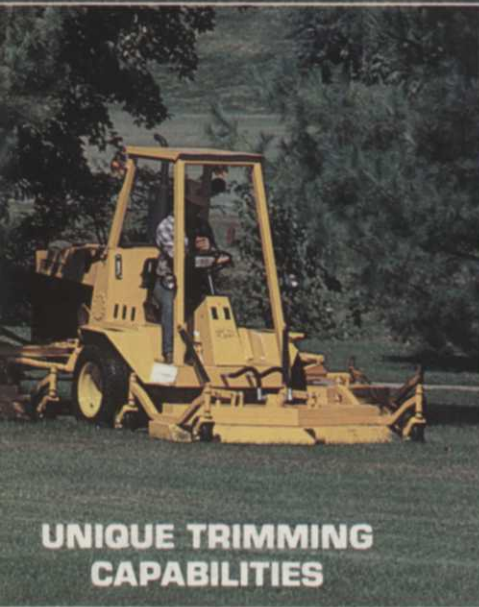


CUT YOUR TURF PROBLEMS DOWN TO SIZE



with **HYDRO-POWER 180**



**UNIQUE TRIMMING
CAPABILITIES**



**YEAR-ROUND
VERSATILITY**



**EASY-FOLDING
CUTTING UNITS FOR
TRANSPORT**

Your search for a high capacity mower encompassing a one man operation is now concluded. The Hydro-Power 180 with its 15 foot hydraulically driven rotary mower has a mowing capacity of up to 11 acres an hour while incorporating rear wheel steering for maximum maneuverability. Cutting units are designed for maximum floatation and may be used individually or in any combination of the three.

A foot pedal controlled hydrostatic transmission affords variable mowing speeds as well as transport speed to insure maximum travel time between the job sites. The Hydro-Power 180 offers year-round versatility with a 2-stage, 73" snow blower and heated cab.

Manufactured by



18155 Edison Avenue
Chesterfield, Mo. 63017

COOL-SEASON TURF DISEASES
TURF DISEASE AND CONTROLS

Disease	Causal Agent	Hosts	Biological and Cultural Control	Chemical Control
Anthracnose	<i>Colletotrichum graminicola</i>	Annual bluegrass Fine-leaf fescue Kentucky bluegrass Perennial ryegrass Creeping bentgrass	Adequate nitrogen. Cool grass by syringing.	Maneb plus zinc sulfate, chlorothalonil, benomyl, thiophanate-methyl, thiophanate, thiophanate-methyl + mancozeb, triadimefon, propiconazole
Brown patch	<i>Rhizoctonia solani</i>	All major turfgrass species	Reduce nitrogen. Remove "dew." Increase air movement.	Mancozeb, maneb + zinc sulfate, chlorothalonil, vinclozolin, benomyl, thiophanate-methyl, thiophanate, thiram, thiophanate-methyl + maneb, thiophanate + thiram, PCNB, iprodione, propiconazole
Dollar spot	<i>Lanzia spp.</i> <i>Moellerodiscus spp.</i> (<i>Sclerotinia homoeocarpa</i>)	Annual bluegrass Creeping bentgrass Colonial bentgrass Fine-leaf fescues Kentucky bluegrass Perennial ryegrass Tall fescue	Increase nitrogen. Remove "dew."	Benomyl, thiophanate, thiophanate-methyl, chlorothalonil, anilazine, fenarimol, cadmium compounds, thiophanate + thiram, thiram, thiabendazole, benomyl, iprodione, thiophanate-methyl + maneb, vinclozolin, triadimefon, propiconazole
Summer patch	<i>Magnaporthe sp.</i>	Annual bluegrass Kentucky bluegrass	Light, daily watering during the summer.	Fenarimol, thiophanate-methyl, thiophanate, triadimefon, iprodione, benomyl propiconazole
<i>Helminthosporium</i> Diseases Brown blight Leaf spot and Melting-out Net blotch Read leaf spot Leafspot, root and crown rot Zonate Leaf spot	(<i>Drechslera</i>) <i>D. siccans</i> <i>D. poae</i> <i>D. dictyoides</i> <i>D. erythrospila</i> <i>Bipolaris</i> <i>D. sorokiniana</i> <i>Bipolaris</i> <i>D. gigantea</i>	Ryegrass Kentucky bluegrass Fescue Creeping bentgrass All major turfgrass species All major turfgrass species	Remove clippings. Raise cutting height. Plant resistant cultivars. Moderate spring nitrogen. Daily irrigation.	Mancozeb, chlorothalonil, iprodione, anilazine, maneb + zinc sulfate, PCNB, vinclozolin

