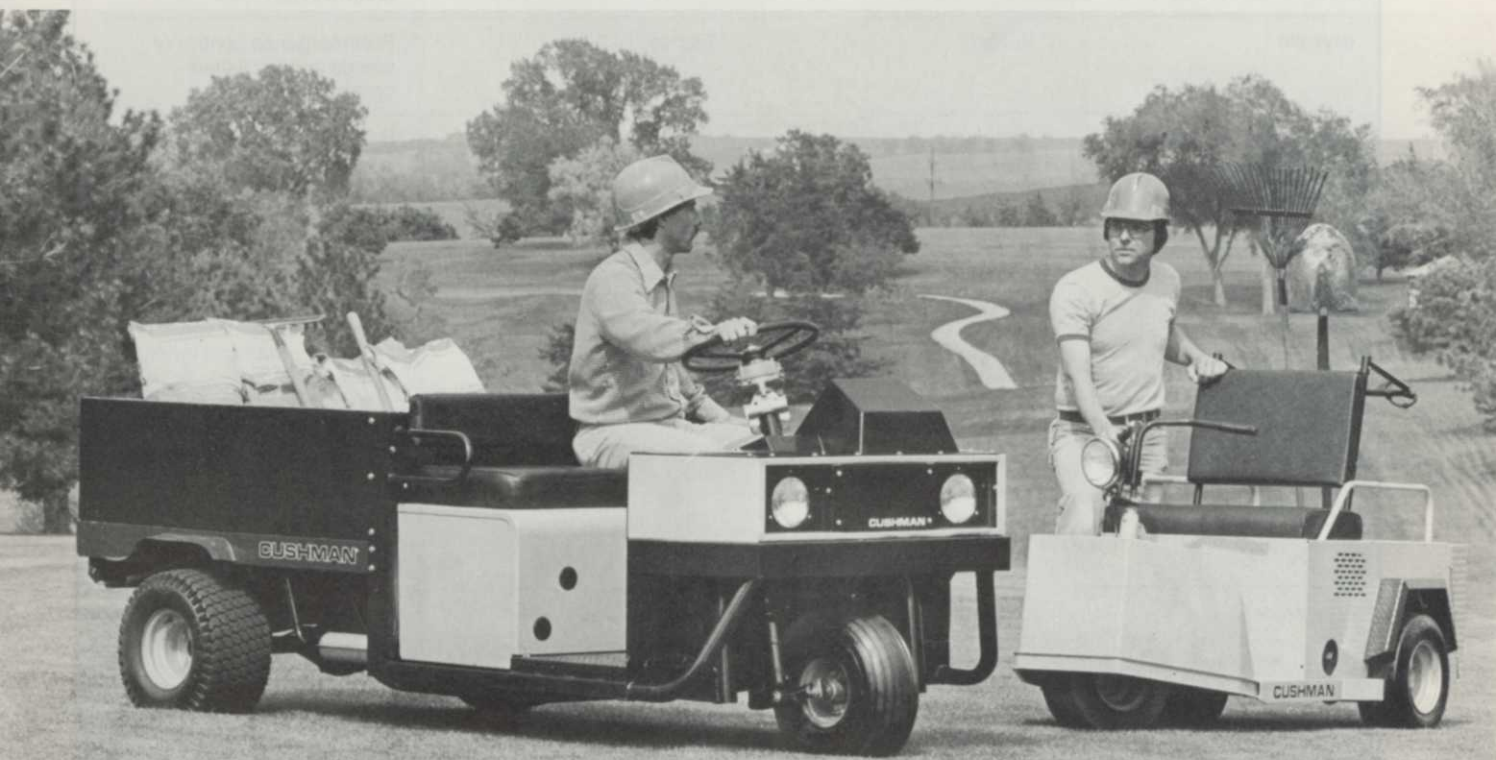


fenac	Fenac	Union Carbide	Preemergence long-term control of weeds, usually mixed with other herbicides.
fosamine	Krenite	du Pont	Brush control.
fluazifop-butyl	Fusilade	ICI Americas	Selective postemergence control of grassy weeds in ornamentals.
glyphosate	Roundup	Monsanto	Nonselective, short-term herbicide for turf renovation and total weed control along fences and plant beds.
imidazoline	Arsenal	American Cyanamid	Broad spectrum systemic industrial herbicide.
linuron	Lorox	du Pont	Short-term control of annual weeds in roadsides and fence rows.
mefluidide	Embark	3M	Growth regulator that suppresses Poa annua.
methyl bromide	Dowfume	Dow	Fumigant for pre-plant control. Also kills weed seed.



**CUSHMAN**<sup>®</sup>

5063 Cushman, P.O. Box 82409, Lincoln, NE 68501

*It works harder because it's built better.*

# DIRECTORY

## Herbicide Directory *continued*

Herbicide	Brand Name(s)	Company	Uses
metham	Vapam	Stauffer	Preplant soil fumigant killing weeds, weed seed, insects and fungi.
metribuzen	Sencor	MoBay	Postemergence control of goosegrass in warm-season turf.
MCPP	MCPP Mecomec MCPP Chipco Turf Herbicide	SDS Biotech PBI Gordon WA Cleary Rhone Poulenc	Selective broadleaf weed control in turf. Often combined with other herbicides.
MSMA	Ansar Broadside Ansar Weed-Hoe	SDS Biotech Vertac Drexel Vineland	Postemergence selective control of crabgrass and broadleaf weeds in turf. Also, grassy weed control in ditchbanks, roadsides, industrial areas.
napropamide	Devrinol	Stauffer	Selective control of weeds in ornamental beds and containers. Experimental combination with Betasan for season-long crabgrass control in turf.
oryzalin	Surflan	Elanco	Preemergence control of weeds in established ornamentals.
oxadiazon	Ronstar	Rhone Poulenc	Preemergence control of weeds in ornamentals and turf.
oxyfluofen	Goal	Rohm & Haas	Selective control of weeds in ornamentals.
paraquat	Paraquat	Ortho, Chevron	Nonselective control of weeds in rights-of-way, industrial areas and fence rows.
