



# When you use Poast<sup>®</sup> herbicide, the grasses are always greener on the other side.

If you want to be the envy of the ornamental world, consider Poast herbicide.

Poast delivers consistent, gentle control of your toughest grasses. Like bermudagrass and crabgrass, quackgrass and fox-tails. And in your most valuable greenery. Like flowers, shrubs, trees and ground covers.

With Poast, you don't have to bother with directed or shielded sprays. Because Poast is proven

gentle to ornamentals. You can apply Poast over-the-top at all stages of ornamental growth. So you don't have to worry about soil residue or leaching. And you

don't need soil incorporation or moisture to activate either.

Best of all, Poast saves you all the time, labor and expense of handhoeing.

So this year, let Poast take care of the grasses. So you can take care of the rest.

From BASF. Always follow label directions.

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Chemicals Division



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Circle No. 103 on Reader Inquiry Card

# BASF



# PROBLEM MANAGEMENT

by Balakrishna Rao, Ph.D.

## Oak iron deficiency

**Problem:** *I would like to treat a number of large red oaks showing iron deficiency. Can we effectively manage the problem by foliar application of iron-containing products? Are there any good products in the market for this purpose? (Texas)*

**Solution:** No, the foliar application of iron will not correct the problem completely. Our experience has shown that chlorotic red oak leaves do not absorb an adequate amount of iron to correct the problem satisfactorily. To avoid wound injury, soil application of iron product is recommended. However, this alone may not correct the situation satisfactorily, particularly if the trees are suffering severely from iron deficiency.

Therefore, first provide ferric ammonium citrate through trunk injections for quick recovery. This should then be supplemented and followed by soil application of chelated iron to maintain the iron requirement of plants. Trees smaller than three to four inches in diameter should not be trunk injected because of the potential for injury. Soil treatment of iron is recommended in this situation. Water the treated area to move the iron product to the root zone for better uptake. Avoid treating when trees are under moisture stress in order to avoid any phytotoxicity problems.

## Treating crabgrass

**Problem:** *We have been using either Betasan or Dacthal in our early spring applications for crabgrass control. This year we have experienced a large number of calls from our clients. What are we doing wrong? What is your opinion on using a post-emergent? Is it possible to skip the pre-emergent application completely and use only the post-emergent in our second treatment around May to June? (New York)*

**Solution:** The use of pre-emergence herbicides like the ones you have mentioned is the best approach to managing crabgrass problems in established turf areas. To determine why you are experiencing too many crabgrass calls, make a survey of several treated and untreated areas and inspect the lawns. This would help analyze the reasons for poor crabgrass control.

According to the manufacturers' guidelines, one can at best expect about 80 to 85 percent control of crabgrass when using pre-emergence herbicides. Compare the treated lawns with untreated sites like parks, etc. to determine how well the product has provided control and how environmental conditions were this year for crabgrass growth. Reports indicate that this year many people have had poor crabgrass control.

Several factors either individually or cumulatively contributed to the crabgrass problem. Remember that these herbicides provide a thin chemical barrier which is toxic to germinating crabgrass seedlings. Results will vary if this chemical barrier is affected by raking, traffic, insect activ-

ity, heat and/or photodegradation of the active ingredient.

Generally, opportunistic weeds like crabgrass appear in thin areas, resulting from poor nutrition, insect and disease activity, or drought. In many situations, the labelled products have out-performed manufactured suggested percent of control. However, quite often when clients find a few plants in their lawns it becomes quite objectionable, which is a common problem in our industry. Educating the clients as to product performance and the state of the art in crabgrass control might be very helpful.

Success in managing crabgrass using post-emergence materials like DSMA, MSMA or Acclaim! depends upon proper timing of the application. For best results, the materials should be applied onto juvenile seedlings (two-leaf stage). This would require proper monitoring and identification of the plant materials. Depending upon the number of seeds carried over from the previous years, the results may vary.

In many situations, the crabgrass problem is recognized when the plants have matured. Reports suggest that variable results can be expected when post emergence materials are being applied onto mature plants.

In some situations, if the plants begin to produce more than one tiller, the management is difficult. At this stage of development, the major objective is to arrest the growth of crabgrass and prevent seedhead formation for which these materials can be very effective. However, these chemical products may temporarily discolor the turf for two weeks following the application. Therefore, read and follow label specifications for best results, and also let your clients know the advantages and disadvantages of these post-emergence crabgrass treatments.

Regarding your question concerning using post-emergence materials in place of pre-emergence materials, I feel that theoretically it should work fine. However, in practice, to achieve good results, the post-emergence products should be applied at the proper time. If this is feasible, try to apply the materials to a few lawns in order to understand more about the product performance and service practices. If the lawns appear to be thin after removing the crabgrass, you may have to overseed the area with compatible turfgrass cultivars and provide a balanced fertilization and pest management program as needed to maintain turf density and quality.



**Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.**

Questions should be mailed to Problem Management, Landscape Management, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

# TRY TO SEE WINTER THIS WAY



While your competitors are locking up their lawn equipment for the winter months, you can be producing income with yours. Use your equipment to apply Great Salt Lake Minerals & Chemicals deicing products, **QWIKSALT® + PCI®** corrosion control polymer and **FREEZGARD™ + PCI®**, during

the winter. These products are more effective and less corrosive than other deicing products. You can keep roads and parking lots clear of ice and snow, and put money in your pocket while your competition is hibernating. Interested? Simply call (801) 731-3100 for the facts.



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# PRODUCTS

## Five-speed engine goes on all terrain

Exmark Manufacturing's 32-inch commercial power mower is equipped with a five-speed transmission for a smooth cut on all terrain. It has hinged grass deflectors which flip up



for easy removal or attachment to the grass catcher.

The operator can adjust mowing heights quickly with easy adjust casters. The mower is available with either an 8 or 12 hp Briggs & Stratton or 12.5 hp Kawasaki engine.

Circle No. 190 on Reader Inquiry Card

## New product for hazardous spills

A new line of absorbent socks has been introduced by Dudick Corrosion, which calls them "the best absorbency in the industry."

Wolf and Super Wolf Absorbent



Socks can absorb acids, caustics and flammable solvents. They come in a polyethylene pail, in which they can be disposed.

The Super Wolf, which weighs one pound, can absorb 15 pounds and will not seep or leach. The Super Wolf is 44 inches long and four inches in diameter. The oil-only regular Wolf, which can absorb 7½ times its weight, will absorb petroleum-based fluids while allowing aqueous solution to pass through.

Circle No. 191 on Reader Inquiry Card

## Rotary mower features compact construction

A new rotary mower line from Ingram Kut-Mor Co. features shorter mowers that include actuator power steering systems for improved handling. The company has also introduced the 623DW, powered by a 24 hp water-cooled Perkins Diesel engine. All Kut-Mor mowers include power steering, hydrostatic drive and fluid deck drive as standard equipment.



Circle No. 192 on Reader Inquiry Card

## Multi-tank spray truck applies versatility

The "Trident" lawn sprayer from Green Pro Services, Grass Roots Nature's Way, Inc., features a low-profile, "non-threatening" appearance, according to the company.



The multiple tank system includes three 200 gallon tanks and one 50 gallon tank for special applications and curbside mixing. The Trident, can be used for lawns, trees or shrubs, and comes with an electronic flow meter, locking cabinets and truck signs.

Everything is mounted on a 12-foot

flatbed available on an Isuzu NPR Diesel chassis.

Circle No. 193 on Reader Inquiry Card

## Motor oil upgraded to meet new engine requirements

Delvac 1 synthetic motor oil from Mobil Oil Corp. has been upgraded with a high-performance formula to meet and exceed new engine and transmission requirements developed in the past 10 years.

The oil is designed for trucks, buses, construction and off-highway



equipment, farm equipment and logging equipment.

Delvac 1 is an SAE 5W-40 synthesized hydrocarbon-based product with a pour point of 60 degrees Fahrenheit and will pump down to -50 degrees.

Circle No. 194 on Reader Inquiry Card

## Root ball grabber a one-person show

The Kinggrabber is a one-person tree handling system that attaches to Coyote C14 loaders.

The root ball grabber easily plants or lifts trees out of the ground without damage to the tree, the root system or the trunk. Powered by the C14 hydraulic system, the attachment can be operated easily from the cab of this loader.

The Coyote C14 loader has a lift capacity of more than 4000 lbs. with the Kinggrabber attachment. Other attachments available for the Coyote

C14 are bucket, forks, scarifier and tree spade.



Coyote C14: Circle No. 195  
Kinggrabber: Circle No. 196

### Monofilament line replaces blade on mower/trimmer

The UnBlade from the UnBlade Company is a combination mower/trimmer/mulcher/bagger.

Instead of steel blades, it employs 12 monofilament lines made of Xenoy, guaranteed to last an entire mowing season. Line replacement can be completed without removing the UnBlade from the mower.

Because it doesn't use blades it can go on rough rocky terrain, cut tall or wet grass easily and doesn't cut garden hoses or tree roots. When coupled with the Trim-A-Lawn mower, a

door on the side of the mower can lift up to expose 2½ inches of line for trimming around trees, houses and shrubs.

Circle No. 197 on Reader Inquiry Card

### Brochure details loader/backhoe

A full-color brochure describing the JI Case Model 580K loader/backhoe is now available. The eight-page brochure highlights features of the loader/backhoe, including the two-wheel- or four-wheel-drive options, the Case 63 net horsepower diesel engine, the 5500-lb. lifting capacity and the 18-ft. 2-in. digging capacity.