all, accurate diagnosis is crucial to any successful disease control program. Prescribing the wrong fungicide is a waste of resources. In some instances, it may promote or aggravate a particular disease problem. Regional and even very local differences in the effectiveness of fungicides, when employed on ostensibly similar turf disease symptoms, have puzzled both pathologists and turf managers alike. Recent and ongoing research at several locations nationwide has helped resolve some of these inconsistencies.

Misidentification or failure to identify the primary pathogen (or

pathogens) is a principle cause of the confusion. Difficulties in diagnosis occur when different pathogens produce disease symptoms that are essentially identical under field conditions. The situation is compounded when two or more pathogens are involved concurrently in disease complexes with similar symptoms.

Multiple pathogens

Multiple pathogen involvement has been demonstrated for Corticium disease, now split into red thread and pink patch, with *Laetisaria fuciformis* and *Limonomyces roseipellis* as the

respective causal agents.

Dollar spot presents a similar situation but has to date defied attempts to identify conclusively the inciting fungi. Additional species of *Rhizoctonia* may accompany or replace *R. solani* in causing brown patch in some locations. *Colletotrichum graminicola*, the anthracnose fungus, may act alone or, frequently, in combination with *Helminthosporium* species (now called *Drechslera* or *Bipolaris*), or with the take-all patch fungus *Gaeumannomyces graminis* var. *avenae*.

Take-all patch and other similar



Over the top...

Over the problem.

For grounds maintenance, nurseries, Christmas tree farms, highway or municipal vegetation—for just about any grass control problem—Poast® herbicide is the simple solution.

Poast delivers consistent control of the toughest grasses. Like bermudagrass and crabgrass, quackgrass and foxtails. Yet, Poast is proven gentle to established plantings of valuable greenery. Like flowers, shrubs, trees and ground covers.

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

can apply Poast over-the-top of all stages of ornamental growth. And you don't have to worry about soil residue or leaching. Because Poast is meant to treat your grasses, not your soil.

And perhaps best of all, Poast can be highly cost efficient. It can eliminate labor-intensive and time-consuming hand roguing or hoeing. And labor and time equal money.

To keep grass in its place, always follow label directions and count on Poast—the last word in safe, effective grass control.

BASF Corporation
Chemicals Division



Poast is a registered trademark of BASF AG.
© 1988 BASF Corporation.

Circle No. 101 on Reader Inquiry Card

BASF

COOL-SEASON TURF DISEASES
TURF DISEASE AND CONTROLS

Disease	Causal Agent	Hosts	Biological and Cultural Control	Chemical Control
Take-all patch	<i>Gaeumannomyces graminis</i>	Creeping bentgrass Colonial bentgrass Velvet bentgrass	Reduce soil pH. Avoid liming, Use acidic fertilizers, Sulfur	Fenarimol
Pythium blight (cottony blight)	<i>Pythium spp.</i>	Perennial ryegrass Creeping bentgrass Annual bluegrass	Improve soil drainage. Increase air circulation.	Chloroneb, ethazol, metalaxyl, propamocarb
Red thread	<i>Laetisaria fuciformis</i>	Creeping bentgrass Colonial bentgrass Kentucky bluegrass Annual bluegrass Perennial ryegrass Fine-leaf fescue Tall fescue	Increase nitrogen.	Anilazine, iprodione, triadimefon, vinclozolin, chlorothalonil propiconazole
Pink patch	<i>Limonomyces roseipellis</i>	as for red thread	Increase nitrogen.	Iprodione, triadimefon
Snow molds Typhula blight Fusarium patch	<i>Typhula spp.</i> <i>Fusarium nivale</i>	Annual bluegrass Colonial bentgrass Creeping bentgrass Fine-leaf fescues Kentucky bluegrass Perennial ryegrass Tall fescue Velvet bentgrass	Avoid early fall nitrogen fertility that leads to lush growth.	Mercury compounds, PCNB products, chlorothalonil, chloroneb. These products may have to be used in combination for effective snow mold management. Benomyl, iprodione, or mancozeb will control Fusarium patch where it occurs alone
Necrotic ring spot	<i>Leptosphaeria korrae</i>	Kentucky bluegrass Annual bluegrass Fine leaf fescues	Nitrogen to promote recovery. Light daily irrigation. Organic amendments.	Iproione, fenarimol, benomyl, thiophanate, thiophanate-methyl propiconazole
Stripe smut Flag smut	<i>Ustilago striiformis</i> <i>Urocystis agropyri</i>	Kentucky bluegrass Creeping bentgrass	Reduce nitrogen. Prevent summer dormancy.	Fenarimol, triadimefon, benomyl propiconazole.