pichloram	Tordon	Dow	Systemic, long-term killer of woody plants and broadleaf weeds.
prometon	Pramitol	Ciba Geigy	Nonselective herbicide with long residual for industrial weed control.
pronamide	Kerb	Rohm & Haas	Poa annua control in warm-season grasses. Also weed and grass control around woody ornamentals and Christmas trees.
sethoxydim	Poast	BASF	Postemergence control of grassy weeds around broadleaf ornamentals.
siduron	Tupersan	du Pont	Preemergence control of annual grasses in newly seeded turf areas.

*continued on page 86*

When there's little difference  
in crabgrass control

...why buy  
herbicides  
costing up  
to 100% more  
than Balan?

For best results, always read and follow label directions.



Compare performance. Compare cost. You'll discover Balan® clearly out-values other preemergence herbicides for lawn and golf course maintenance.

Balan delivers effective crabgrass control—similar to other products that cost up to *twice* as much. And Balan also kills goosegrass, foxtail, poa annua, barnyardgrass. Gets 'em before they get growing.

Another Balan advantage is its *predictable* length of control. So you know when to reapply and when it's safe to reseed. And that prevents wasting money on unnecessary applications or having to wait for several months before you can reseed.

Balan granules apply easily, too. Won't clog in the spreader. Assure even, uniform coverage with more particles per square foot for consistent weed control, better looking turf.

This season, depend on weed control that has been proven safe and dependable on more turfgrass for more years at much less cost: Balan—from your Elanco distributor at prices even *lower* than last year. (Also, have him show you the advantages, cost-efficiency in other Elanco turf products: Rubigan® fungicide, Surflan® and Treflan® herbicides.)

Elanco Products Company, A Division of Eli Lilly and Company, Dept. E-455, Indianapolis, IN 46285, U.S.A.

ELANCO

TM

Turf products with benefits  
that make the difference.

