizer Section  
Maumee, Ohio

During the years 1957 through 1962 only 10 to 13 states were listed as having a Sulfur deficiency in their soils. Today there are at least 29 states deficient in this amazing life giving element.

Sulfur is essential to the healthy growth of turf as well as all plants. Here are some of Sulfur's benefits to turf.

1. Improves water penetration in soil.
2. Increases availability of iron, manganese, copper, zinc, and boron to the plant.
3. Improves soil structure.
4. Builds healthy protoplasm and plant tissue to help resist drought, disease and winter damage.

5. Enhances color.
  6. Promotes turf growth and density.
  7. Aids the turf response when used in combination with nitrogen.
  8. Helps keep alkalinity in balance.
  9. Aids nitrogen release from organic matter.
  10. Improves recuperation capacity.
- WHY IS THERE AN INCREASED NEED FOR SULFUR NOW?

Substantial amounts of sulfur used to be in the air because of coal burning home furnaces. Sulfur would be carried to the soil and plants by rain. During the 50's as much as 200 lbs. of sulfur per acre would be included in the annual rainfall in the Chicago area while the rural areas of Kentucky only

## CHIPCO

# protects your turf from the world's toughest critic... The golfer

- |  |   |
|--|---|
| <input type="checkbox"/> Chipco® Spot Kleen            | <input type="checkbox"/> Chipco® Thiram 75              |
| <input type="checkbox"/> Chipco® Microgreen<br>Liquid  | <input type="checkbox"/> Chipco® Crab Kleen             |
| <input type="checkbox"/> Chipco® Turf Herbicide "D"    | <input type="checkbox"/> Chipco® Turf Herbicide<br>MCPP |
| <input type="checkbox"/> Chipco® Spreader<br>Activator | <input type="checkbox"/> Chipco® Buctril®               |
|  | <input type="checkbox"/> Chipco® Turf Kleen             |

RHODIA INC. AGRICULTURAL DIVISION  
Monmouth Junction, New Jersey 08852





# Cleary Products for Better Turf

## Fungicides

### 3336 Turf Fungicide

A broad spectrum systemic fungicide that prevents and controls all six major turf diseases.

### Bromosan Turf Fungicide

The newest broad spectrum systemic fungicide for those persistent trouble areas.

● Caddy ● Granular Turf Fungicide

● PMAS (10%) ● Cad-Trete

● Spotrete ● Spectro

## Herbicides

MCPP

MCPP Plus 2,4-D

Methar 80

Methar 30

AMA Plus 2,4-D

AMA (Super Methar)

## Specialties

All Wet

Clear Spray

Tru-Green

Grass-Greenzit

**W-A-CLEARY**  
CORPORATION

P.O. Box 10, Somerset, N.J. 08873

received 5 or 6 lbs. of Sulfur per acre annually.

Today, because of very little sulfur coal burning and environmental controls eliminating sulfur emissions the amount of sulfur returned to the soil in rainfall has been practically eliminated.

Before the popularity of today's high analysis plant food, most fertilizer had a high concentration of sulfur contributed by ingredients, such as ammonium sulfate, superphosphate, potassium sulfate, sul-po-mag. But because of lower costs and greater availability, higher analysis sources of nutrients are used containing little or no sulfur. As a consequence, two of the most important sources of sulfur that have been washed out of the air by rain and a normal ingredient in fertilizer have almost been eliminated.

The sulfur present in the soil is eventually used up or leached out. The more nitrogen used the more sulfur is

Continued on Page 16

## WANT THE FINEST TURF IRRIGATION SYSTEM?

### Use the complete J-M turf irrigation system.

Some of our most beautiful and best cared for environments are golf courses. We can help make the good ones better and keep the great ones great . . . easily, in fact, automatically, with the complete Johns-Manville turf irrigation system.



## CALL YOUR SISCO MAN TODAY!

Jim Vince — Mike Byrnes — Tom Kennedy — Warren Gulick

— 313-398-2233 —

SPRINKLER IRRIGATION SUPPLY COMPANY

1316 N. Campbell Rd., Royal Oak, Mich. 48067

**Sisco**  
ENGINEERED RAIN

# The best new way to hit the fairways!



Hit the fairways this fall with an application of this great new USS Vertagreen fertilizer and you're on your way to fewer turf problems next spring. This quality product is ideal for fall fairway fertilization because it has a high potash analysis...and that means less winter kill.