patch diseases caused by soil-borne, root infecting fungi, generate the symptoms that are most commonly misdiagnosed.

Fusarium blight is a prime example. Over the years, the designated name became a catch-all for any of the summer-season patch disease symptoms in Kentucky bluegrass turf. It is now recognized that at least two additional diseases can be separated out: necrotic ring spot (causal agent *Leptosphaeria korrae*), and summer patch (causal agent a species of *Magnaporthe* and not *Phialophora graminicola*).

Necrotic ring spot bears a striking resemblance to yellow patch caused by *Rhizoctonia cerealis* and has un-

doubtedly been confused with this disease. In any event, it now figures as one of the major headaches for the lawn care industry wherever Kentucky bluegrass sod is employed.

Summer patch is similarly damaging to Kentucky bluegrass turf but is also commonly encountered on the annual bluegrass component of golf greens. There it produces symptoms similar to take-all patch.

The latter is a serious disease of bentgrasses. It is increasingly common on newly-established creeping bentgrass greens built with sand as the growing medium. *Fusarium blight*, incited by *Fusarium colmorum* and *F. poae*, is still out there somewhere. But, after nearly 25 years of

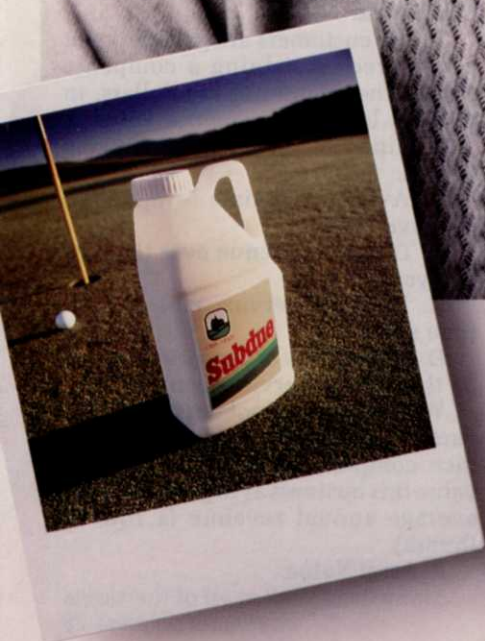
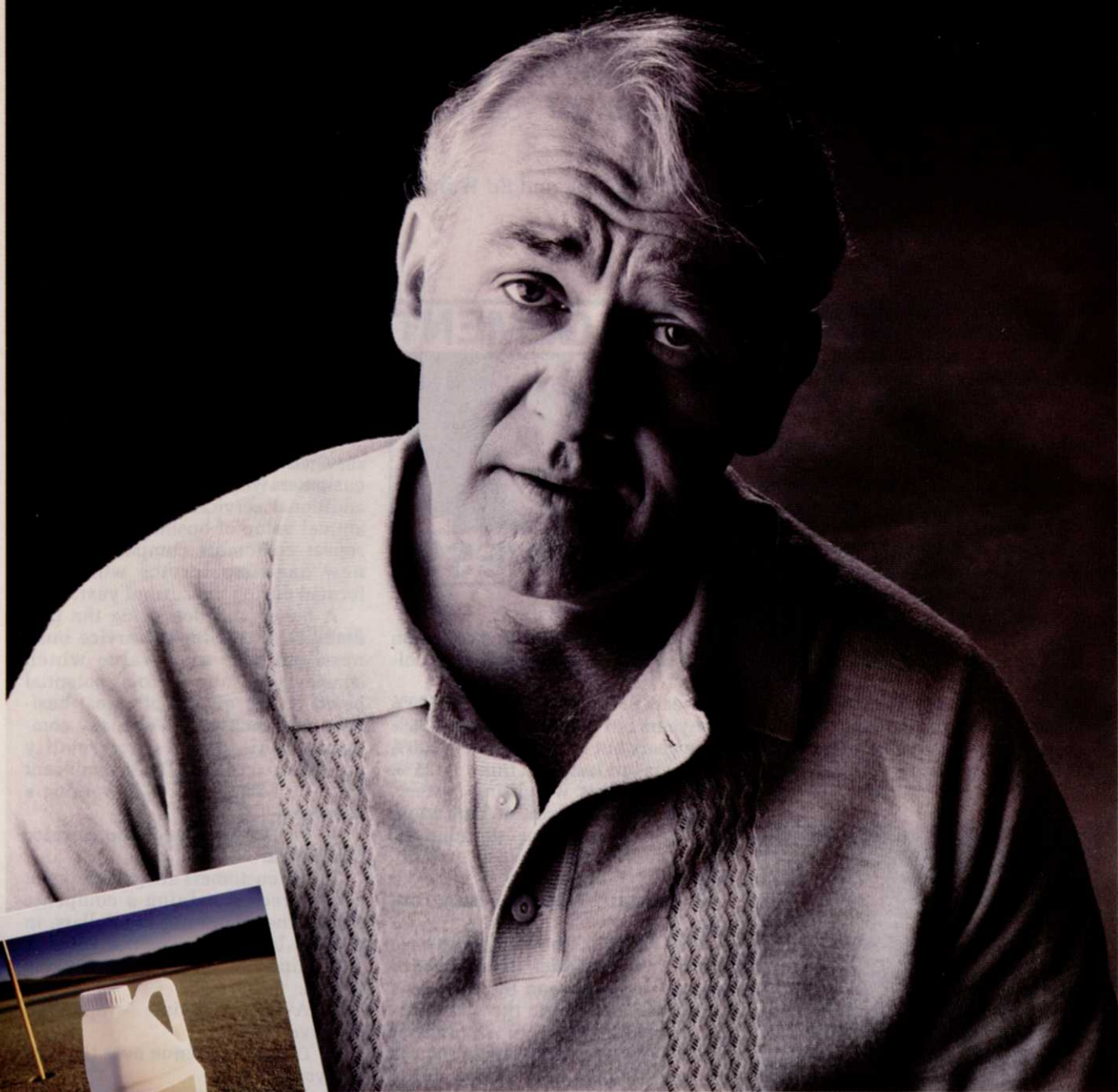
confusion, the incidence and severity of this disease needs to be re-evaluated.

The key

For all of these patch diseases, more definitive diagnostic techniques are needed. Careful microscopic examination of the diseased plants followed by isolation and culturing of the causal agents provide the only certain means of identification and the key to any control measures. **LM**

Next month: disease of warm season turf.

“One of my employees ran the mower into the lake.
My wife totalled our new Volvo. And my daughter just dyed her
hair purple. But what really concerns me is Pythium.”



There's one sure way to avoid worrying about Pythium. Use Subdue® fungicide. Subdue stops Pythium on contact. And once absorbed by grass roots, Subdue protects your turf against further attack for up to three weeks. So don't let Pythium get you down. Get Subdue. Because you've got other things to worry about. **CIBA-GEIGY**

© 1987 CIBA-GEIGY Corporation, Ag Division, Box 18300, Greensboro, NC 27419 Always read and follow label directions.

