

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUL 12 1989

Mr. Ralph P. Burton
Fermenta Plant Protection Company
5956 Heisley Road
P.O. Box 8000
Mentor, OH 44061-8000

Dear Mr. Burton:

Subject: Revised labeling in Accordance with the OCPA
Registration Standard
Dacthal G5
TPA Registration No. 50534-3
Your submission dated February 21, 1989

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Plant Disease Act, as amended, is acceptable. A stamped copy is enclosed for your records.

When final labels are printed, describe gloves as "chemical resistant gloves" under the "Protective Clothing Requirements" heading.

Under the "Protective Disposal" heading, add the following information: "Wash disposal of sprayer washwaters."

Submit one (1) copy of your final printed labeling with you to use on the product for shipment with the revised labeling.

Sincerely yours,

Barry Schnaukelt ^{WJS}
Acting Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (475050)

Enclosure

BEST AVAILABLE COPY

58181:I/C:Ikeda:MF-10:KENCO:06/29/89:07/12/89:CT:GJ:CL

CONCURRENCES

SYMBOL	SURNAME	DATE					
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FERMENTA

PLANT PROTECTION

Dacthal G-5 Herbicide

(5% Dacthal Granules)

[Redacted text]

Keep out of Reach of Children

CAUTION

[Redacted text]

[Redacted text]

[Redacted text]

Collect and incorporate granules spilled on the soil surface. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes.

Dacthal G-5 Herbicide

A selective preemergence herbicide for control of annual grasses and certain broadleaved weeds in home lawns and vegetable gardens and ornamental turf.

Read entire label carefully and use only as directed.

General Information

Dacthal G-5 is a 5% granular formulation for use as a preemergence application for control of crabgrass and other annual grasses and certain broadleaved weeds on mineral soils. Dacthal G-5 is recommended for use on Turf; Home Flower Gardens; Nursery Stock; Strawberries; Seeded Crops: beans (dry and snap), broccoli, brussels sprouts, cabbage, cauliflower, collards, cucumbers, garlic, horseradish, kale, melons (cantaloupe, honeydew, watermelon), mustard greens, onions, potatoes (whole and cut pieces), Southern peas (black-eyed), soybeans, squash (winter and summer), turnip greens and turnips; Transplant Crops: broccoli, brussels sprouts, cabbage, cauliflower, eggplant, garlic, peppers, onions, sweet potatoes, tomatoes and yams.

For the control of grasses and some broadleaved weed species, such as smooth and large crabgrass, green foxtail, yellow foxtail, lovegrass, witchgrass, carpetweed, common chickweed, lambsquarters, purslane and Florida pusley, Dacthal G-5 is recommended at 160 to 180 pounds per acre. A slightly higher rate of application (up to 210 pounds per acre) of this product may be required for control of barnyardgrass, ground cherry, dodder, browntop panicum, goosegrass, johnsongrass from seed, and reedroot pigweed. For control of nodding spurge, spotted spurge or prostrate spurge, apply 210 to 240 lbs. of Dacthal G-5 in mid-April or when annual weed seeds, such as crabgrass, germinate. Repeat application 6 to 8 weeks later. A rate of 300 pounds per acre is recommended for control of annual bluegrass in turf. When Dacthal G-5 is used at the recommended rate, up to 3 months weed control can be expected. Bermudagrass, johnsongrass established from rhizomes, nutsedge, galinsoga, wild mustard, ragweed, smartweed and velvetleaf have not been effectively controlled with Dacthal G-5.

Application should be made to a uniform weed-free soil surface within two to three days maximum following cultivation to prevent sub-surface germinating weeds from becoming established. Disturbing the soil surface following application will reduce effectiveness. Rates of application can be reduced by banding. Lawn spreaders should be properly calibrated prior to use to deliver Dacthal G-5 granules at prescribed rate. Settings may vary between spreaders because of condition and other factors.

Dacthal G-5 can also be applied by the shaker can method. The ideal way of doing this is to measure off the area to be treated into small plots and then evenly sprinkle the prescribed quantity of Dacthal granules over this area.

Do not apply this product through any type of irrigation equipment.

Conversion Table — Acre and Smaller Areas

If Rate per Acre Is	Amount of Dacthal G-5 to Apply	
	250 sq. ft.	1,000 sq. ft.
160 pounds per acre	0 lb 15 oz	3 lbs 12 oz
180 pounds per acre	1 lb 0 oz	4 lbs 2 oz
210 pounds per acre	1 lb 3 oz	4 lbs 12 oz
300 pounds per acre	1 lb 12 oz	7 lbs 0 oz

476

If there is no rain within three or four days after Dacthal G-5 application, sprinkler irrigation (1/2 to 1 inch of water) should be used for best results.

