



Through professional planning

# Superintendents decide what a course needs to be healthy, look better and play better

## like using **ACTI-DIONE®** in a Tees Greens Fairways program

Fungus diseases can bring disaster to a golf course. That's why professional superintendents decide every year to follow a complete disease control program.

Besides the direct damage caused by fungi, unchecked disease can ruin the investment made in fertilizer, weed control, water and management practices (verticutting, aerifying, mowing and the labor they require). This investment can range up to \$80,000 a year and deserves the protection of a complete disease control program.

### DISEASE CONTROL PROGRAMS PAY

Many superintendents have discovered Tees Greens Fairways programs of disease control pay their own way. They help eliminate the problems and costs which arise when turf is lost. They help eliminate golfer dissatisfaction. The increased play from growing numbers of golfers is too much of a challenge for anything less than healthy turf.

### FOLLOW APPLICATION SCHEDULE

Although the level of control on fairways is not so critical as that required on greens, prevention of disease is always less expensive than cure. Start your fairway spray program in the spring as soon as possible after the first mowing. Continue on a scheduled basis—usually an interval of 21 to 30 days. Acti-dione turf fungicides can eradicate many turf diseases, but you will save time,

money and many headaches by establishing a program of prevention.

### TRAINED TUCO PERSONNEL

Just a call will bring one of our highly trained and expert field representatives to help you in your program of scientific turf management. He can help with more than just fungus diseases, too.

### ACTI-DIONE ADVANTAGES

It's biodegradable and non-mercurial. It does not harm beneficial bacteria that are necessary for the breakdown of thatch and release of nitrogen and other nutrients. It is absorbed into plant cells through locally systemic action. It is water dispersible for uniform coverage when sprayed on the grass.

### DISEASES CONTROLLED

Leafspot, Dollarspot, Melting-out, Fading-out, Going-out, Brown patch, Pink patch, Powdery mildew, Rust

### Acti-dione TGF®

New formulation from TUCO. Easy-to-open 15-ounce zip-top package. Easy to use. Easy to handle. Easy to dispose of. Treats three average greens. For fairway use, check with your supplier.

### Acti-dione® Thiram

Broad-spectrum, year-round disease control, including snow mold. Your supplier has complete information.



**TUCO**

Division of The Upjohn Company, Kalamazoo, Michigan 49001

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## JOB APPLICATION

**NAME:** Bolens Husky 18 hp. tractor

**JOB DESIRED:** One-tractor maintenance crew

**EXPERIENCE:** Mowing, snow removal, grading, terracing, tilling, weed cutting, cultivating, loading, sweeping, raking, plowing, seeding, fertilizing, hauling, aerating, scarifying, spraying, fogging, trenching, thatching, shredding, and post-hole digging.

**SPECIAL ABILITIES:** Hitches up to 35 separate attachments. Has an exclusive collar-locking PTO system, a hydrostatic foot pedal transmission (the no-hand shift), a two spool hydraulic system, an extra capacity fuel tank, and (optional) three point hitch and power steering.

**SALARY:** Very reasonable.

## INTERESTED?

(Then send this coupon. We'll be in touch)

Bolens Div., FMC Corp., Port Washington, Wisconsin 53074  
Gentlemen: Let's talk!

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# BOLENS

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# Introducing KROVAR I

## a new one-two punch for tough weed problems

KROVAR I is really two great herbicides in one—bromacil and diuron. Each chemical has certain advantages over the other, and together they produce a single product with many superior advantages . . .

### Controls more weeds and grasses.

KROVAR I controls a wider spectrum of weeds and grasses than HYVAR® X or KARMEX.® It even gets tough ones like water grass, groundsel and filaree. Applied at higher than normal rates, it actually suppresses the tougher perennials, such as bermuda grass, salt grass and yellow nut grass.

### Gives you an edge on the weather.

In high-rainfall areas, KROVAR I doesn't dissipate as rapidly. In low-rainfall areas, it takes only a little moisture to start KROVAR I working against weeds. Result? Better control in a wide range of rainfall.

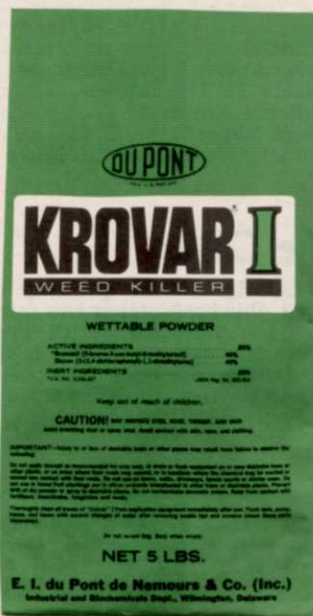
The interval between application and rainfall is less critical than with other residual herbicides. KROVAR I effectively reduces weather as a factor in weed control.