Circle No. 105 on Reader Inquiry Card

VALUING YOUR COMPANY

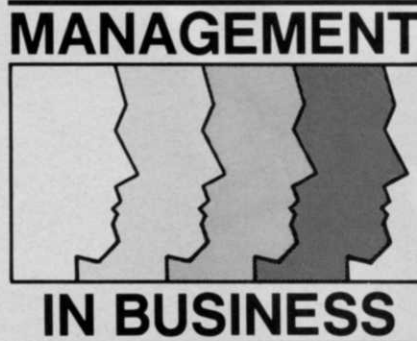
If you are thinking about selling your landscape or lawn care company, how do you determine how much to ask? Or to expect from the potential buyer? These formulas should help get you in the ballpark, anyway.

by Rudd McGary and Ed Wandtke

With the acquisition and merger mania prevalent across the country today, many green industry firms are being approached about selling their companies. A question that we have been hearing discussed at various industry meetings is, 'What is a fair value to receive for your company?' Although the question appears simple, many variables determine the final price a seller pays for a company. The following are the various factors that will be weighed differently in determining what price to ask for a green industry company:

1. Repetitive Customer Base, no contract.

The value of repeat customers in chemical lawn care, mowing or maintenance is determined by calculating the average length of time a company has been retaining its customers. Gen-



erally a formula weighs the retention factor over a five-year period as follows:

five years or longer 100%
four years but less than five 75%
three years but less than four . . . 50%
two years but less than three . . . 25%.

In using this weighting system, some purchasers look at individual account profitability or—in other instances—average revenue per account.

2. Repetitive Customer Base, contract.

The value of the customer base that is under contract, the number of contract renewals and the contract's length will determine these customers' purchase value to a potential buyer. Generally, the formula considers the account's profitability, unbilled contract add-ons and the length of the contract.

One such formula that has been used recently is determined as follows:

- A. Length of the contract (years remaining).
- B. Profitability of the contract (percentage).
- C. Value of the basic contract per year.
- D. Value of the add-on contract extras.

E. Average extras based on the years the contract has been serviced.

Take $(A \times B \times C)$ plus $(A \times B \times E)$ to determine the total value of these contract repetitive customers.

3. One-Time Serviced Customers.

The value of customers who are serviced only once (e.g. design/build customers who return periodically for additional services) is based on the annual value of business from these repeat customers compared to the new one-time service work performed during the current year.

A buyer will determine the profitability of this repeat service business and will set a value which considers the future income potential based on the quality of repeat business sold each year. For many companies, this data is not readily available; consequently no significant value is assigned to it in valuing a company.

4. Partial or One-Time Service Customers.

These customers are generally not considered in valuing a company. Rather the amount of the dollars, in total, is looked at. Then, a value is determined based on the following factors:

- A. Average one-time revenue the past five years.
- B. Trend in revenue over the past five years.
- C. Business service mix of one-time services.
- D. Profitability of the service based on the types of services being sold.

While there has not been one standard formula employed by many service company buyers, many firms value this business at 10 percent of the average annual revenue (a rule of thumb).

5. Asset Value.

Many firms look at all of the assets

continued on page 78



Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. Dr. McGary focuses on marketing and management issues. Wandtke focuses on operations and financial questions.

bobcat 2400 MTC

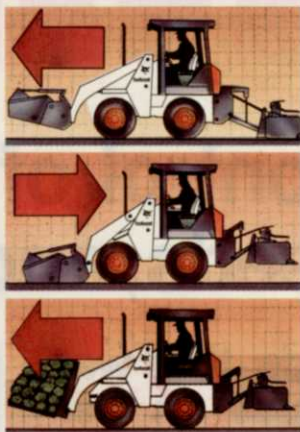
INTRODUCING THE ULTIMATE MULTI-PURPOSE MACHINE

One machine on the job can do the work of four. Or five. Or six. Or more.

Custom-tailor a Bobcat 2400 to fit your job.

You can custom-tailor your MTC (Multiple Tool Carrier) to fit your job, whether it requires excavating, landscaping, demolition, back-filling, loading, fertilizer handling, scrap handling, construction, or more.

More Agile: Positive four-wheel hydrostatic drive provides the traction and flotation you need to work in rough terrain and muddy job sites. And the MTC's articulated design provides a tighter turning radius to help you work in those hard-to-get-at places.



Save time on the job. Here's an example of how a landscaper can use the MTC with a box scraper going forward and with a landscape rake going backwards, without changing equipment... and in a matter of minutes, you can switch to a front-mounted pallet fork and unload sod.



More Available: The Bobcat dealer network is worldwide and there's a dealer near you. So why not stop in and see for yourself how much more you can do with a new multi-purpose Bobcat MTC.