Potash works to toughen the grass, giving the turf healthy and hardy leaves that can better withstand the cold winter weather. Potash also helps your fairways resist disease problems such as dollar spot and brown

spot. A soil test in the late summer or early fall will determine if your fairways lack this vital nutrient. And if they do, USS Vertagreen Fall Fairway Fertilizer is the answer because it's formulated with primary nutrients specifically for your area.

See your USS Vertagreen distributor and he'll show you how this great new product can winterize your fairways this fall. Next spring you'll be glad you did.

**See your Vertagreen distributor**



## Agri-Chemicals

Division of United States Steel

P.O. Box 1685, Atlanta, Ga. 30301

## Sulphur Cont.

needed for proper turf growth. Depleted sulfur must be replenished or severe turf damage can result. Here is a list of sulfur sources.

Sulfur Carriers	Average fertilizer and sulfur content
Elemental Sulfur	N-P-K-S 0-0-0-99
Sulfur Coated Urea	32-0-0-24
Ammonium Sulfate	21-0-0-24
Ferrous Sulfate	18% S, 21% Fe
Gypsum	20% Ca, 18% S
Potassium Magnesium Sulfate (Sul-po-mag)	0-0-22-18, 11% Mg
Ferrous Ammonium Sulfate	16% S, 22% Fe
Potassium Sulfate	0-0-50 - 17% S
Superphosphate	0-22-0 18% Ca, 12% S

## HOW MUCH SULFUR DOES TURF REQUIRE?

Normally grass contains as much sulfur as phosphorous. The more nitrogen that is fed the more phosphorous, potash and sulfur needed. For example, if 4 lbs. of nitrogen were fed each thousand sq. ft. of turf it would require 1 lb. of phosphorous;

2 lbs. of potash and 1 lb. of sulfur. Sandy soils would require more sulfur because of leaching tendencies. CAN SULFUR BE TOXIC TO GRASS?

The major sulfur villain is sulfur dioxide usually produced by smelters. This atmospheric contamination can completely kill plants. It is rare that sulfur added to the soil will harm plants. However, in arid or poorly drained soils, high concentrations of sulfates can cause problems by making calcium unavailable.

## SULFUR DEFICIENCIES

Plants deficient in sulfur have very similar symptoms to those with a nitrogen deficiency; yellowing of leaves, faint scorching of leaf tip continuously until the whole leaf withers and dies.

## SULFUR IS NEEDED TO LOWER pH OR INCREASE SOIL ACIDITY

If your pH is 7, add 2 lbs. of sulfur per 100 sq. ft. for every ½ degree of pH you want to decrease. For example:



# COUNTRY CLUB

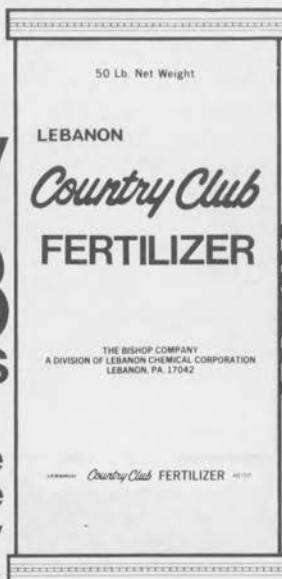
## TURF PRODUCTS

**A New Outside  
Appearance - Same  
Dependable Quality  
Inside**

LEBANON

AGRICO

Good Names To  
Grow By



**A FULL  
LINE OF  
QUALITY  
TURF  
PRODUCTS  
FOR THE  
PROFESSIONAL  
USER**

Call your Country Club Distributor  
or James L. Camp, (219) 485-6828.

if your pH is 7, 2 lbs. of sulfur per 100 sq. ft. will bring your pH down to 6.5 and 4 lbs. of sulfur per 100 sq. ft. will bring the pH down to 6.0. In sand, cut these amounts by one third.

Never add sulfur or lime to correct pH until you have tested your soil and know what pH is.

