

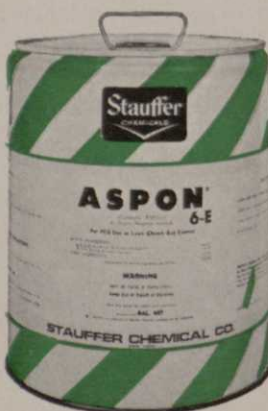
# The enforcers from Stauffer

Insects, weeds and soil pests...go down for the count when they come up against an enforcer from Stauffer.

Don't let them gang up on you this season. With one or all of these five dependable, economical, labor-saving products in your corner, you're sure to be in effective control of the toughest grounds maintenance problems.



**Makes any growing season tough on weeds.** EPTAM® selective herbicide controls over 20 species of annual grasses and broadleaf weeds in many established flowers and ornamentals during the growing season. A single application is all that it normally takes. (In semi-tropical areas, additional applications may be needed). In small plots, give the same weeds and grasses the shake with EPTAM granular in the easy-to-use shaker can and save time, labor and money.



**90-day chinch bug control.** ASPON® insecticide gives effective lawn chinch bug control within 48 hours after a single application. Control that lasts up to 90 days for all resistant and nonresistant species. Provides a high initial kill, long residual action, no resistance buildup and low handling hazard. There just isn't anything more effective for chinch bug control than ASPON.



**Sock it to crabgrass and Poa annua seed.** BETASAN® selective herbicide... liquid or granular... acts directly on crabgrass and Poa annua seed... without any danger of turf burn. Recommended for pre-emergence application and safe for use on bentgrasses, fescues, bluegrasses, and other established turf... including Bermudagrass and dichondra. BETASAN is equally effective in controlling specific weeds and grasses in more than 40 different ornamentals.



**Send soil to the cleaners... safely.** VAPAM® soil fumigant is tailor-made for the toughest soil cleanup jobs. An easy-to-use, water-soluble fumigant, VAPAM is equally effective for renovating greens and tees, freeing sand traps of weeds, sterilizing topsoil. And VAPAM is highly recommended for the control of root-graft transmission of Dutch elm disease.



**Beat mighty mites.** TRITHION® insecticide-miticide takes on and licks aphids, mealybugs, spider mites and their eggs, scale insects, chinch bugs, bagworms and potato leafhoppers on turf and more than 70 flowers, trees and ornamentals. Economical, long-lasting residual action and low hazard to operators make TRITHION one of the best insecticide-miticide control agents you can use. Available as a wettable powder and a liquid.

For complete information on the five Stauffer enforcers, see your golf supply distributor. For literature on specific grounds maintenance problems and how to solve them with one or more of these products, write: Stauffer Chemical Company, Agricultural Chemical Division, Dept. HD, 299 Park Avenue, New York, N.Y. 10017.



Read the label, heed the label and **GROW WITH STAUFFER CHEMICALS**

For more information circle number 242 on card

*On Long Island, N.Y., a self-styled golf course designer turned in a commendable job in his first effort at an 18-hole layout. When it came time to pay the bill, the membership lined up behind its lawyer-president, who refused payment, saying that the designer was not included under Article 148. The surprised designer took the case to court and lost!*



# Course architects being bulldozed?

by Stan Sousa

**A** little known law—Article 148, Chapter 1082 of New York State's Education Law—makes it illegal for approximately 90 per cent of established golf course architects to ply their trade in that state.

New York is not alone, however. Florida, Michigan, Ohio and most recently Connecticut, which passed an Article 148-type law in 1968, have similar laws. More states are expected to follow suit with the ultimate result being that a majority of today's best known golf course architects and big name pros who dabble in design will be banned from doing business.

The New York statute, passed by the legislature in 1960, mandates that the practice of landscape architecture (this includes golf course design), be limited to professional engineers, land surveyors, building architects and licensed landscape architects. The section defines a landscape architect as one "who performs professional services such as consultation, investigation, reconnaissance, research, planning, design, or responsible supervision in connection with the development of land areas . . . ."