Circle No. 198 on Reader Inquiry Card

### Non-toxic herbicide is also biodegradable

A new non-toxic herbicide for weed control is available from Safer, Inc. TopGun is a broad-spectrum contact vegetation killer that destroys unwanted weeds on contact without leaving harmful residues in the soil.

The active ingredient in TopGun is

a blend of fatty acids that disrupt cell membranes, causing the vegetation to shrivel and die. Seed beds or grass can



be replanted within 48 hours after application of TopGun.

Safer's line of natural products includes insecticidal soap, moss and algae killers, sulfur-based fungicide, insect traps, herbicides and plant protectants.

Circle No. 198 on Reader Inquiry Card

### Hydraulic reel mower suits many needs

A line of innovative hydraulic reel mowers that turn any tractor into a turf mowing unit without dedicating it to one task has been unveiled by John Deere.

## We are expanding.

If you are looking for a career opportunity rather than just another job, consider linking your future to ours. We are looking for experienced people in the following areas:

- Environmental Care Inc.  
*Landscape Management*
- Arbor Care  
*Commercial and Industrial Arborist*
- Interiorscape Division  
*Interior Landscape Maintenance and Installation*

Please check your area of interest and the geographical area where you would most like to be located:

- Los Angeles    East Bay    Inland Empire    Sacramento    Santa Ana
- San Diego    San Jose    Colorado Springs    Denver
- Phoenix    Houston

Send resume to:



## Environmental Care Inc

Landscape Maintenance Services  
A subsidiary of environmental industries, Inc.

Personnel Department  
24121 Ventura Boulevard  
Calabasas, CA 91302

The mowers are pull-behind units that provide a hydraulically-driven set of reel mowers for golf fairways and other sports turf.

The model 305 has five 30-inch reel mowers with a 142-inch cutting swath. Optional 4-, 8- and 10-blade reels are available. The model 303 has



three 30-inch mowers with an 86-inch swath.

Both can cut heights from 3/8-inch to 2 3/8 inches; both have rear rollers and scrapers, adjustable skids and hydraulic reel lifts.

Circle No. 200 on Reader Inquiry Card

### Tree transplanter is completely self-contained

Mid Dakota Corp.'s towable transplanter is a self-contained unit which



will go anywhere a garden tractor will go. It won't damage lawns or underground sprinklers.

The cradle can be positioned at any level above ground to allow for varying root ball sizes. Once the cradle is positioned, a jack hammer drives the spades into the ground. Then, hydraulics lift the tree and puts it in the ground or in a pot.

Circle No. 201 on Reader Inquiry Card

### Stump cutter performs in tight places

Rayco has introduced a new stump cutter which is portable or truck-towed. Model RG 1620 (JR) is designed for use where working clearances are tight.

A 20 hp Kohler gasoline engine

powers the cutting action, while a hydrostatic motor provides on site self propulsion. Field performances have shown RG 1620 (JR) to be versatile and productive.



Circle No. 202 on Reader Inquiry Card

### Sentry luminaire gives off directed light distribution

The new Sentry SMA series luminaire comes with an internal refractor for directed light distribution. The refractor can yield either symmetric or asymmetric distribution. Asymmetric lighting is frequently used to separate lighting between a road and pedestrian sidewalk.

The Sentry SMA series uses a globe



made of sturdy textured polycarbonate. Its heavy-duty cast aluminum base offers further protection to the ballast and associated electrical components.

SMA luminaires are available in metal halide, high-pressure sodium and mercury lamps ranging from 70 to 250 watts.

Circle No. 203 on Reader Inquiry Card

# Olathe

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Circle No. 126 on Reader Inquiry Card



# Shed new light on your shade tree operation.

**Branch out** and attend a Mauget micro-injection seminar. It's the proven and effective way to learn how micro-injection can keep trees vigorous and healthy. Each Mauget seminar is designed to shed new light on your tree care problems. Seminar topics include tree nutrition, insect and disease control, and application procedures.

Learn how Mauget micro-injection uniquely fits today's environmentally-conscious customer. No spraying, no particle drift and no chemical burden. All product is placed directly into the tree's sap stream. No waste or contamination.

**Enlighten yourself.** Plan now to attend a Mauget micro-injection seminar. Complete and send the



coupon below, and we'll send you information about the meeting you select. Choose a location nearest you. Registration fee: \$35. Open to all arborists, city foresters, lawn care firms, landscape architects and contractors, golf superintendents and grounds managers.