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Balan®—(benfen, Elanco)

Rubigan®—(fenarimol, Elanco)

Surflan®—(oryzalin, Elanco)

Treflan®—(trifluralin, Elanco)

# CRABGRASS OR GOOSEGRASS?

# CONTROL BOTH

If you think you've seen late-germinating crabgrass in your turf, you may really have been looking at a goosegrass problem.

Either way, you can solve the problem with CHIPCO® RONSTAR® herbicide.

## THE DIFFERENCE BETWEEN CRABGRASS AND GOOSEGRASS.

Goosegrass is more common than you might think. It's easily mistaken for crabgrass, especially when it's mowed.

What's the difference? Check the color first. Goosegrass is a

darker green. And it always grows in tufts. Crabgrass doesn't.

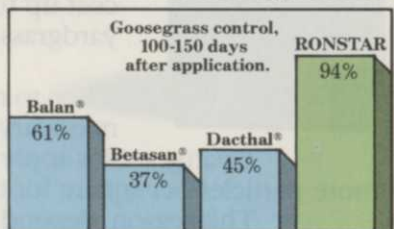
There's another important difference: goosegrass is much harder to control. Unless you use RONSTAR.

## CRABGRASS OR GOOSEGRASS... IT MAKES NO DIFFERENCE WITH RONSTAR G.

RONSTAR is the only herbicide you can count on for effective preemergent control of both crabgrass and goosegrass.

While other products will give you satisfactory performance on

crabgrass, they don't even come close to RONSTAR on goosegrass. Years of testing prove it:



Summary of 9 years of testing conducted by University Experiment Station and Rhône-Poulenc personnel.

So you have two choices. Use an ordinary crabgrass herbicide



**GOOSEGRASS OR CRABGRASS?**

**WITH RONSTAR.**

HERBICIDE

and hope crabgrass is your only problem.

Or play it safe and use RONSTAR this season, for excellent, season-long control of both crabgrass and goosegrass.

**NO RAIN-OUTS,  
ROOT PRUNING OR  
PROBLEMS WITH PLANTINGS.**

RONSTAR is the most convenient herbicide for your turf care program. It won't leach, so you can fit it into your schedule earlier. It's highly selective, causing no root pruning in peren-

nial bluegrass, perennial ryegrass and bermudagrass, no harm to ornamental plantings or trees.

**QUALITY CHIPCO TURF CARE  
IS THE "RIGHT APPROACH."**

Wherever the professionals really care for turf — and especially where both crabgrass and goosegrass are problems — word is getting around. CHIPCO RONSTAR herbicide is your best choice for effective, convenient, long-lasting control.

For more information on RONSTAR or other CHIPCO

products, ask your CHIPCO distributor.

Rhône-Poulenc Inc., Agrochemical Division, Monmouth Junction, NJ 08852.



**RONSTAR<sup>®</sup>**  
**SPREAD THE WORD.**

Please read label carefully, and use only as directed.

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# DIRECTORY

## Herbicide Directory *continued*

Herbicide	Brand Name(s)	Company	Uses
simazine	Princep	Ciba Geigy	Selective control of annual grasses and broadleaf weeds in established bermudagrass. Also, used in industrial and aquatic weed control.
sulfometuron	Oust	du Pont	Non-selective industrial and selective in bermudagrass
tebuthiuron	Spike	Elanco	Total vegetation control in non-crop areas
trifluralin	Treflan	Elanco	Selective preemergence weed control in established ornamentals.
trichlopyr	Garlon	Dow	Systemic control of woody plants in rights-of-way and industrial sites. Current experiment use pending for selective turf weed control.
2, 4-D	2, 4-D	Dow, SDS Biotech, Rhone Poulenc, Vertac	Selective control of weeds in turf and numerous other areas. Usually mixed with other herbicides.
Vorlex	Vorlex	Nor-Am	Preplant fumigant Broadleaf weed control in established turf.

