

Get rid of unwanted green growth before it cuts into your profits.

The weed onslaught is just about universal.

An expensive headache.

For utilities, railroads, highway departments, the petroleum industry and industry in general.

But there is a way to con-

trol that costly green tide—with Tandex® herbicide.

It's a urea-carbamate compound that gives outstanding extended control over a range of weeds and grasses.

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It's brush control, too. If you've got to get rid of really tough brush and woody vines, Tandex gets the job done.

You can spray Tandex or apply it in dry granular form.

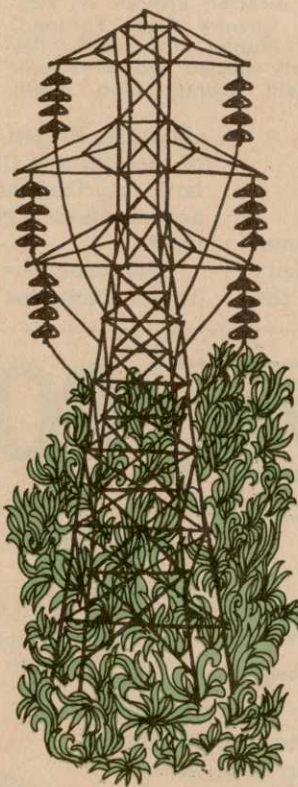
Either way you use it, you'll control that costly green tide.



FOR INDUSTRY



FOR RAILROADS



FOR UTILITIES



FOR ROADS

TANDEX

HERBICIDE

Agricultural Chemical Division
FMC Corporation, Middleport, N.Y. **FMC**

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For More Details Circle (134) on Reply Card



The 1974 GCSSA executive committee (from left) Melvin B. Lucas, Jr., Garden City Golf Club, Garden City, N.Y., newly elected director; Theodore W. Woehrle, CGCS, Oakland Hills Country Club, Birmingham, Mich., director; Richard W. Malpass, CGCS, Riverside Golf and Country Club, Portland, Ore., re-elected director; Palmer Maples, Jr., CGCS, The Standard Club, Atlanta, Ga., newly elected vice president; Charles H. Tadge, CGCS, Mayfield Country Club, South

Euclid, Oh., newly elected director; Charles Baskin, CGCS, Country Club of Waterbury, Inc., Conn., newly elected president; Gordon Witteveen, CGCS, Board of Trade Country Club, Woodridge, Ontario, Canada, director; George Cleaver, CGCS, Chestnut Ridge Country Club, Lutherville, Md., newly appointed secretary-treasurer; Clifford Wagoner, CGCS, Del Rio Golf and Country Club, Modesto, Ca.

GCSSA REPORT

(from page 20)

and no dust or exhaust fumes."

The classic dilemma of poa annua was revived when two speakers presented opposing opinions of the

plant. Len Hazlett Jr., superintendent of the Country Club, Inc. in Cleveland, described the heartaches, ulcers and sleepless nights caused by the plant.

"Most members of any given club do not know poa annua when they

are walking on it. Its incessant demands for water at some of the most undesirable times increase the number of player complaints on the soggy course," Hazlett said.

Bruce A. Sering, superintendent of
(continued on page 28)



POWER-KART

RIDE HAUL

(seat for two)

(500 pounds gross)

..... TOW

(pulls like a mule!)

(Shown with optional
headlight)

Snowco's torque converter drive converts the output of an 8 HP engine into almost unbelievable power for hauling and towing over all terrain.