Replanting: Replanting crops other than those included on this label in Dacthal treated soil within eight months of application may result in crop injury. If replanting is required because of an early crop failure, the planting of onions, seeded melons, potatoes, tomatoes, eggplants or peppers at this time may result in crop injury. However, all crops on this label may be planted following harvest of a Dacthal treated crop.

Any application of Dacthal should be made prior to weed seed germination.

Directions for Use

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

DO NOT APPLY IN SUFFOLK COUNTY, LONG ISLAND, NEW YORK.

Protective Clothing Required: Wear a long-sleeved shirt, long-legged pants, gloves, shoes and socks when handling (mixing, loading or applying) pesticides or when cleaning and repairing equipment used during mixing, loading or application of pesticides.

In case of contact with skin, wash thoroughly with soap and water. Always wash hands, face and arms with soap and water after using pesticides before smoking, eating, drinking or toileting. Shower after work and do not reuse contaminated clothing. Clothing worn during work must be laundered separately from household articles before reuse.

Reentry: For commercial vegetable production, Do not enter treated areas for 24 hours after application unless wearing long sleeved shirt and long pants.

Ornamental Turf: Apply uniformly to established turfgrass at 200 lbs Dacthal G-5 per acre in the early spring before crabgrass and other annual grasses and broadleaved weed seeds germinate. Crabgrass seed germination usually coincides with the time Forsythia blossoms start to fall. One application in early spring before weed seed germination usually provides season long control. In areas which commonly experience stands of late-germinating crabgrass and other annual weedy grasses, a second application at half the regular rate can be safely made two months after the first application. To control annual bluegrass (*Poa annua*) and other erratic or later-germinating grasses and weeds in northern states, supplement the early spring application of Dacthal G-5 with an application of 300 lbs Dacthal G-5 in late summer or early fall before weed seed germination. Earlier applications are required in southern United States. Consult agricultural experiment station or extension service weed specialist for date *Poa annua* seeds germinate in your area and make application at least two weeks prior to this date.

Early spring application of Dacthal G-5 may be made to new turfgrass seedlings after the grasses have exhibited a uniform greening and the grass is preferably 1 to 2 inches in height.

Where some spring seeding is necessary, there should be a delay of approximately 60 days after application of Dacthal G-5. This delay increases the survival of desirable grasses. Fall seeding of permanent grasses may follow a single application made either in early spring up to not less than 60 days of seeding.

Dacthal G-5 is not recommended for use on putting-greens. Dacthal G-5 is not recommended on bent grasses when mowed at putting-green heights. Do not apply to *Dichondra*.

Flower Gardens: Apply after establishment of bed and conditions are favorable for good plant growth, or as a supplemental application at 180 lbs Dacthal G-5 per acre. Where possible the bed should be established and application made early in the spring. Delayed or secondary applications, when needed, can be made at any time provided beds have been cultivated and are free of weeds. Weed control up to three months or more may be expected following proper application. See list of ornamentals.

Nursery Stock, or Ornamental Plantings: Apply at lining out, late fall or early spring at 180 lbs Dacthal G-5 per acre. Applications should be made to soil recently cultivated to a uniform texture. These can be made immediately following lining-out of stock. With established plantings, application should be made following proper cultivation to remove existing weeds. Where possible this should be done early in the spring. Late summer applications may prove beneficial for control of fall-germinating weeds, if made following cultivation. Weed control up to three months or more may be expected following proper application. Dacthal G-5 is specifically recommended for weed control on the following nursery and ornamental plantings:

Abelia
 Ageratum
 Alyssum
 Andromeda, Jap.
 Arborvitae
 Ash
 Aster
 Azalea
 Babysbreath
 Barberry
 Bellflower
 Birch
 Bleedingheart
 Bloodleaf
 Boxwood
 Bugloss
 Camellia
 Candytufts
 Chestnut
 Chrysanthemum
 Cinquefoil
 Coleus
 Columbine
 Coneflower, purple
 Coreopsis
 Coralbelts
 Cosmos
 Cotoneaster
 Cottonwood
 Crabapple
 Cuphea
 Cypress
 Dahlia
 Delphinium
 Deutzia
 Dogwood
 Eleagnus
 Elm
 Euonymus
 Evening Primrose

Feverfew
 Fir
 Forget-me-not
 Forsythia
 Four-O'Clock
 Foxglove
 Gaillardia
 Geranium
 Gladiolus
 Golddust
 Golden tuft
 Gum
 Hawthorn
 Heath, pink
 Holly
 Hydrangea
 Honeysuckle
 Iris
 Ivy, Baltic
 Ivy, Boston
 Ivy, English
 Ivy, Wilson
 Juniper
 Lantana
 Larkspur, candle
 Lavendercotton
 Lilac
 Lily
 Locust
 Lupine
 Magnolia
 Maple
 Marguerite, golden
 Marigold
 Mockorange
 Morningglory
 Moss, rose
 Mother-of-thyme
 Mountain Laurel
 Mourning Bride