## Herbicide Combinations

Active Ingredients	Brand Name	Company	Uses
2, 4-D plus MCPP	Chipco Turf Kleen Cleary Scotts II SDS Tee Time Lescopar	Rhone Poulenc WA Cleary OM Scott SDS Biotech Andersons LESCO	Broadleaf weed control in established turf.
2, 4-D plus dicamba	Scotts I Banvel Plus Lesco Selective Herbicide	OM Scott Velsicol Lesco	Selective postemergence control of weeds in turf.
2, 4-D plus MCPP plus dicamba	Trimec Trexan	PBI Gordon Mallinckrodt	Selective, broad spectrum control of weeds in turf.
2, 4-D plus dichlorprop	Weedone DPC	Union Carbide	Selective postemergence control of weeds in turf.
2, 4-D plus 2, 4-D plus dicamba	Trimec Ester	Bulkem	Selective, broad spectrum control of weeds in turf.
2, 4-D plus dicamba plus dalapon	Banvel Plus	Velsicol	Broad spectrum, post-emergence turf weed control.

# WHAT'S BETTER THAN SPEED READING?

## SPEED LEARNING

(SPEED PLUS COMPREHENSION)

**Speed Learning is replacing speed reading. It's easy to learn...lasts a lifetime...applies to everything you read...and is the only accredited course with the option of college or continuing education credits.**

Do you have too much to read and too little time to read it? Do you mentally pronounce each word as you read? Do you frequently have to go back and re-read words or whole paragraphs you just finished reading? Do you have trouble concentrating? Do you quickly forget most of what you read?

If you answer "yes" to any of these questions — then here at last is the practical help you've been waiting for. Whether you read for business or pleasure, school or college, you will build exceptional skills from this major breakthrough in effective reading, created by Dr. Russell Stauffer at the University of Delaware.

**Not just "speed reading" — but speed reading-thinking-understanding-remembering-and-learning**

The new *Speed Learning Program* shows you step-by-proven-step how to increase your reading skill and speed, so you understand more, remember more and use more of everything you read. The typical remark made by the 75,000 slow readers who completed the *Speed Learning Program* was: "Why didn't someone teach me this a long time ago?" They were no longer held back by the lack of skills and poor reading habits. They could read almost as fast as they could think.

**What makes Speed Learning so successful?**

The new *Speed Learning Program* does not offer you a rehash of the usual eye-exercises, timing devices, costly gadgets you've probably heard about in connection with speed reading courses or even tried and found ineffective.

In just a few spare minutes a day of easy reading and exciting listening, you discover an entirely new way to read and think — a radical departure from any-

thing you have ever seen or heard about. Research shows that reading is 95% *thinking* and only 5% eye movement. Yet most of today's speed reading programs spend their time teaching you rapid eye movement (5% of the problem) and ignore the most important part (95%) *thinking*. In brief, *Speed Learning* gives you what speed reading *can't*.

Imagine the new freedom you'll have when you learn how to dash through all types of reading material at *least* twice as fast as you do now, and with greater comprehension. Think of being able to get on top of the avalanche of newspapers, magazines and correspondence you have to read... finishing a stimulating book and retaining facts and details more clearly and with greater accuracy than ever before.

**Listen-and-learn at your own pace**

This is a practical, easy-to-learn program that will work for you — no matter how slow a reader you think you are now. The *Speed Learning Program* is scientifically planned to get you started quickly... to help you in spare minutes a day. It brings you a "teacher-on-cassettes" who guides you, instructs, encourages you, explaining material as you

read. Interesting items taken from *Time Magazine*, *Business Week*, *Wall Street Journal*, *Family Circle*, *N.Y. Times* and many others, make the program stimulating, easy and fun... and so much more effective.

Executives, students, professional people, men and women in all walks of life from 15 to 70 have benefited from this program. *Speed Learning* is a fully accredited course... costing only 1/5 the price of less effective speed reading classroom courses. Now you can examine the same, easy, practical and proven methods at home... in spare time... without risking a penny.