**MIDWEST REGIONAL TURF FOUNDATION  
MIDWEST REGIONAL TURF CONF.**

**FEBRUARY 28 - MARCH 2, 1977**

**Purdue Memorial Union**

**I WAS MISTAKEN -  
YOU ALL LOOK ALIKE**

**By ERMA BOMBECK**

I just figured out if my husband paid just half the attention to me as he does the lawn, my 70-year-old mailman would never have started to look like Robert Redford.

If ever there was a valid suit for alienation of affection, it's that lousy lawn.

There is something about the ability of a man to grow a few blades of grass that contributes to his masculinity. He is either a grass grower or not a grass grower. I have seen virile men move into the neighborhood with tattoos on their lips, but if they have fungus on their dwarf tiff, forget it. They're just not one of the boys.

A lawn enthusiast has two moods: terrible and irritable. These are interchangeable depending on whether the grass is growing or whether the grass is not growing.

When the grass is not growing, my husband goes to the library to see what could be missing, has his soil analyzed, waters, soaks, fertilizes, and has the nurseryman who sold him the seed make a house call.

When the grass is growing, he runs the mower back to the store to make sure the blade is cutting, trims, rakes, rolls and makes an obscene phone call to the dog next door who overfertilized



**NOW YOU CAN PHONE US**

**FREE**

**for Fast Order Service**

or Messages for our Sales Representative

Quality products  
for turf maintenance  
since 1939

**alco**

P.O. BOX 267  
MARIETTA, OHIO 45750

**OHIO CUSTOMERS:  
1-800-282-9714**

**ALL OTHER STATES:  
1-800-848-9740  
MICHIGAN REPR.  
RALPH GRESS**

**TURF SUPPLIES INC.**

**6900 Pardee Rd., Taylor, Michigan  
(313) 291-1200**

**DON'T EVEN THINK  
OF BUYING . . . . .**

**GRASS SEED  
FERTILIZERS  
FUNGICIDES**

**WITHOUT CALLING**

**291-1200**

**TURF SUPPLIES INC.**

**6900 Pardee Rd., Taylor, Michigan  
(313) 291-1200**

**LAKESHORE**

**EQUIPMENT & SUPPLY CO.**

**DISTRIBUTOR & FORMULATOR  
GRASS SEED - FERTILIZERS  
INSECTICIDES - FUNGICIDES - HERBICIDES  
REPLACEMENT MOWER PARTS  
REPLACEMENT TIRES  
LESCO Products**

**Price Quotation On Request**

**CALL OUR NEW OFFICE  
300 So. Abbe Rd., Elyria, Ohio 44035  
(216) 323-7544  
MICHIGAN CUSTOMERS  
Call Toll Free: (800) 321-7423**

**We're the  
WATER MOVING  
SPECIALISTS ...  
and we'll help you  
put it all together**

**We've  
got systems**

An engineering staff  
to consult with you  
on irrigation systems design  
& specifications,  
and budget estimates.

**We've  
got supplies**

The largest  
selection & stock  
in the midwest:

PIPE & FITTINGS:

PVC • Sewer & Drain (Corr.)

Polyethylene • Galvanized

Copper • Aluminum

Pressure Reg. Valves • Elec. Valves

Pressure & Flow Switches

Controllers

PUMPS & PUMPING STATIONS

EXCLUSIVE FRANCHISED DISTRIBUTOR

**RAINBIRD  
NELSON  
SAFE-T-LAWN/MOODY**

**CenturyRain aid**

**WHOLESALE DISTRIBUTORS**

3890 W. 11 Mile Rd., Berkley, Mich. 48072  
(313) 543-7730

22159 Telegraph, Southfield, Mich. 48075  
(313) 356-9137

341 Lively Blvd., Elk Grove Vill., Ill. 60007  
(312) 640-6660

it in the first place.

There is no pleasing a lawn freak.

Some say it is normal for a man to want a pretty lawn. I don't know what is normal anymore. I sent the kids to Mother's, blew an entire food budget on steaks and wine, put a dab of garlic on the lightbulb and slipped into something that had not been paid for. "What are you thinking?" I teased, turning off the TV set.