Nasturtium
 Oak
 Opine
 Pachistima
 Pachysandra
 Peony
 Petunia
 Pine
 Pittosporum
 Podocarpus
 Poker plant
 Poplar
 Privet
 Privet, variegated
 Redbud
 Rhododendron
 Rose
 Russian olive
 Sage, scarlet
 Snapdragon
 Spiderwort, Va.
 Spirea
 Spruce
 Stonecrop
 Strawflower
 Sundrops
 Sunflower
 Sweet pea
 Sycamore
 Tree peony
 Tulip tree
 Viburnum
 Violet, African
 Walnut
 Weigela
 Willow
 Wormwood
 Yarrow, fernleaf
 Yew
 Zinnia

Do not use on the following plants:

Bugleweed
 Button pink
 Carnation

Geum
 Germander
 Mesembryanthemum

Pansy
 Phlox
 Sweet William
 Telanthera

Note: See General Information to determine proper rate for your weed complex.

Broccoli, Brussels Sprouts, Cauliflower, Cabbage: Apply uniformly to the soil at seeding or transplanting at 160 to 210 lbs Dacthal G-5 per acre. Application can be applied directly over transplants without injury. If weeds have emerged, crops should be clean cultivated or weeded prior to application.

Beans (dry or snap), Southern Peas (blackeyed), Soybeans: Apply uniformly to the soil at time of seeding at 160 to 210 lbs Dacthal G-5 per acre.

Seeded Cucumbers, Squash (winter and summer), Melons (cantaloupe, watermelon, honeydew): Apply uniformly to the soil at 160 to 210 lbs Dacthal G-5 per acre when plants have 4 to 5 true leaves, are well established and growing conditions are favorable for good plant growth. Crops should be cultivated or weeded prior to application if weeds have emerged.

Collards, Kale, Mustard Greens, Turnips (greens and roots): Apply uniformly to the soil at 160 to 210 lbs Dacthal G-5 per acre at time of seeding.

Garlic and Onions: Apply uniformly to soil at seeding, or transplanting and/or at layby at 160 to 210 lbs Dacthal G-5 per acre. Application can be made directly over transplants without injury. A layby application can be made on onions up to 14 weeks after seeding or transplanting; on garlic, layby application can be made when the crop plant has 3 to 5 true leaves. Should weeds emerge prior to layby the crop should be cultivated or weeded before application.

696

Horseradish: Apply uniformly to the soil at time of planting at 160 to 210 lbs of Dacthal G-5 per acre. Preplant incorporation is not recommended.

Potatoes (whole or cut pieces): Apply uniformly to the soil at 160 to 210 lbs Dacthal G-5 per acre at planting, drag-off or layby. If top of beds are to be dragged off, make application after drag-off. Layby application can be made up to 9 weeks after planting. If weeds have emerged at layby, the crop should be cultivated prior to application. The initial sprinkler irrigation should not exceed one inch. Dacthal G-5 is not recommended for use on potatoes in California.

Sweet Potatoes and Yams: Apply uniformly to the soil at 160 to 210 lbs Dacthal G-5 per acre at time of transplanting or layby. Application can be made directly over transplants without injury. Layby application can be made up to 6 weeks after transplanting. If weeds have emerged, the crop should be cultivated or weeded prior to application.

Tomatoes, Eggplant, Peppers: Apply uniformly to the soil at 160 to 210 lbs Dacthal G-5 per acre. Application should be confined to a period 4 to 6 weeks after transplanting. Plants should be well established and growing conditions favorable for good plant growth. Application can be made directly over the plants without injury. If weeds have emerged, the crop should be cultivated or weeded prior to application.

Strawberries: New plantings — Apply uniformly to soil at 180 lbs per acre at time of transplanting. Established plantings — Apply in early fall and early spring at rate of 160 to 180 lbs per acre to control fall and early spring germinating weeds. Do not apply after first bloom through harvest. These applications can be made directly over plants without injury.

Special Precautions: Do not feed treated foliage to livestock or graze treated areas. Applied according to directions and under conditions favorable to good plant growth, Dacthal G-5 will not harm crops for which its use is recommended; however, conditions such as high salt concentration, seedling disease, cold weather, deep planting, excessive moisture or drought may injure or weaken crops normally tolerant to Dacthal G-5 thereby increasing the possibility of herbicide damage. Under any of these conditions, one or more of the following may result; delayed crop development, reduced yields or reduced quality.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Storage: Store in a dry place.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment and dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Warranty and Limitation of Damages

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.