These are the duties of the golf course architect. If he is neither a licensed landscape architect, nor fits the other job descriptions, he is risking a fine or even a jail term if he continues to practice that profession.

The law varies from state to state. For example, in Florida the secretary of the Board of Landscape Architects told a veteran golf course architect in no uncertain terms that he could not legally design in that state unless he held a landscape architect's license.

In New York, the Public Works Law even supplements the Education Law in this field by stating that no one without the license may plan a municipal job carrying more than \$5,000 in construction costs. It also has the provision that should unlicensed work be performed, the municipality is entitled to recover all fees paid. This applies to private party contracts too.)

Getting a license is no snap, according to William

F. Mitchell, a Huntington Station, N.Y., designer, who holds one. Mitchell had designed more than 100 courses when he discovered he was ineligible to work in the state where he maintains offices.

He discovered this by being knocked out of a municipal job on the basis of the law. "I made up my mind right then that I needed a landscape architect's license to stay in business. I only hope other designers across the country recognize the increase in this type of legislation and take steps to either stop it or join it."

Most designers have literally learned their profession from the ground up. Up to now, experience and reputation have won them the vast majority of golf course design work in the country. In New York state, however, a designer needs more than experience to get a landscape architect's license.

Every applicant must appear before a state board of examiners. Preliminary ground rules say he must be at least 25 years of age, a citizen of the United States, be of good moral character and be at least a high school graduate. He must prove he has either been graduated from a college or school registered by a department that offers an approved curriculum in landscape architecture or its equivalent. He must also submit, before admission to the examination, evidence of practical experience in landscape architecture work acceptable to the board. (Each complete year of study may be accepted in lieu of one year's experience.) The applicant must submit evidence that gives him a total of eight years.

The architect without formal training must show 12 years of practical experience before being allowed to take the examination. He then faces a written test geared to "seek out competency to plan, design and supervise the installation of landscape projects." The board of examiners may also require the applicant to submit to an oral exam as well.

Once approved, the golf course architect receives



## Architects being bulldozed?

a landscape license that is renewable every two years and a list of licensed compatriots, with the request that he inform the state education department of "any persons known to be practicing landscape architecture whose names do not appear on the list."

To those without licenses, in New York, a penalty of not less than \$100 or more than \$500 or imprisonment of not more than one year or both awaits them. It is also illegal for an architect to use another's seal unless he is a regular employee of the man holding the license.

Mitchell calls the law "ironic," because it safeguards work for building architects, land surveyors and professional engineers—none of whom has the background and experience needed to layout golf courses in accordance with the rules of the game. Mitchell notes the American Society of Golf Course Architects has failed to take a stand on the law. "I doubt if 10 per cent of its members are even aware of the situation that may deprive them of their livelihoods."

One answer, Mitchell feels, is to amend the law to include practicing golf course architects whose work has been satisfactorily rated by the United States Golf Assn. □



**Expansion Drive:** At the opening of MacGregor's new golf distribution center in North Woburn, Mass., were: (l. to r.) Harold J. Curtis, treasurer of Everett Co-Operative Bank; Carroll McGill and Robert McGill, vice president and president, respectively of Robert Realty Trust; Dale Chambers, MacGregor pro golf salesman; John X. Davoren, Secretary of State of Mass.; Joe Bellino, former Navy football star who is now president of Kustom-In-Plant Food Corp., and Robert Kellermann, manager of the center.