**Examine Speed Learning FREE for 15 days**

You will be thrilled at how quickly this program will begin to develop new thinking and reading skills. After listening to just one cassette and reading the preface you will quickly see how you can achieve increases in both the speed at which you read and in the amount you understand and remember.

You must be delighted with what you see or you pay nothing. Examine this remarkable program for 15 days. If, at the end of that time you are not convinced that you would like to master *Speed Learning*, simply return the program and owe nothing. See the coupon for low price and convenient credit terms.

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**In most cases, the entire cost of your *Speed Learning Program* is Tax Deductible.**



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You may obtain 2 full semester hour credits for course completion, wherever you reside. Credits offered through Whittier College (California). Details included in your program.

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*Speed Learning* is offered internationally to members of professional associations such as: American Chemical Society, Foundation for Accounting Education, Institute of Electrical and Electronics Engineers and dozens more. Consult your Education Director for information.

**BUSINESS, INDUSTRY, GOVERNMENT**

Many companies and government agencies offer *Speed Learning* as a wholly-paid or tuition reimbursement program. Consult your Training or Personnel Director for details.

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HBJ1-WTT-3/84

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**If you don't already own a cassette player, you may order this Deluxe Cassette Recorder for only \$49.95. (Includes handling and delivery.)**

Check here to order



— Outside USA add \$10 per item—Airmail extra —

## Herbicide Combinations *continued*

2, 4-D plus prometon	Vegemec	PBI Gordon	Selective postemergence control of weeds in turf.
Balan plus Ronstar	Regalstar	Regal Chem.	Broad spectrum preemergence control of weeds in turf.
amitrol plus simazine	Amizine	Union Carbide	Season-long control of weeds and grasses around ornamentals.
MSMA plus cacodylic acid	Broadside	Crystal	Nonselective, broad spectrum weed control.
diuron plus sodium chlorate plus sodium metaborate	Chlorea	Rhone Poulenc	Nonselective weed and grass killer.
amitrole plus fenac plus atrazine	Fenamime	Union Carbide	Pre- and postemergence control of weeds for industrial sites and rights-of-way.
bromacil plus diuron	Rout Krovar	Hopkins du Pont	Wide range control of weeds in industrial sites and rights-of-way.
MSMA plus dicamba	Mondak	Velsicol	Noncropland general weed control.
prometon, simazine and chlorate	Pramitol	Ciba Geigy	Full-season weed control in industrial sites.

Nitrogen costs money. So does water for that matter. And bluegrasses need them both.

Well, most bluegrasses.

Tests have shown that Rugby tolerates heat and drought better than most bluegrass cultivars. Rugby held its medium dark-green color and overall vigor on restricted moisture conditions. That makes *less watering* highly feasible.

A similar result happened in tests measuring the

# The Way Some Bluegrasses You Wonder What





TABLE 1.  
Woody plants tolerant to pre-emergence herbicides

The following evergreen and deciduous plants are labeled for use with the pre-emergence herbicides across the top of the chart. An (X) in the column indicates the herbicide can be safely used for that plant listed. The list includes only those plants with company label registration.

	BETASAN	CASORON	DACTHAL	DEVIRINOL	ENIDE	EPTAM	FURLOE CHLORO IPC	ORNAMENTAL WEEDER	PRINCEP	RONSTAR	SURFLAN	TREFLAN
<b>Narrowleaf Evergreens</b>												
Arborvitae	X	X	X	X	X		X	X	X	X	X	X
Chamaecyparis					X	X						
Eastern Red Cedar	X		X	X					X			X
Fir		X	X		X	X						
Fir, Balsam							X			X		X
Fir, Douglas				X				X	X		X	
Fir, Fraser								X				
Hemlock			X	X	X	X	X	X	X	X	X	X
Juniper	X	X	X	X	X	X	X	X	X	X	X	X
Pine		X	X		X	X	X			X		
Pine, Austrian								X	X		X	
Pine, Japanese Black								X	X	X		
Pine, Mugo								X		X		
Pine, Red								X			X	
Pine, Scotch								X	X		X	
Pine, White								X	X	X	X	
Spruce		X	X		X	X				X		
Spruce, Blue										X	X	X
Spruce, Norway										X	X	X
Spruce, White										X		X
Yew	X	X	X	X	X	X	X	X	X	X	X	X
<b>Broadleaf Evergreens</b>												
Boxwood	X	X	X	X		X					X	X
Cherry Laurel					X							X
Euonymus			X	X			X	X			X	X
Firethorn	X	X	X	X				X	X	X	X	X
Holly	X	X	X	X	X			X			X	X
Holly, Japanese						X					X	X
Japanese Pieris		X				X		X			X	X
Leucothoe	X					X					X	X
Magnolia grandifolia											X	X
Mahonia					X		X		X	X	X	X
Mountain Laurel	X	X		X			X				X	X
Rhododendron	X	X	X	X	X	X	X	X	X	X	X	X