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## 010 - ADVANCES IN TURFGRASS PATHOLOGY

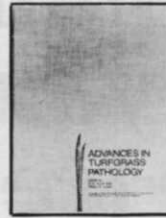
by Joyner and Larsen  
Leading U.S. turf pathologists report on turfgrass diseases, pythium blight, snow molds, fairy rings, leaf spot of Kentucky bluegrass in Minnesota, initial and field fungicide screening, turfgrass disease resistance, etc. Contains new ideas on how to combat turfgrass problems. **\$27.95**

## 220 - CONTROLLING TURFGRASS PESTS

by Shurtleff, Fermanian, Randall  
New comprehensive guide provides the most up-to-date information available on the identification, biology, control and management of every type of turfgrass pest. Covers weeds, insects, animal pests and diseases in detail. Also provides information on cultural management practices: the establishment, care and renovation of low-, medium-, and high-maintenance turf areas. 50 color and 400 black and white photographs. **\$27.95**

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by J.M. Vargas  
Identifies turfgrass diseases by description and illustration. Includes a holistic approach to healthy turf and lawns. Presents practical management strategies for golf courses, lawns and athletic fields. 204 pages, illustrated. **\$26.70**



## 615 - TURF MANAGEMENT FOR GOLF COURSES

by James Beard  
Written by an eminent turfgrass researcher, this USGA sponsored text is an ideal reference and "how to" guide. Details all phases of golf course design and construction, turf management, course administration, irrigation, equipment and disease and pest control. Fully illustrated. **\$52.75**

## 620 - TURF MANAGEMENT HANDBOOK

by Howard Sprague  
Practical guide to turf care under both healthy and poor turf conditions. Chapters cover turf in cooler and warmer regions, fertilizer use, regular turf care, weed and disease control and special turf problems. Useful seasonal schedules for management of turf areas. **\$19.00**

## 110 - TURF MANAGERS' HANDBOOK Second Edition

by Daniel and Freeberg  
ENTIRELY UPDATED. A practical guide for the turf practitioner. Chapters on grasses, growth regulators and diseases have had extensive modification. Innovations resulting from research and practice have been added to reflect the current techniques available for turf managers. Offers recommendations for effective turf protection through integrated pest management. Included are alternate plans for providing and improving safe, uniform turfgrass for sports fields. Outline format plus newly added index make this new edition easier to use and more comprehensive approach to turfgrass science. **\$32.95**

## 225 - TURFGRASS MANAGEMENT

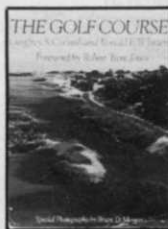
by A.J. Turgeon  
Revised edition. Covers the latest developments in turfgrass science and technology. Heavily illustrated with dozens of new drawings. Provides specific recommendations for applying the newest pesticides, fertilizers and other materials to combat turfgrass problems. A valuable reference for diagnosing problems and determining their causes. **\$32.95**

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by James Beard  
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## 640 - TURF IRRIGATION MANUAL

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A guidebook for engineers, architects, designers and contractors. Keeps pace with the latest developments in turf and landscape irrigation. Specific chapters devoted to rotary sprinkler design systems. Golf course design systems and expanded engineering and reference material. **\$23.95**

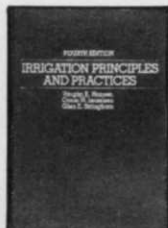
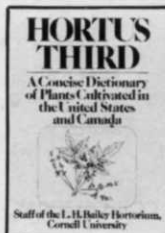


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by Cornish and Whitten  
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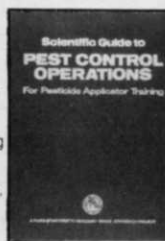


## 635 - IRRIGATION PRINCIPLES AND PRACTICES

by Hansen, Israelsen, Stringham  
A new fourth edition of this highly successful textbook presents essential concepts pertaining to water conveyance, application, storage in the soil and use by plants. Basic underlying principles that govern irrigation practices are stressed. **\$57.00**

## 125 - SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS

by Truman, Bennett, Butts  
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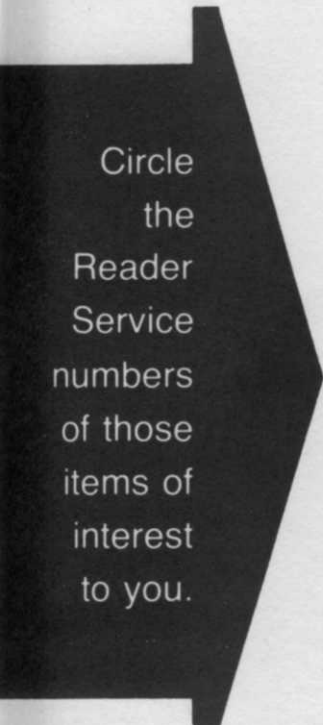
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