# AGRI-SYSTEMS of TEXAS, Inc.

## *Golf Course Specialists*

---

COMPLETE CONSULTING SERVICE  
SOILS ANALYSES FOR PUTTING GREEN CONSTRUCTION  
IRRIGATION SYSTEMS

---

DR. MARVIN H. FERGUSON, President

MR. HERMAN JOHNSON  
Agronomist and  
Irrigation Specialist

MRS. ELSIE SMITH  
Office Manager

MRS. JUDITH STEWART  
Sec.-Treas. and  
Laboratory Manager

---

Write: P. O. Box 3757  
Bryan, Texas 77801

or

Call: (713) 823-5551

**All  
Wet**

**Caddy**

**Spotrete**

**Clear  
Spray**

**PMAS**

**AMA**

# CLEARY PRODUCTS

**FOR BETTER TURF**

**Greenzit**

**AMA  
plus  
2-4-D**

**Tru-  
Green**

**MCPP**

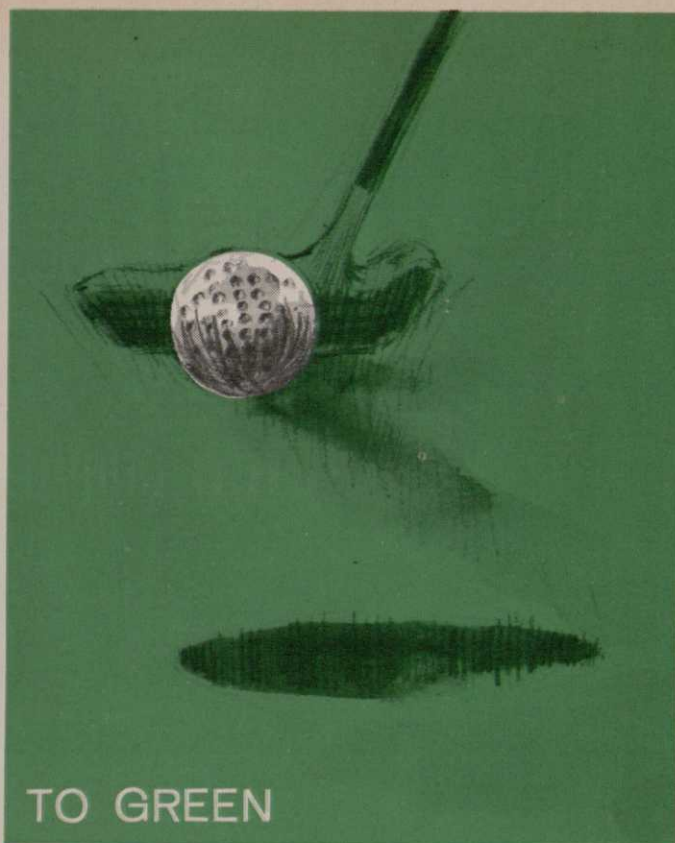
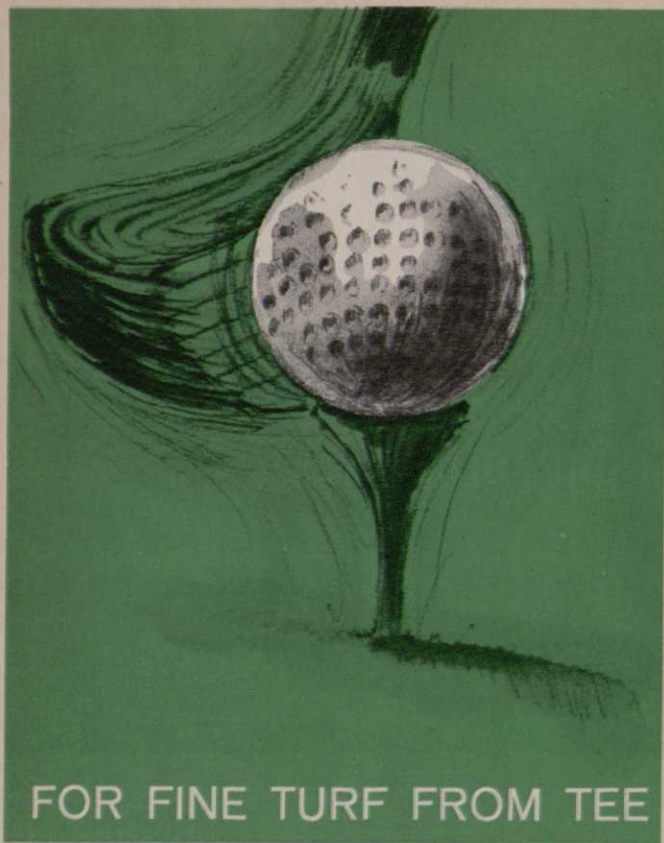
**Thimer**