More Versatile: The 2400 MTC features the exclusive Bob-Tach* system (available front) and a rear quick attachment system for fast, secure attachment changes. Your MTC can quickly change function from a loader to a landscape rake, or from a demolition hammer to a backhoe to a 3-point loader, plus many more, for even more versatility.

**More than a loader.
More than a backhoe.**

*Bob-Tach is the registered name for the patented front Bobcat attachment system.



More Mobile: The MTC is ready to move when you are. Its ease of transport will save you money by cutting transportation costs and expensive downtime of larger machines, which often wait for ground transport.



MELROE COMPANY
EM
A BUSINESS UNIT OF JOHN DEERE COMPANY

112 North University Drive • P.O. Box 6019 • Fargo, North Dakota 58108-6019



bobcat

Introducing the ultimate

TRIMEC®

HERBICIDE

Post-emergent control of broadleaf weeds, grassy weeds, and nutsedge.

- ★ Now, this unique herbicide that was originally developed for use on Bermudagrass can also be used on Kentucky Bluegrass.
- ★ In the beginning we called it Quadmec, but in response to popular demand we have renamed it Trimec Plus.
- ★ If you have never used this ultimate post-emergent herbicide, we want to send you a free sample. If you are already using it, we want to offer you a \$100 value sprayer for only \$25.

Trimec Plus is a major breakthrough in post-emergent herbicide for ornamental turf. It not only controls the widest range of broadleaf weeds, including the toughies like spurge, oxalis and ground ivy — but it also controls grassy weeds such as crabgrass, barnyard grass and dallisgrass as well as nutsedge.

Furthermore, it achieves this control very economically. In most instances, only one treatment is necessary and the cost is only about one-third of what you would pay to use one of the other new post-emergent herbicides with a much narrower spectrum.

What is Trimec Plus?

To understand the composition of

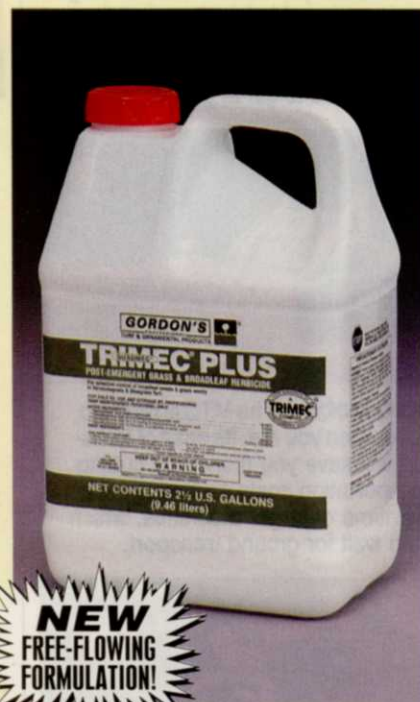


Everett Mealman
President
PBI/Gordon Corp.

Trimec Plus, it might be helpful to start off by saying that it is *not* merely a formulator tank mix of Classic Trimec and MSMA. Rather, it is a specially compounded amine complex of 2,4-D, MCP, dicamba and MSMA . . . in a stable, uniform suspension that is as easy to work with as any other Trimec complex.

It not only has the synergistic and eutectic power of Trimec for controlling tough summer annuals, but the complex enhances the effectiveness of the MSMA so that in most instances only one treatment is necessary to eliminate crabgrass and nutsedge.

Trimec Plus was tested for several years under the name *Quadmec*, and was introduced in the South last year for use on Bermudagrass. The re-



ports from users and researchers have been very positive. And why not! There has never been anything like it for the grooming of Bermudagrass.

Characteristically, the pre-emerge on Bermuda begins to peter out just about when the hot summer annuals are beginning to be a problem. The result is often a hodgepodge of all sorts of grassy weeds, broadleaf weeds, and nutsedge.

With a broadcast spray of Quadmec (now called Trimec Plus) groundskeepers soon found they could clean up Bermuda in one fell swoop.

New name and formula

But there were two problems. Number one, the original formulation

post-emergent herbicide

PLUS



had too much viscosity and required premixing if it was to be used in cold water. Number two, our friends didn't cotton to the name Quadmec, and instead kept referring to it as *that Trimec plus MSMA*.