### Economical.

KROVAR I gives such effective, long-lasting control that it substantially reduces the need for follow-up sprays later in the season. In many areas, one application takes care of weeds and grasses all season long. Additionally, KROVAR I used in retreatment extends the desired controls and reduces the need for "touch-up."

### Large safety factor.

When used as directed, KROVAR I is safer to trees, shrubs and other desirable vegetation than "straight" HYVAR products. It's non-volatile, non-flammable, non-drifting. Pick up a supply of KROVAR I soon and specify it in your orders for custom application.



With any chemical, follow labeling instructions and warnings carefully.



**KROVAR® I**  
WEED KILLER

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# WEEDS TREES and TURF<sup>®</sup>

Volume 11, No. 4

April, 1972

James A. Sample  
Editor

Arthur V. Edwards  
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Eric Lindsay  
Advertising Production

Hugh Chronister  
President and Publisher

Dan M. Humphrey  
Vice-President, Advertising

D. D. Langley  
Director of Circulation

## ADVERTISING SALES OFFICES

Cleveland, Ohio 44102  
9800 Detroit Ave./216+651-5500  
William Schmunk

Chicago, Illinois 60601  
333 N. Michigan Ave./312+236-9425  
John Kielp

Shawnee Mission (Kansas City),  
Kansas 66202  
6811 W. 63rd St./913+722-5900  
Austin Schnacke

New York, New York 10017  
757 Third Ave./212+421-1350  
Russell Bandy

Los Angeles, California 90005  
The Eschen Company  
3142 Wilshire Blvd./213+382-8391  
Henry Eschen

San Francisco, California 94104  
The Eschen Company  
57 Post St./415+781-7440  
Rod MacDonald

## Dutch Elm Disease—One Step Closer To A Cure ..... 13

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## Accutrol—Industry Unites Chemicals and Air ..... 18

New application methods for modern chemicals are generating excitement throughout the Green Industry. Accutrol, a spray system developed by Velsicol, Chemical Corporation, combines chemicals and air to form an air emulsion spray that minimizes drift, reduces the number of times required for refilling spray tanks and increases the efficiency of the chemical being sprayed.

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A report of the 43rd International Turfgrass Conference and Show of the Golf Course Superintendents Association of America.

## Winter Hardy Ornamentals ..... 26

The key to Year-Round Fertility is a nitrogen source that acts throughout the year. Dr. Robert J. Schramm, Jr. of the University of Connecticut reports on his studies with Uramite ureaform fertilizers.

## Zoysia Grass ..... 28

A different way in establishing a golf course. Mel Anderson's success with zoysia grass represents an interesting concept in turfgrass culture. His chemical program involving both Dacthal W-75 and Daconil 2787 have kept weeds and disease to a minimum.

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## The Cover

Looking like the progeny of a cross between a hay baler and a refuse truck, this rock picker can minimize manual labor chores considerably. Here, Jack Parkhurst of Smith Tree & Landscape Service, Inc., Lansing, Mich. shows the ease with which this Armor Anderson Rock Picker effortlessly handles the big ones. The cost of manual labor on a single job can go a long way in paying the depreciation on a machine such as this.

WEEDS TREES and TURF is published monthly by The Harvest Publishing Company, subsidiary of Harcourt Brace Jovanovich, Inc. Executive, editorial headquarters: 9800 Detroit Ave., Cleveland, Ohio 44102.

Single Copy Price: \$1.00 for current and all back issues. Foreign \$1.50.


Subscription Rates: WEEDS TREES AND TURF is mailed free, within the U.S. and possessions and Canada, to qualified persons engaged in the vegetation care industry and related fields in controlled circulation categories. Non-qualified subscriptions in the U.S. and Canada are \$10.00 per year; other countries, \$12.00 per year. Controlled circulation postage paid at Fostoria, Ohio 44830.

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# try to say **TREES** without smiling

Saying "Trees" will bring a smile to your face. Seeing them. Climbing in them (if you're a kid). Using them or just enjoying them, trees bring a lasting satisfaction. On this 100th anniversary of Arbor Day ...the Conservationist's Holiday, bring joy to your little corner of the world. Plant a tree for tomorrow.