# W.A. Cleary Corporation

NEW BRUNSWICK, NEW JERSEY

Skokie, Illinois · Bellville, Ontario, Canada

For more information circle number 169 on card



FOR FINE TURF FROM TEE

TO GREEN

# VICHEM

## FUNGICIDES AND HERBICIDES

Widely used for turf treatment and maintenance of finest Lawns, Parks and Golf Courses.

### USE VICHEM FUNGICIDES

Vi-Cad (Cadmium Chloride)  
Liquiphene (PMA)  
Mercuram (PMC)  
Thiuram-M (Mercuric/  
Mercurous Chloride)  
Thiuram 75 (TMTD)

#### For Control and Prevention of these Turf disease organisms

Brown Patch, Dollar Spot,  
Snow Mold, Copper Spot,  
Helminthosporium-Curvularia,  
Blue Grass Blight, Pink Patch,  
and others.

### USE VICHEM HERBICIDES (Arsonate Products)

\*Dal-E-Rad  
(Southern Areas)



For Selective Control Of  
Dallis Grass, Nut Sedge,  
Goose Grass, Lemon Grass,  
Bull Grass, Beggar Weed,  
Creeping Charlie, Penny-  
wart, Purslane, Spotted  
Spurge, Johnson Grass & others

\*Crab-E-Rad  
(Northern Areas)



Crab Grass, Barnyard Grass,  
Witch Grass, Foxtail, Large  
Leaf Spurge, Plantain, Knot-  
weed, Dandelion, Chickweed,  
and others.

Use Vichem Green to color off-shade turf  
& "958" Wetting Agent to improve water penetration.

See us at Booth F5, Turf Grass Conference and Show,  
Fontainebleau Hotel, Miami Beach, Florida, Jan. 19-24, 1969

Write today for complete technical details on the control of  
weeds and fungi with proven VICHEM turf products.

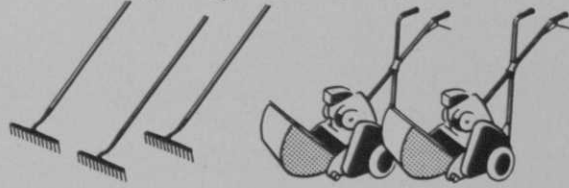
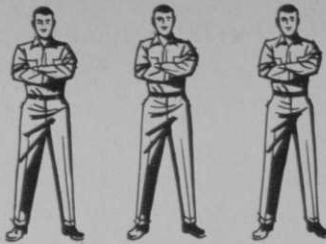
\*Trade Name for Vichem arsonate herbicides (DSMA) (MSMA) (CAMA) (AMA) (& 2,4-D Formulations)



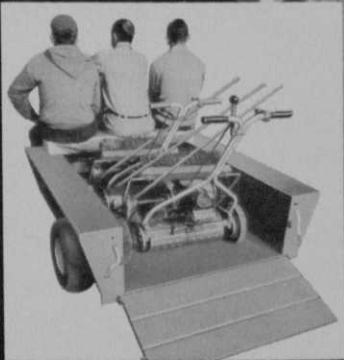
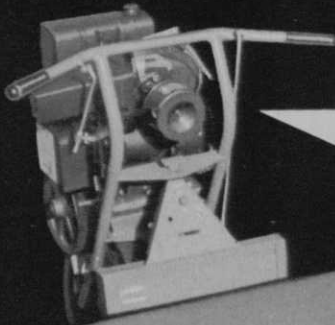
VINELAND CHEMICAL COMPANY

