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352-287

page 1 of 6

JUL 29 1993

Mr. Ian Wellings
E.I. DuPont de Nemours & Company, Inc
Agricultural Products
P.O. Box 80038
Wilmington, DE 19880-0038

Dear Mr. Wellings:

Subject: DuPont Hyvar X Herbicide (Label Changes Requested By Reregistration)
EPA Registration No. 352-287
Your Application Dated May 24, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable. Please submit five (5) copies of your final printed labeling before you release the product for shipment. A stamped copy of the label is enclosed for your records.

This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under WPS labeling regulations at 40 CFR part 156, subpart K, section 156.200 (c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

Sincerely,

Robert J. Taylor
Product Manager 25
Fungicide-Herbicide Branch
Registration Division (H7505C)

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HYVAR® X

HERBICIDE

REGISTRATION CODE 1290-000
PACKAGE SIZE 12 - 4 POUND BAGS/CARTON 50 POUND DRUMS

ACCEPTED
with COMMENTS
by EPA Letter Dated:
JUL 29 1993

WETTABLE POWDER		
ACTIVE INGREDIENT		BY WEIGHT
Bromacil (5-bromo-3-sec-butyl-6-methyluracil)	352-287	80%
INERT INGREDIENTS		20%
	TOTAL	100%
EPA Reg. No. 352-287		

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
352-287

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION! MAY IRRITATE EYES, NOSE, THROAT, AND SKIN.
Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.
For medical emergencies involving this product, call toll free 1-800-441-3637.

STATEMENT OF PRACTICAL TREATMENT

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.
If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS

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 contaminate water when disposing of equipment washwaters.
Bromacil is known to leach through soil and has been found in ground water as a result of normal field use. Users are advised not to apply in areas where soils are permeable, particularly where ground water is used for drinking water. Consult with the pesticide state lead agency for information regarding soil permeability and aquifer vulnerability in your area.

IMPORTANT

Injury to or loss of desirable trees or other plants may result from failure to observe the following: Do not apply (except as recommended for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Do not contaminate domestic waters. Keep from contact with fertilizers, insecticides, fungicides, and seeds. Thoroughly clean all traces of Hyvar® X from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand
- Avoid over-filling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station
- Dilute and agitate excess solution and apply at labeled rates/uses
- Avoid storage of pesticides near well sites

GENERAL INFORMATION

Du Pont "Hyvar" X Herbicide is a wettable powder to be mixed in water and applied as a spray for control of weeds and brush. It is non-corrosive to equipment, non-flammable and non-volatile.

"Hyvar" X is an effective general herbicide for the control of many annual weeds at low rates and perennial weeds and brush at higher rates and is particularly useful for control of perennial grasses. It may be used on non-cropland for non-selective weed and brush control and for selective weed control in certain crops.

Effects are slow to appear and may not become apparent until the chemical has been carried into the root zone of the weeds by moisture. The degree of control and duration of effect will vary with the amount of herbicide applied, soil texture, rainfall, and other conditions.

DIRECTIONS FOR USE

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

Du Pont "Hyvar" X Herbicide should be used only in accordance with recommendations on this label, or in separate published Du Pont recommendations available through local dealers.

Du Pont will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by Du Pont. User assumes all risks associated with such nonrecommended use.

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

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Farm workers performing hand labor operations should not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to farm workers performing hand labor operations who are expected to be in a treated cropland area or in a cropland area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Warnings must include the following information: "CAUTION. Area treated with "Hyvar" X on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of contact, flush eyes with plenty of water; wash skin with plenty of soap and water. Get medical attention if irritation persists."

Apply "Hyvar" X as a spray just before or during the period of active growth of plants to be controlled and when rainfall can be expected for soil activation. If dense growth is present, results will be improved if vegetation is removed before treatment. Do not apply when ground is frozen.

Before spraying, calibrate equipment to determine quantity of water necessary to uniformly cover measured area to be treated. Weigh the proper amount of "Hyvar" X and mix into necessary volume of water.

