

HM 23 524-455 10/10
23 JUL 1993

Mr. Roy G. Danhaus
Monsanto Company
700 14th Street, N.W., #1100
Washington, D.C. 20005

Dear Mr. Danhaus:

Subject: Dimension® 2 f.g. Turf Herbicide
EPA Registration No. 524-455
Applications Dated April 28, 1993 and June 21, 1993
and Revised Labeling Submitted on June 22, 1993,
Request to Amendment of Registration for Use of Addi-
tional Brandname and Labeling for Homeowner Use of
Product

The proposed amendments to the registration of the subject pesticide product have been reviewed and found to be acceptable for registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended provided that you:

1. Delete the parenthetical dosages for the active ingredi-
ents on pages 5 and 6. As stated "(or 0.2 oz. of
its active ingredient)/1000 sq. ft. per year" it is
inaccurate and does not add to the labeling, because
dosages are given in the tables in terms of ounces of
product per 1000 sq. ft. Reference to active ingredient
could be confusing to the homeowner applicator and
result in misuse of the product.
2. Under "Fall Applications" at top of page 8 rewrite the
directions to read:
"When applied as directed for early fall use, for
crabgrass control through the early part of the
next spring, this product will also control
(at the "postemergence" rates) or suppress (at
the "preemergence" rates) the emergence of the
following weeds:"

BEST AVAILABLE COPY

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3. Submit five (5) printed copies of the final printed label before releasing the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (R-7505C)

Enclosure

EWilson:Diskette dithiopyr: 07-23-93

Rec. 7-22-93 ✓ PCL 7-23-93 30410
Suzanne Wilson

**DIMENSION® 2 F.G. Lawn Herbicide
by Monsanto**

Dimension® 2 F.G. is a selective herbicide that provides control of listed annual grasses and broadleaf weeds in established lawns and ornamental turfs.

ACTIVE INGREDIENTS:

*Dithiopyr, 3,5-pyridinedicarbothioic acid, 2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-S,S-dimethyl ester.....2.1%

INERT INGREDIENTS:.....97.9%
100.0%

*This product contains 1 pound of the active ingredient, dithiopyr, per 50 pound bag.

Product protected by U. S. Patent No. 4,692,184. Other patents pending.

EPA Reg. No. 524-455

*Dimension is a registered trademark of Monsanto Company.

ACCEPTED
with COMMENTS
in EPA Letter Dated
23 JUL 1993

1993-1

Read the entire label before using this product.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using 524-455. If terms are not acceptable, return at once unopened.

LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label pamphlet ("Directions") when used in accordance with those Directions under the conditions described herein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise. Notice of these claims may be made by calling 1-800-323-1421.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control

JULY 20, 1993

BEST AVAILABLE COPY

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of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, application in any manner not explicitly set forth in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation. ✓

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes or clothing.

Avoid breathing dust.

Wash thoroughly with soap and water after handling.

Remove contaminated clothing and wash before reuse.

Prolonged or frequently repeated skin contact while handling this material may cause allergic reaction in some individuals.

FIRST AID: IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IF INHALED, remove individual to fresh air. Seek medical attention if breathing difficulty develops.

In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000.

Environmental Hazards

This product is toxic to fish and highly toxic to other aquatic organisms including oysters and shrimp. Use with care when applying to turf areas adjacent to any body of water. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent aquatic sites. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters. ✓

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

For information on use of this product call 1-800-323-1421.

Storage and Disposal

STORAGE:

- Store this product only in its original container in a dry, cool, secured storage area.

PRODUCT DISPOSAL:

- As a responsible environmental practice, where possible, it is recommended that all of the contents of the bag be used, carefully following label directions and precautions. ✓
- If it is necessary to dispose of a partially filled bag, securely wrap the bag in several layers of newspaper and discard in the trash. ✓

EMPTY CONTAINER DISPOSAL:

- Do not reuse bag. Discard bag in trash. ✓

SPILL:

- In case of spill, sweep up, wrap in newspaper and discard in trash. ✓

GENERAL INFORMATION

This product is a selective herbicide that provides control of crabgrass and other annual grasses and broadleaf weeds in established lawns and ornamental turfs. This product will not harm nearby established ornamentals when used according to label directions.

USE PRECAUTIONS

Turfgrass Safety

This product may be used on seeded, sodded, or sprigged lawns and ornamental turfs that are well-established. The grass must have developed a good root system and a uniform stand, and have received at least two mowings following its seeding, sodding, or sprigging before it can receive its first application of this product. Use of this product on lawns and ornamental turfs that are not well-established, or on those that have been weakened by weather-, pest-, or mechanical-related stress, may increase the chances for turf injury.

This product should only be applied to lawns and ornamental turfs that are composed of the following turfgrass species that have been determined to be tolerant to applications of this product. When applied as directed under the conditions described, the following established turfgrasses are tolerant to this product:

Cool-Season Grasses

Bentgrass, creeping
Bluegrass, Kentucky
Fescue, fine
Fescue, tall
Ryegrass, perennial

Warm-Season Grasses

Bahiagrass
Bermudagrass
Buffalograss
Carpetgrass
Centipedegrass
Kikuyugrass
St. Augustinegrass
Zoysiagrass

Reseeding, Overseeding, or Sprigging

Reseeding, overseeding, or sprigging of treated areas within 4 months after application of this product may inhibit the establishment of desirable turfgrasses. When reseeding or overseeding, proper cultural practices such as soil cultivation, irrigation and fertilization should be followed. For best results, use mechanical or power seeding equipment (slit seeders) designed to give good seed to soil contact.

2410

Other Use Precautions

The early postemergence crabgrass control described below is limited. Postemergence applications are only effective on crabgrass if applied before crabgrass has displayed its fifth leaf.