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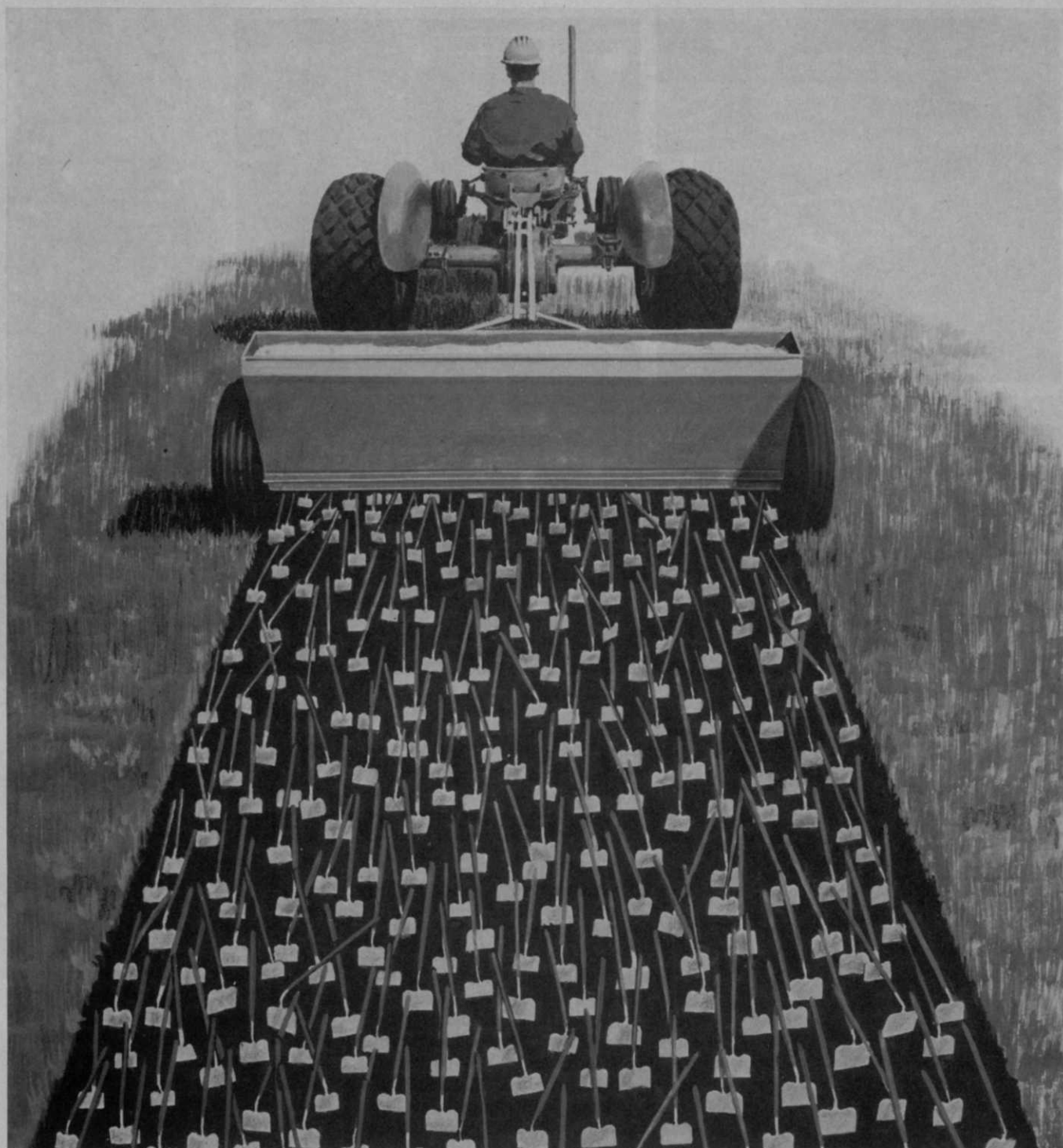
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aerating.**

Just apply GRAND PRIZE® Lawn & Garden Gypsum to grassy areas and shrub beds. GRAND PRIZE will work down—like a million tiny hoes—to create a loose, porous soil structure where air and water can move . . . roots can freely feed and grow.

It supplies soluble calcium and sulfur in a readily absorbed form. Won't affect the pH of the soil. Helps fertilizers to be more effec-

tive, and organic matter to decay faster. In addition, GRAND PRIZE helps neutralize pet and deicing salt damage.

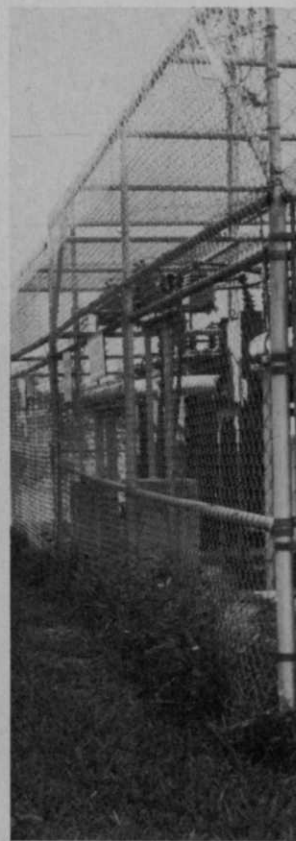
GRAND PRIZE is inexpensive and easy to use. While excellent for lawns, use it for flowers, vegetables and shrubs. If you want richer, greener lawns with less work, write for more information to 101 S. Wacker Drive, Chicago, Ill. 60606. Dept. WTT-44.