## Trees...a joy forever

- they provide us with shelter
- keep the air pure
- make life so much better



*bring joy to your little corner  
of the world...*

## Plant a tree for tomorrow!

For details, write:

**The National Arbor Day Foundation**  
Box 100 Arbor Lodge  
Nebraska City, Nebraska 68401

# All Yours



## FYLKING KENTUCKY BLUEGRASS

U.S. Plant Patent 2887

The ultimate in beautiful lawn turf when you insist on Fylking, the low-growing, ground-hugging, fine-textured grass. It produces an abundance of side shoots, and has a dense root system that strangles weeds and creates rich, green cushiony turf of unrivalled loveliness. More disease and drought resistant, Fylking has proven superior in years of international tests and actual use. It thrives cut at  $\frac{3}{4}$  inch (even low as  $\frac{1}{2}$  inch) making backyard putting greens practical. Ask for 0217® Brand Fylking Kentucky bluegrass lawn seed or sod at your local wholesale seed or sod distributor.

Another fine product of Jacklin  
Seed Co., Inc.

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## Editorial

### Our Brave New World

At the Southern Weed Science Society in January we heard Dr. Joseph R. Orsenigo speak on weed science in the future. As he talked we could not help but let our imagination run at the same accelerating rate with which Dr. Orsenigo credited the growth of weed science. We could see the man with the hoe of the past contrasted with a giant electronic system of gadgetry commanded by a professional zapping weed seeds hidden from view but visible through micro-cosmic radiation.

While we dreamed Dr. Orsenigo talked in reality about the applicability of UHF electromagnetic fields and laser methods, the improvement of mobile power sources and other technologies based on electricity. He mentioned that "weed science has an important role in anticipating and implementing production methods that will result from genetic modification of crops, new cultural systems and the introduction of new crops."

The realism of our dream and this plant physiologist's remarks are upon us already. Consider the new mini-granules measured in microns, equipment that can be programmed to perform a myriad of tasks, chemicals that can be applied as a foliar spray to control nematodes in the soil, the ability to detect disease or insect infestations through the wonders of infra-red photography from an orbiting satellite and a host of others.

At least one chemical company has now formed a group of scientists who are looking at new methods of application of crop protection chemicals. Impregnated bars drug over the ground or capsules containing time-release herbicides planted in the ground once in five years are potential candidates of future application techniques.

Closely tied to this scientific research will be an intensified awareness of the ecological and biological balance of nature.

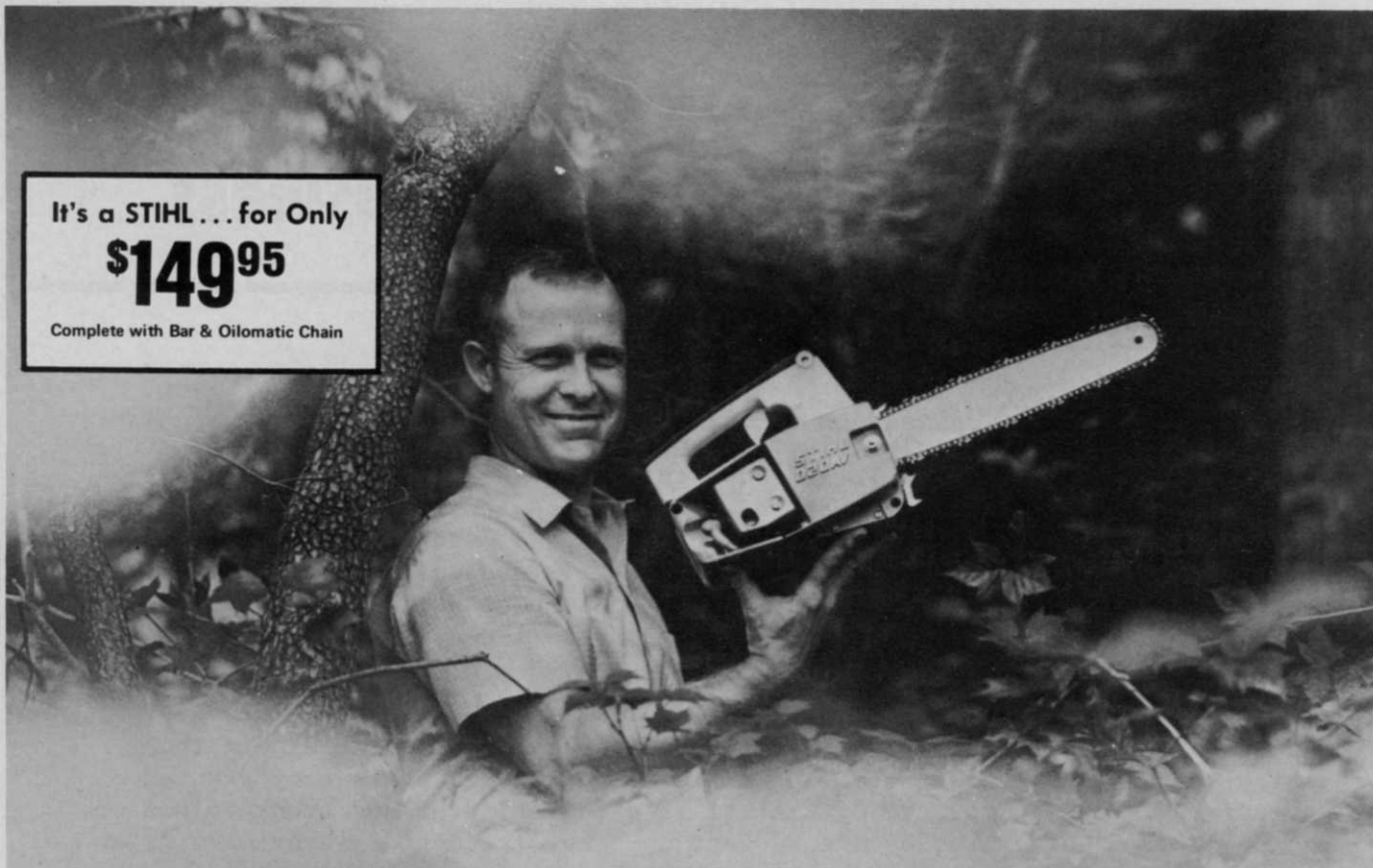
We believe that the Green Industry has a definite stake in the future of weed science. Yet this interest must be nurtured and developed. Participating in society meetings and expressions of ideas and opinions to government leaders, researchers and industry must be increased in order to draw more attention to our dynamic business.