Of course you know that when turf professionals talk, PBI/Gordon listens. So we totally corrected the cold water viscosity problem and we changed the name to Trimec Plus.

Now labeled for Bluegrass

Not surprisingly, the reports about Trimec Plus reached into Bluegrass

country, and we were deluged with inquiries about using it for spot treating the rash of pre-emerge escapes that occur every year.

The good news is that Trimec Plus is now labeled for use on Kentucky Bluegrass. Just think what this can mean to you: a stable, easy-to-use, economical, single product that selectively takes grasses out of grass, while at the same time controlling the widest spectrum of broadleaf weeds and nutsedge.

Introductory offer

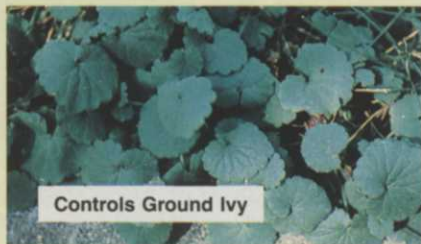
If you have never used Trimec Plus

(Quadmec), we urge you to call or write us for a sample so you can see for yourself what this product can do for you. It controls more weeds in turf than any other commercially available herbicide in the world.

On the other hand, if you are already using Trimec Plus, we want to thank you by offering you a chance to receive a \$100 value sprayer for only \$25. For details, see the coupon on this page.

Call toll-free 1-800-821-7925
In Missouri, call 1-800-892-7281

Imagine! One post-emergent herbicide that controls broadleaf and grassy weeds and nutsedge.



Controls Ground Ivy



Controls Oxalis



Controls Spurge



Controls Nutsedge



Controls Crabgrass

**This \$100 Value Sprayer
Is Yours for Only \$25
When You Buy Trimec Plus.**



- Totally sealed diaphragm (up to 70 psi pressure).
- Four-gallon capacity.
- Large 6-in fill opening.
- Built-in carrying handle.
- Check valve in lid.
- Brass wand and nozzle. (Variable cone and flat fan).

To get this \$100 Value SP-1 Back-Pack Sprayer for only \$25, buy 2½ gallons or more of Trimec Plus from your distributor between now and October 1, 1988, and send us proof of purchase (a sales receipt). Limit one offer per customer. Delivered via UPS. No requests honored after October 31, 1988. Please include name, address and your check for \$25. Mail to PBI/GORDON Corporation, P.O. Box 4090, Kansas City, MO 64101.

Trimec® is a registered trademark of PBI/Gordon Corporation.

G pbi / GORDON CORPORATION

1217 WEST 12th STREET
P.O. BOX 4090
KANSAS CITY, MISSOURI 64101

©1988, PBI/Gordon Corporation

Circle No. 135 on Reader Inquiry Card

704-388

FLUENT

On Design



The entranceway at the Oak Run housing development in Ocala, Fla. needed an attention-getter. After looking over the arid area, landscape architect Michael Pape decided a waterfall would add lushness and vitality. Pape designed the 1400-acre project and the 1/2-acre waterfall entranceway. Urdl's Waterfall Creations completed the hydraulic and structural design and constructed the pond and waterfall using their lightweight rocks. Pape and Urdl's worked closely together to fit the falls into the natural setting. "Rather than creating a small, out-of-scale water feature, we placed the emphasis on the scale and size of the area," Pape says. "We used predominately native plant materials to keep in harmony with the area." The waterfall uses pumps moving 2400 gpm into three source ponds. The tallest pond is 13 feet high, about 22 feet long. The other two cascade and free fall into the bottom pond. The falls are lighted at night to provide a spectacular view. The Urdl's rocks are hollow, molded fiber reinforced concrete panels, which were bolted and mortared onto the concrete superstructure. The plants in the area, installed by Kinswood Nurseries of Ocala, Fla., are Florida coontia ferns, Indian hawthornes, weeping yaupon and 14- to 16-foot laurel oaks. The entranceway cost about \$400,000. The project won a 1987 Florida Nurserymen and Grower's Association Award of Excellence for water features.

Urdl's Waterfall Creations: Circle No. 200 on Reader Inquiry Card
Michael Pape and Associates: Circle No. 201 on Reader Inquiry Card

Kinswood Nurseries: Circle No. 202 on Reader Inquiry Card