"Did you turn the hose off?" he asked.

Is it normal for a man to call the police and report a flock of birds who are eating our grass seed? Is it normal for a grown man to mourn a brown spot for three years?

I was all set to tell the mailman about my infatuation with him when he said, "I see your husband uses a chemical fertilizer of nitrogen, phosphorous, and potash. Tell him if he invested in a little sheep dip, he'd do away with that crabgrass. Is there something you wanted?"

"I thought you looked like someone I knew," I said. "But I was mistaken. You all look alike."

Reprinted from Westchester-Rockland Newspaper

No society of nations, no people within a nation, no family can benefit through mutual aid unless good will exceeds ill will; unless the spirit of cooperation surpasses antagonism; unless we all see and act as though the other man's welfare determines our own welfare.

— Henry Ford II

**CLASSIFIED ADS**

**WANTED** — Used 7-gang Worthing Fairway Mower. Morey's Golf & Country Club, 2280 Union Lake Road, Union Lake, Mi. 48085. 313-363-4101.

Cooperation is doing with a smile the things you ought to do anyway.





## The New \*Turf-Blo from Turf-Vac

Now there's a fairway blower that is completely self-contained. A unit that can be towed by any vehicle from a tractor to a pickup truck because no power takeoff is required.

Even though the Turf-Vac "Turf-Blo is compact and light weight, it delivers a tremendous stream of air. A stream that can be quickly deflected from side to side without moving from a tractor seat!

High flotation pneumatic tires reduce tire marking, heavy duty blower features the same engineering know-how that goes into every Turf-Vac product.

Contact us or your nearest Turf-Vac distributor for a demonstration. And, ask about the Turf-Vac sweeper line. They're great companion pieces to the all-new Turf-Vac "Turf-Blo.

\*Patent applied for

### General Specifications:

Engine: 12 HP  
Tires: 13 x 6/5 x 6 low pressure  
Frame: 3" 4.1 channel  
Turbine: Abrasive resistant steel, direct engine drive  
Air direction: Blows from either side. Controlled by lever.  
Height: 36"  
Length: 51"  
Width: 42"  
Shipping Weight: 450 pounds  
Accessories: Electric start, battery.



A Division of TSI, Inc.  
1717 Four Mile Road, N.E.  
Grand Rapids, Michigan 49505  
(616) 364-8441 or 364-0719



### LAWN EQUIPMENT CORPORATION

520 W. 11 MILE ROAD

ROYAL OAK, MICH. 48068

TELEPHONE: (313) 398-3636

**JACOBSEN**  
TURF EQUIPMENT

# SWEEPERS



**MODEL**  
**720**  
**PULL BEHIND**  
**SWEEPER**

**SPECIFICATIONS:**

Sweeping Width	60 in.
Pick-Up	Mechanical, 2 reels-counter-rotating rubber fingers.
Frame	Rugged angular steel, all welded joints.
Hopper	Hinged to power head, angular steel frame, galvanized steel skin riveted to frame.
Capacity	5 cu. yds.
Dumping	Self dumping, activated by three point hitch.
Bearings	Sealed and self-aligning.
Gear Box	Heavy duty, 45 hp.
Universals	Heavy duty.
Drive to Reels	Chain (60) runs in lubricant.
Reel Timing	Chain: connects reels for counter-rotating interlocking feature.
Wheels	Castor type—rear.
Tires	Pneumatic, 16 x 6.50—8 (2).
Hitch	3 point, standard tractor hook up.
Height Adjustment	Pre-set at factory, for other than normal conditions skid shoes can be raised or lowered. For fine adjustment (0- $\frac{1}{2}$ in.) use adjustable top link on 3 point hitch.

**OPTIONAL EQUIPMENT:**

Thatcher-Thinner	
Front Rear Roller Attachment	Replaces standard skid shoes.
Curb Broom	
Bag Attachment	Replaces hopper, (factory installed) material is collected in burlap bag. Capacity: 1 $\frac{1}{2}$ cu. yds.

## W.F. Miller Garden & 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  
EAST LANSING, MICH. 48823

U.S. POSTAGE

**PAID**

PERMIT NO. 37