CHEMICALS DIVISION

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For More Details Circle (133) on Reply Card



The Navy's Role In Weed Control

By D. R. ESTES

Special Assistant For Applied Biology
Southern Div. Facilities Engineering Command
Department of the Navy

One of the most frequent questions asked of me is, "Why does the Navy need an entomologist?" or, more specifically, Special Assistant for Applied Biology. I have found that the relationship is best explained by pointing out that the Navy shore stations, including reserve centers, directly support the fleet.

Being autonomous and military, with biology problems unique to the military and with security problems at most stations, requires experts who are thoroughly familiar with the military way to solve the problems, well versed in the entire field of applied biology, and able to communicate with the cognizant personnel.

The photos above and at left look like the scenes around an average city. All these areas need chemical weed control. Yet they are also typical of the needs of the Navy. All photos here are "OFFICIAL PHOTOGRAPH U.S. NAVY".

These shore stations range in size from one-building-on-an-acre reserve centers to large public works centers, air stations and ammunition depots. An example of the size involved in one of the larger activities is the following inventory: 44,967 acres (72 sq. miles); 2,206 buildings (9, 055,651 sq. ft. floor space); a 625 acre lake and 69 stocked ponds; 51.2 miles of electrical lines; 194 miles of standard gauge railroad; 404 miles of road system; 38.6 miles of boundary fence; 6.1 miles of sidewalk.

From this it can be seen that this is a good sized military "city," with all of the inherent problems of an autonomous locality.

It is my job to train and certify the on-board personnel conducting pest control operations and to advise them on pest control problems and programs in the 12 state jurisdiction. I work out of the southern division, Naval Facilities Engineer-

(continued on page 45)

FERTILIZE TREES IN ONE THIRD THE TIME AND ABOUT HALF THE COST USING JOBE'S TREE FOOD SPIKES.

Here's proof when fertilizing a 5" tree

Drilling Method¹

Bulk 16-8-8 fertilizer—\$90/ton
(Example price throughout U.S.)

2 lbs./inch of trunk diameter = 10 lbs. × 4.5¢/lb.	\$.45
½ hr. labor @ \$4/hr.	2.00
Labor and materials	<u>\$2.45</u>

\$2.45 ÷ 5" tree = 49¢/inch of diameter
No allowance made for depreciation, amortization, breakage of auger, mistakes, etc.

¹Using electric auger.

Jobe's Tree Food Spikes Method²

5 spikes 16-8-8 fertilizer—22¢/spike

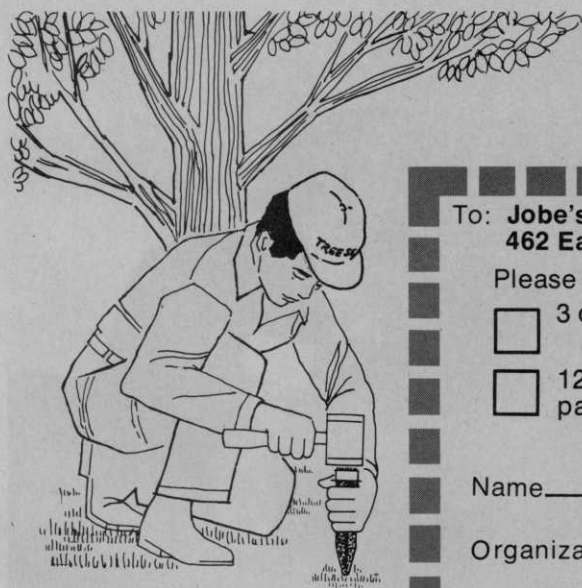
1 spike/inch of trunk diameter	\$1.10
5 min. labor @ \$4/hr.	.33
Labor and materials	<u>\$1.43</u>

\$1.43 ÷ 5" tree = 29¢/inch of diameter,
based on 20 case order.

²Based on results of university field tests and recommendations.

Professional tree and turf men using Jobe's Tree Food Spikes save 50% and more in labor and materials. Save time and money

by using Jobe's Tree Food Spikes. Order from your local supplier or use the coupon below.



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Continental U.S.A. (105 spikes—40 lbs. per case)
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For More Details Circle (136) on Reply Card



More than 300 attended this year's technical conference. Registration overflowed the headquarters hotel as well as four other local motels. Nineteen speakers discussed subjects from energy to drip irrigation.



This panel discussed the energy situation. They are: (l-r) David A. Witts, attorney, Dallas, Tex.; Charles A. Rothfus, exec. v-p, Colorado Petroleum council, Denver, Colo.; Dr. Clair J. Batty, mechanical engineering dept., Utah State Univ.; Dr. Ernst Smerdon, head, dept. of agriculture engineering, Univ. of Fla.; Dr. David Pimental, prof. of insect ecology, dept. of entomology, Cornell University.