continued

need for nitrogen. Rugby scored well at low to moderate nitrogen fertility levels. And maintained good turf quality and density under no-nitrogen conditions.

In short, Rugby needs *some* nitrogen, but it doesn't need to wallow in it. So you can spend your time and money where it does more good.

But not on extra fungicide. Rugby resists Fusarium blight, leaf spot, dollar spot, stem rust, and powdery mildew.

Rugby also offers you the benefits of a low growth habit. And only the *blades* grow vertically. So mowers clip the leaf ends only, not the crucial growth-sustaining lower stems.

With Rugby, you can have rich, dense Kentucky bluegrass. For less nitrogen. Less water. And less time.

That's nothing to snort at.



Circle No. 161 on Reader Inquiry Card

# Devour Nitrogen, You're Raising.



# DIRECTORY

TABLE 1.

## Woody plants tolerant to pre-emergence herbicides

	BETASAN	CASORON	DACTHAL	DEVIRINOL	ENIDE	EPTAM	FURLOE CHLORO IPC	ORNAMENTAL WEEDER	PRINCEP	RONSTAR	SURFLAN	TREFLAN
<b>Deciduous Trees</b>												
Ash	X	X	X	X						X		
Ash, White					X			X				X
Bald Cypress					X							X
Beech					X							
Birch	X	X		X			X			X		
Birch, European												X
Chinese Chestnut			X		X							X
Corktree, Amur	X											
Crabapple	X	X	X	X					X	X		X
Dogwood	X	X			X	X	X	X	X	X	X	X
Dogwood, Kousa												X
Elm	X	X										
Elm, American									X			
Elm, Siberian									X			
Ginkgo										X	X	
Goldenchaintree	X			X								
Goldenraintree	X										X	
Hackberry	X											
Hawthorn			X	X								
Honeylocust				X					X			X
Linden	X					X						
London Planetree												X
Magnolia		X	X							X		
Maple		X	X	X	X	X	X					
Maple, Amur												X
Maple, Norway												X
Maple, Red												X
Maple, Silver											X	X
Maple, Sugar										X		X
Mountain Ash	X											
Oak	X	X			X	X					X	
Oak, Pin												X
Oak, Red											X	X
Oak, Scarlet												X
Poplar	X	X	X		X		X					
Redbud			X		X							X
Russian Olive	X	X			X						X	X
Sassafras												X
Sweetgum			X		X							X
Sycamore			X		X							X
Tuliptree			X		X							X
Tupelo												X
Walnut	X	X	X		X							X
Willow	X	X			X							X

# Short Towers! Big Capacity!



## Vermeer Tree Spades: More operating room. More digging torque. More tree and ball.

- New, compact, short tower design. Gets you closer, easier, faster, with more operating room for tree and ball.
- Most powerful drive system in the field.
- Convenient sales/service centers all over North America.

Discover the "New Generation" of Vermeer Tree Spades today and win up to \$5,000 cash in the Vermeer "New Generation" sweepstakes. Contact your local Vermeer dealer today.

Call toll-free 1-(800)-247-2347\*

# Vermeer

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## A New Generation

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