P.O. BOX 745, VINELAND, NEW JERSEY 08360. (609) 691-3535

For more information circle number 227 on card



**ALL THIS**



# **Ranger-23**

**COSTS LESS THAN \$1000**

see your equipment dealer or write to:

**SMITHCO Inc.**   
11 WEST AVENUE, WAYNE, PA. 19087



# Turfgrass research review

by Dr. James B. Beard

## Observations on Bentgrass puffiness

A Note on the Development of Puffiness in 1/4-inch Bentgrass Turf with Varied Nitrogen Fertilization. R. E. Engel. 1967 Report on Turfgrass Research at Rutgers University, New Jersey Agricultural Experiment Station Bulletin 818. pp. 46-47. 1967. (from the Department of Soils and Crops, Rutgers, the State University, New Brunswick, N.J.).

This paper involves a series of observations concerning the affect of nitrogen fertilization treatments such as carriers, rates and time of application on variations in the puffiness of a bentgrass turf. The turf was composed of a mixture of Seaside and Penncross creeping bentgrass, which was mowed three times a week at a quarter of an inch. Watering was done three times a week during periods of moisture stress with about a quarter of an inch of water per application. The soil was a loam containing approximately 14 per cent clay. The experimental area received a groove cultivation treatment plus a sandy

loam topdressing once a year. The turf was 12 years old when the experiments started.

The treatment comparisons in this study included an activated sewage sludge, urea and ureaformaldehyde with each applied at two nitrogen levels, four and eight pounds of actual nitrogen per 1,000 square feet per year. The fertilization schedule involved (a) a uniform seasonal application applied in eight equal applications from March through October, (b) four equal applications applied during the cooler periods of March, April, September and October, and (c) four equal applications applied during the warm periods of May, June, July and August.

After four consecutive years of selected nitrogen fertilization treatments, differential responses in the form of puffiness became evident. Visual ratings of this effect were made with the degree of response being more evident in the following year.

Results during the fourth and fifth year of fertilization treatment indicated that puffiness was greater at the eight-pound nitrogen treatment than at the four-pound level, regardless of the type of nitrogen carrier involved. A comparison of the three carriers showed urea resulted in greater puffiness than the two organic carriers.

Some very interesting results were observed in relation to the season of the year in which the nitrogen was applied. The warm season fertilization treatment (four equal applications in May, June, July and August) resulted in a minimum degree of puffiness

## HERE ARE YOUR BUCKNER PROFESSIONALS

### ALABAMA

McGowan-Lyons Hardware & Supply Company  
Mobile (205) HE 2-8721

### ARIZONA

Keenan Pipe and Supply Co.  
Tucson (606) 792-3000  
Turf Irrigation & Water Works Supply  
Phoenix (602) 276-2451

### ARKANSAS

Capital Equipment Co.  
Little Rock  
(501) FR 2-7115

### CALIFORNIA

American Sprinkler & Supply  
Los Angeles  
(213) 223-2424  
Controlled Irrigation  
Fresno (209) 222-4843  
Emerald Irrigation Supply Co.  
Salinas (408) 422-9026  
Ewing Turf Products  
San Leandro  
(415) 357-9530  
Ewing Turf Products  
Sacramento  
(916) 922-5618  
Irrigation & Plumbing Supply  
Santa Maria (805)  
WA 2-3512  
Kern Turf Supply, Inc.  
Bakersfield (805)  
FA 7-4048

### COLORADO

Colorado Western Distributing Co.  
Grand Junction  
(303) 242-0556  
The Warner Company, Inc.  
Denver (303) FL 5-7371