Sprinkler Irrigation Association Report

THE energy situation and the irrigation industry shared the spotlight in February during the two day meeting of the Sprinkler Irrigation Technical Conference.

More than 320 members and guests met in Denver, the mile high city, to discuss head on the potential prob-

lems facing an industry dependent on energy to move water. Despite a few Aggie jokes and the usual razzmatazz of meeting old friends and acquaintances, it was a deadly serious meeting. This energy situation has started the wheels rolling in the creative minds of men. Concern

about the present and more so about the future has fueled the inventive fires to develop conservation practices and/or new energy sources.

This was put in better perspective by Dr. David Pimental of Cornell University. Speaking on "food production and world energy supplies," the entomologist said that it "wasn't until man tapped the fossil energy did growth really take place." He reported that there are currently roughly 3.6 billion humans on Earth. "With the current rate of increase

(continued on page 34)



Executive director Wally Anderson, SIA, (l) chats informally during lunch with Dr. Fali K. Aljibury, irrigation specialist, San Joaquin Valley, Univ. of California, Parlier, Calif. Dr. Aljibury presented a paper on sprinkler irrigation.



Dr. Henry Indyk, extension specialist in turfgrass management, Rutgers University, discusses the use of irrigation in sod production. He drew much interest in this growing field. One of the newer innovations is using spray effluent on sod fields.

Parks weren't designed for trucks. So we designed a truck for parks.



One that could tip-toe in and out of scenic areas where an ordinary truck would have to bull its way. In other words, the Otis® Turf-Aul. It's compact, it's light, and its 4-wheel stability lets you travel the toughest terrain with sure-footed safety.

The Otis Turf-Aul's big half-ton payload capacity saves time, fuel and manpower. In parks, on golf courses, in refuse collections and in industry, the Otis Turf-Aul's strong transmission and powerful engine make tough

jobs easy. A wide range of options, including several axle ratios, underscores the versatility of the Otis Turf-Aul.

Call your local Otis Dealer for a demonstration of the Otis Turf-Aul. It's the best way to do a beautiful job beautifully.

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More than \$8 million in equipment, fertilizers, insecticides and other supplies were exhibited.

Table 1. Conference attendance continues high for the national turf conference staged by the GCSAA. Statistics for the past five years are:

	Anaheim Calif. (1974)	Boston, Mass. (1973)	Cincinnati, Ohio (1972)	Denver, Colorado (1971)	Houston, Texas (1970)
Members	1250	1198	1309	1076	1182
Ladies	848	487	455	564	592
Guests	431	473	226	234	189
Greens Chairmen	62	87	250	214	211
One Day Admission	586	735	609	333	419
Turf Students	147	122	219	142	52
Exhibitors	1762	1114	985	922	975
Total Registration	5086	4216	4053	3485	3620

GCSSA REPORT

(from page 22)

Glen View Golf Course in Evanston, Ill., presented an opposing view of poa and how he lived with it. Sering related a personal experiment at his Evanston club to test the water needs of the plant. He concluded that his members would rather play on a green, wet fairway than one that's dry and brown.

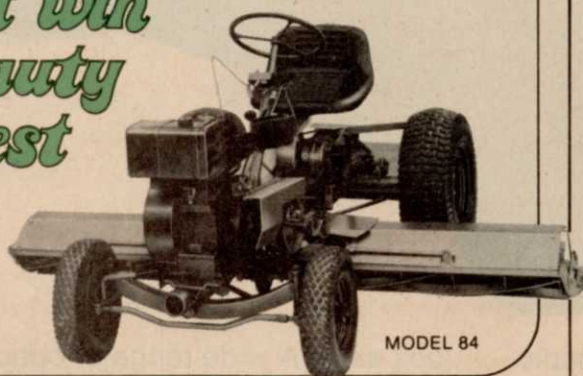
Dutch Elm disease (DED) controls were brought up to date by Dr. Eugene B. Smalley of the department of plant pathology at the University of Wisconsin. He pointed out that the big stumbling block to better control at this point has been

available to the tree. He also discussed research work conducted at the university and other tests conducted by J. J. Mauget Co.

Previsual detection of plant disease or stress on leaf tissues by using infrared photography was discussed by two speakers at the conference. Dr. William Wildman, department of soils and plant nutrition at the University of California at Davis, and Gerald L. Faubel, superintendent of Saginaw Country Club, Saginaw, Mich., agreed on the unlimited uses of disease detection with infrared.