For best results, cultural practices that disturb the soil, such as core aerification or verticutting, should be done before application of this product. DO NOT apply this product until the grass has recovered from these cultural practices.

Apply this product directly to established lawns or ornamental turfs only. DO NOT apply to flowers, vegetables, shrubs, or trees.

DO NOT use clippings from treated turf for mulching around vegetables or fruit trees.

DO NOT apply this product to pastures.

Keep people and pets off treated areas until dust has settled.

APPLICATION DIRECTIONS

Control of Crabgrass

Preemergence and Early Postemergence Control.

- This product provides "preemergence" control of crabgrass (both large and smooth species) when applied prior to the emergence of crabgrass from the ground in established lawns and ornamental turfs.
- It can also provide "early postemergence" control of crabgrass during the early stages of crabgrass growth after the crabgrass has emerged from the ground. However, it is often difficult to identify the very small, early stages of crabgrass in well-established lawns and ornamental turfs.
- So the practical benefit of this product's additional, early postemergence activity is that (compared to strictly pre-emergence crabgrass products) it can give the user a 2-4 week longer period of time to make applications and still control crabgrass.

Application Timings.

- This product may be applied as a single application or as a sequential application for crabgrass control. DO NOT apply more than 8.8 oz. of this product (or 0.2 oz. of its active ingredient)/1000 sq. ft. per year. 7.8
2.1
2.6
1.6
8.48
- Applications may be made in the spring and in the fall.

Length of Control.

- The length of time of residual weed control provided by this product is directly related to the total rate applied.
- Depending on the desires of the user, this product may be applied at the use rates recommended in Table 1 below for the user's particular region to get 2-3 months of weed control, or it may be applied at rates listed in Table 2 below to get 3-5 months of control from date of application.
- The actual length of control will vary somewhat depending on weather, weed pressure, and the user's location within the North or South region.

Table 1:

Recommended Use Rates for 2-3 Months of Crabgrass Control*
(oz. of this product/1000 sq. ft.)

Region	Preemergence	Postemergence
North	1.6	3.2
South	3.2	6.4

Table 2:

Recommended Use Rates for 3-5 Months of Crabgrass Control*
(oz. of this product/1000 sq. ft.)

Region	Preemergence	Postemergence
North	2.2	4.4
South	4.4	8.8

*South: includes AL, AR, AZ, CA, FL, GA, HI, LA, MS, NC, NM, NV, SC, TN, TX, and VA. North: includes all other states.

DO NOT apply more than 8.8 oz. of this product (or 0.2 oz. of its active ingredient)/1000 sq. ft. per year. Postemergence control is limited; see the "Crabgrass Control" and "Precautions" sections above.

Spring Applications.

- When applied in the spring, a single application of this product at the appropriate "preemergence" rate listed in Table 1 above will provide control of crabgrass for 2-3 months after application.
- Use the preemergence rate listed in Table 2 when the application is made very early in the spring (mid-February to mid-April) and longer control is required.

- Alternatively, a second ("sequential") application at the preemergence rate listed in Table 1 can be made 6-8 weeks after an early first application at the same rate to provide extended control where sequential fertilizer applications are recommended.
- When crabgrass has (or is likely to have) already emerged from the ground in your area and early postemergence control of crabgrass is desired, use the appropriate "postemergence" rate listed in Table 1.
- Use the postemergence rate listed in Table 2 when crabgrass has already emerged, but it is still relatively early in the spring.

Fall Applications.

- This product can also be applied in the late summer or early fall (late August through October) at the preemergence use rates listed in Table 2 to provide control of crabgrass through the early part of the next spring.
- The fall application should be followed by a mid-to-late spring application at the appropriate postemergence rate to provide season-long control.

Tips for Improved Control.

- For best results, apply this product within a few days after mowing and delay mowing again for a few days after the application.
- When treated lawn or ornamental turf areas are watered or receive significant rainfall within a few days after application of this product, improved weed control may result.

Control of Other Grass and Broadleaf Weeds

Spring Applications. When applied as directed for crabgrass control in the spring, this product will also control (at the "postemergence" rates) or suppress (at the "preemergence" rates) the emergence of the following weeds:

barnyardgrass	lespedeza (common)
bluegrass (annual)	oxalis (buttercup, creeping & yellow woodsorrel)
crowfootgrass	pineappleweed
foxtail (yellow & green)*	purslane (common)
goosegrass	speedwell (corn)
kikuyugrass	spurge (prostrate & spotted)
ryegrass (annual & perennial)	
smutgrass	

*Also controlled at the preemergence rates.

Decided in the early fall *10/10*
Fall Applications. When applied as ~~above in the early fall~~ for crabgrass control through the early ^{part of the year} spring, this product will also control (at the "postemergence" rates) or suppress (at the "preemergence" rates) the emergence of ~~these weeds:~~ *X*

bluegrass (annual)
bittercress
chickweed

the following
henbit
geranium (Carolina)
parsley-piert *X*

APPLICATION EQUIPMENT AND INSTRUCTIONS

Apply this product with drop or rotary-type spreaders designed to apply granular herbicides. Avoid the use of spreaders that would apply this product in narrow rows or concentrated bands. Before each application, calibrate the spreader according to the equipment manufacturer's directions for adjusting the spreader settings such that the spreader delivers the appropriate application rate recommended above. Apply this product uniformly over the lawn or ornamental turf area. A more uniform application can be made by spreading half of the required amount over the area and then applying the remaining half at a right angle to the previous direction. Avoid streaking, skips, or overlaps during application. Check equipment frequently to ensure equipment is functioning properly and applying uniform distribution of granules.

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In case of an emergency involving this product, Call Collect, day or night, (314)694-4000.

MONSANTO COMPANY
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