### CONNECTICUT

Hartford Equipment Company  
Hartford (203) JA 7-1142

### FLORIDA

Hector Turf & Garden Supply  
Miami (305) OX 1-8800  
Peninsular Supply Company  
Fort Lauderdale  
(305) 524-3611  
Southern Mill Creek Products  
Tampa (813) 626 2111

### GEORGIA

Russell Daniel Irrigation Co.  
Athens (404) LI 6-0168

### ILLINOIS

Sprinkler Irrigation Supply  
Glen Ellyn (312) 469-8730

### INDIANA

Sprinkler Irrigation Supply  
Glen Ellyn, Ill.  
(312) 469-8730

### KANSAS

U.S. Supply Co.  
Kansas City (816)  
842-9720

### KENTUCKY

Irrigation Supply Company  
Louisville (502) 585-4840

### LOUISIANA

Southern Specialty Sales Co.  
New Orleans (504)  
486-6101

### MARYLAND

Lewis W. Barton Company  
Simpsonville 531-5051

### MASSACHUSETTS

The Clapper Company  
West Newton  
(617) BI 4-7900

### MICHIGAN

Sprinkler Irrigation Supply  
Royal Oak (313) LI 8-7272

### MINNESOTA

Milsco Engineering Inc.  
Minneapolis (612)  
724-3655

### MISSOURI

Bechmann Distributing Company  
St. Louis (314) WY 3-4490

### NEBRASKA

Big Bear Equipment, Inc.  
Omaha (402) 393-2220

### NEVADA

Arlington Nursery  
Reno (702) FA 3-4463  
Las Vegas Fertilizer Co., Inc.  
North Las Vegas  
(702) 649-1551

### NEW JERSEY

Lewis W. Barton Company  
Haddonfield  
(609) HA 9-6500  
Halco Chemical Company  
Kenilworth (201) BR 6-3298

### NEW MEXICO

Albuquerque Chemical Company  
Albuquerque  
(505) 247-2321

### NEW YORK

Grassland Equipment & Irrigation  
Latham (518) ST 5-5841  
Halco Chemical Company  
Glen Head, L. I.  
(516) OR 6-2727

### NORTH CAROLINA

E. J. Smith & Sons, Co.  
Charlotte (702) 333-4141

### OHIO

Sprinkler Irrigation Supply  
Covington (513) 473-7567

### OKLAHOMA

Southwest Irrigation Company  
Tulsa (918) NA 7-7272

### OREGON

United Pipe & Supply Co.  
Eugene (503) 688-6511  
United Pipe & Supply Co.  
Portland (503) 281-0058

### TENNESSEE

Ernest Hardison Seed Co.  
Nashville (615) AL 6-2659  
Knox Valve & Fitting Co.  
Knoxville (615) 588-7475  
Uticon Co., Inc.  
Memphis (901) 391-9093

### TEXAS

Goldthwaite's of Texas, Inc.  
Dallas, Fort Worth, Houston, San Antonio  
Momsen, Dunnegan, Ryan  
El Paso (915) 533-1621

### UTAH

Conely Company  
Salt Lake City  
(801) HU 4-5208

### VIRGINIA

R. P. Johnson Sons, Inc.  
Wytheville (703) 228-2136

### WASHINGTON

Polson Company  
Seattle (206) MA 2-2891  
Polson Company  
Spokane (509) FA 7-9571

### WEST VIRGINIA

Young Feed and Seed Co.  
Charleston (304) DI 2-2104

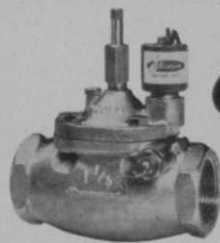
### WISCONSIN

Sprinkler Irrigation Supply  
Glen Ellyn, Ill.  
(312) 469-8730

### CANADA

Pacific Irrigation Ltd.  
Vancouver (604) 682-6132





***Our valves  
come on strong under  
all kinds of pressure***

The mark of the professional is reliability. No matter what the pressures. No matter how tough the terrain. And, that's our 150GER Series Electric Automatic Valves with Pressure Control. The Professionals. They'll never let you down.