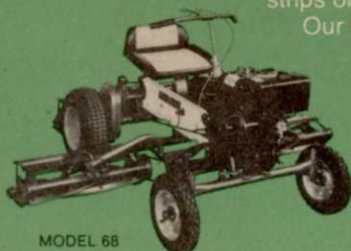
The organization's 46th International Turfgrass Conference and Show will be February 16-21, 1975 at the Rivergate, New Orleans, La. making the chemical benomyl more

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a beauty
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vide you with a written report on each unit. If your HI-RANGER(s) do need extensive (1) updating, (2) overhauling or (3) rebuilding, your problems will be minimal. Good equipment conservation mandates that you think about one or more of the three available services if any unit is three years or older, or has logged 6,000 or more hours of work.



If you would like specific helpful information about your HI-RANGER(s), advise us the Serial Number(s), and we'll promptly provide factory recommendations as to how best to assure your unit(s) optimum productive capability and safe functional condition; and to meet definitive regulatory requirements. We urge that you do this, especially in view of current conditions which demand exercise of unusual foresight.

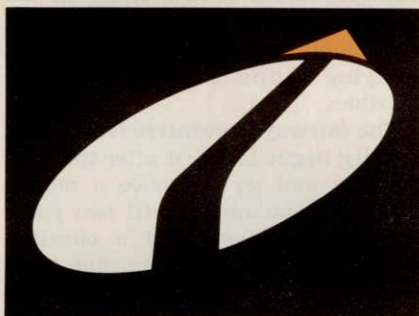


We want your present HI-RANGER(s) to continue to serve you, because we know that HI-RANGERS, with proper care, are capable of unexcelled performance . . . better and longer . . . with optimum safety.



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A practice green at the New Haven Country Club gets a workout. This green is bordered by a yard-wide strip of blacktop. Increased golfing pressure puts a premium on turf management.



James MacDonald, superintendent, surveys one of the greens and fairways on the 18 hole course. He uses Acti-dione weekly to control major turf diseases.

Rush Hour On The Golf Course

Families are golfing more.

This statement has all sorts of implications for psychologists, sociologists, and other "ists", but it's having a more direct impact on golf course superintendents. James MacDonald, superintendent at the New Haven Country Club, Hamden, Conn., has noted the increase in families golfing.

"During 1973 I noticed an increase in junior golfers," he says, "and the course is getting pressure seven days a week. The club membership is the same as it was in 1905 — 600, some of which are third and fourth generations of founding families, but all the family members are doing more golfing.

This increased golfing pressure puts a premium on turf management and organization of maintenance work. MacDonald utilizes his eight years of superintendent's knowhow, yet almost daily is learning new ways to get the job done.

As with most superintendents, he gives turf management top priority and blends fertilization, disease control, mowing and irrigation into an

integrated program. Because he has a six-man migrant summer crew that returns every summer and two full-time men, labor hasn't been a problem for him.

"Thus far our labor situation has been good," he adds, "and we've been able to handle our seasonal tasks, which means the March to December time span. As expected, the tees have borne the brunt of most of the increase in traffic in recent years."

Tees on the 18-hole course consist of a mixture of Merion bluegrass, *Poa annua*, Manhattan rye and Fylking. Fairways have been overseeded with Fylking and Kentucky bluegrasses for the past four years.

New Haven Country Club greens consist of a mixture of Seaside, *Poa annua* and C1-C19 bentgrass, while the fairways contain *Poa*, Kentucky bluegrass, and some bentgrasses. The greens are built on soil brought from mushroom beds in New Jersey.

"My fertilization program isn't any different from anyone else's," MacDonald points out, "but we do topdress our own mix on the greens

five times a year. With the spring and fall topdressing, we aerate the greens."

Herbicide treatments of Banvel D and 2,4-D are made every other year, with spot applications of MCPP used to control particular problems like clover. Disease control involves a combination of preventive and curative measures.

"Acti-dione has been a part of my disease control program since I've worked in turf management," MacDonald says. "I use it in a preventive program on the greens and haven't had any disease outbreaks in the five years I've been here."

He sprays Thiram, Cleary's 3336 and Acti-dione once a week on the greens from the middle of May into the month of October. When the spraying stops depends on the weather.

The fairway preventive treatments usually begin in April after the first mowing and go on twice a month through September. Until two years ago, he had just used a curative program on the fairways, but "diseases present in the spring must be controlled as they start to incubate,"