Progress is measured by achievement. As communicators of the services offered, we must increase the knowledge of those who use these services. More consumer oriented advertising other than a telephone yellow page listing is needed to tell the Green Industry's story. Direct mail, radio, television and word of mouth must play a bigger role. By teaching others what we have learned, a greater appreciation of the goals of this growing industry can be achieved.

It's a STIHL... for Only

**\$149<sup>95</sup>**

Complete with Bar & Oilomatic Chain



## This new, Super-Lightweight will amaze you! The STIHL 020AV

Here it is! New and terrific!

The finest and the most advanced mini-size lightweight saw in the World... designed and engineered for you by STIHL, makers of the World's First and Finest Chain Saws.

It's the first and only chain saw of its size in the World with built-in shock absorbers and automatic chain oiling. Yes, now you can have the same famous patented STIHL AV anti-vibration system & superior quality and performance, formerly only available in our higher priced professional models.

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# **STIHL 020AV**





## Government News / Business

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Phaseout of the no-residue, zero tolerance concept of certain pesticides continues by the Environmental Protection Agency. The latest herbicide to receive the ax is IPC for use in weed control for grasses grown for seed. Products containing IPC for this use are cancelled April 9. EPA has further cancelled and suspended all registrations for use of sodium cyanide, 1080 and strychnine for predator control. Structural or urban pest control with these compounds is not affected. Thallium sulfate as an economic poison has been cancelled or suspended. Shipment and sale of thallium as a rodenticide will halt.

Benlate benomyl fungicide became official in early March as an aid in the control of Dutch Elm Disease. The Environmental Protection Agency granted Federal registration for use of Benlate as a foliar spray and trunk injection. The product, manufactured by the Du Pont Company, is considered by many as an important step forward in DED control. EPA has a kicker on the label, however. Benlate must be used by trained arborists. At press time, only one state, Wisconsin, has scheduled training. Consult with your state Land Grant university for more details.

Aquatic plants may hold the answer to reducing mercury levels in contaminated lake sediments. Research conducted by Dennis R. Keeney, soil scientist at the University of Wisconsin has shown that inorganic mercury can be changed to organic forms by micro-organisms in sediments. Organic mercury has been found to be quite mobile in sediments and readily available for plant uptake. This means that rooted aquatic plants theoretically could remove quantities of mercury. At an appropriate time these plants could be harvested, thus reducing dangerous levels of mercury contamination. Only laboratory tests have been made at this time, but Keeney believes it offers potential for scientists to investigate.

Nearly 200 suggested amendments to the proposed Federal Environmental Pesticide Control Bill of 1971 swamped a subcommittee of the Senate Committee on Agriculture during two days of hearings last month. One suggested amendment incorporated in the Committee's work draft would allow use of restricted pesticides under supervision of a certified applicator who does not have to be physically present at the time and place a material is applied. However, David D. Dominick, assistant administrator for categorical programs at EPA poured cold water on this measure by saying, "I recommend against language that would preclude the Administrator (of EPA) from requiring that a certified applicator has to be physically present at the time and place that a restricted pesticide is applied."

Environmentalists are lobbying to toughen a water pollution bill being drafted by the House Public Works Committee. Some environmentalists believe the measure is weaker than one passed by the Senate which would prohibit industrial discharges into waters by 1985.