Our 150 GER's were specially designed and meticulously engineered to hold pressure constant to all sprinklers. Regardless of varying elevations. Regard-

less of water line lengths. Regardless of inlet pressure fluctuations.

Available in five angle or globe sizes—1", 1¼", 1½", 2" and 3"—you'll stay steady, day and night, with the 150GER. Get more facts on the 150GER and the entire line of Buckner equipment from your Buckner dealer. He's equipped to give professional solutions to professional problems.

***Buckner***<sup>®</sup>

Buckner<sup>®</sup> Sprinkler Co. Division of General Sprinkler Corporation, P. O. Box 232, Fresno, California 93708

## Beard

compared to the fertilization applied during the cool temperature periods or in eight equal applications throughout the growing season. Also, the eight-pound application rate of ureaformaldehyde applied in March resulted in significantly greater puffiness than when applied in September.

*Comments:* The author of this article defines puffiness "as dense, loosely attached patches of top growth that tend to buckle into a higher position than the immediately surrounding turf." It commonly occurs on turfs maintained under putting green conditions and results in more scalping and relatively poor putting quality or poor ball roll. Puffiness will vary with the particular bentgrass variety involved and correlates with the rate of vegetative growth.

The basic response which underlies all observations in this paper is that excessively high levels of nitrogen nutrition result in excessive growth and the result-

ing puffiness. In the case of the nitrogen carriers, the greater percent nutrient availability of urea at a much more rapid rate has stimulated excessive growth. In the case of the timing of nitrogen fertilization, the mid-summer fertilization during periods of relatively slow growth due to high temperature stress has limited the degree of nitrogen response and resulting puffiness compared to the cool portions of the growing season where growth is relatively rapid and where responses to higher nitrogen fertility are more evident in the degree of puffiness. This data indicates that when fertilizations are made in the cooler portions of the growing season it is important that the rate be sufficiently low to avoid excessive stimulation of top growth. The level of nitrogen to be applied should only be that amount which is sufficient to maintain color and to provide an adequate level of recuperative ability from injury caused by environmental stress, turfgrass pests or traffic.

## Other References of Interest:

1. Index to the Proceedings of the Florida Turfgrass Management Conference pp. 1-32. 1953-1967. H. G. Meyers and G. C. Horn\* (from the Department of Ornamental Horticulture, University of Florida, Gainesville, Fla.)

2. The economics of turfgrass sprinkler irrigation. W. W. Wood. California Turfgrass Culture. 17 (2):15-16. 1967. (from the Extension Service, University of California at Riverside, Riverside, Calif., 92502).

3. Chemical control of *Fusarium* blight of turfgrasses. G. A. Bean\*, R. N. Cook, and A. E. Rabbitt. Plant Disease Reporter. 51(10): 839-841. 1967. (from the Department of Botany, University of Maryland, College Park, Md.).

4. Residue of Bensulide in turfgrass soil following annual treatments for crabgrass control. S. W. Bingham and R. E. Schmidt\*. Agronomy Journal. 59(4):327-329. 1967. (from the Department of Agronomy, Virginia Polytechnic Institute, Blacksburg, Va.) □

## INSTANT GREENERY

That's what you will think when you see all that green popping up after your Miller irrigation system is installed. Miller sprinkling systems are built-in player-pleasers that produce results. These results come from know-how acquired through over 40 years of experience and installation of more than 100 successful irrigation systems. So, call Miller today, ... your players will thank you!!

## MILLER SPRINKLING SYSTEMS

Division of A. J. Miller, Inc.

1320 North Campbell Road • Royal Oak, Michigan • 313, 398-2233

*40 years of experience in designing and installing  
sprinkling systems*