For crop use, apply with a fixed-boom power sprayer properly calibrated to a constant speed and rate of delivery. Use sufficient water (min. 40 gal. per

acre) to provide thorough and uniform coverage of the ground. Spray booms must be shut off while starting, turning, slowing, or stopping, or injury to the crop or successive crops may result.

For non-crop use, application also may be made with a handgun sprayer using at least 200 gals. spray per acre to insure uniform coverage. For small areas, a hand sprayer or sprinkling can may be used.

Nozzle screens should be 50 mesh or larger. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means in the spray tank. If by-pass or return line is used, it should terminate at bottom of tank to minimize foaming. Do not use air agitation.

NON-CROP USE

WEED CONTROL

To control most weeds for an extended period of time on non-cropland areas such as RAILROAD, HIGHWAY and PIPELINE RIGHT-OF-WAYS, PETROLEUM TANK FARMS, LUMBERYARDS, STORAGE AREAS and INDUSTRIAL PLANT SITES. Do not apply to open water (such as lakes, reservoirs, rivers, streams, creeks, salt water bays or estuaries) nor while water is present in fresh water wetlands (such as marshes, swamps, bogs or potholes) nor to salt water marshes within tidal areas nor to ditches, steep banks along waterways or impervious substrates, nor to areas near desirable plants where roots of these plants may extend.

Apply 3 to 6 lbs. per acre for control of annuals such as cheat, crabgrass, downy brome, foxtail, lambsquarters, puncturevine, ragweed, ryegrass, turkey mullein, and wild oats. When applied just prior to or after emergence of annuals, rates as low as 2 lbs. per acre control many annual weeds and grasses in low rainfall areas and give short term control in higher rainfall areas.

Apply 7 to 15 lbs per acre for control of perennials such as bahiagrass, bermudagrass, bluegrass, broomsedge, dandelion, dog fennel, goldenrod, johnsongrass, nutsedge, plantain, purpletop, natalgrass (redtop), quackgrass, smooth brome, and wild carrot. In areas with low or seasonal rainfall, rates as low as 5 lbs. per acre control many perennial weeds and grasses.

Where limited rainfall (usually less than 4 inches) occurs during the active growth period, such as some areas of the West, "Hyvar" X usually will not provide satisfactory control of hard-to-kill, deep-rooted perennial weeds such as johnsongrass.

NOTE: Use the higher levels of the dosage ranges on adsorptive soils (those high in organic matter or carbon).

Retreatment--Apply 2 to 6 lbs per acre when annual weeds and grasses reappear on sites where weed growth has been controlled.*

For Small Areas--1/4 cupful of "Hyvar" X per 250 sq. ft. is approximately 15 lbs. per acre.

Combinations - For broader spectrum control of emerged weeds, apply "Hyvar" X (as listed above) plus surfactant with Banvel[1] D (dicamba) or 2,4-D amine, or dalapon, or MSMA or parquat or Phytar[2] 560 (Na salt of cacodylic acid); use the higher rates of "Hyvar" X on heavier soils or soils high in organic matter; use the companion herbicides as recommended on package labels using higher rates on heavy dense vegetation.

BRUSH CONTROL

To control undesirable woody plants on non-cropland areas such as RAILROAD RIGHT-OF-WAYS, STORAGE AREAS, and INDUSTRIAL PLANT SITES.

Apply in spring or summer as a broadcast or basal (spot) treatment. Do not use where marketable timber or other desirable trees or shrubs are immediately adjacent to the treated area.

Broadcast Treatment—Apply 7 to 15 lbs per acre to control brush such as oak, pine, sweet gum, and willow. Use the higher rates on adsorptive soils (those high in organic matter or carbon).*

Basal (Spot) Treatment—Mix 2 1/2 lbs in 5 gals. of water and apply at the rate of 1 to 2 fl. oz. per stem 2" to 4" in basal diameter; wet base of stem to run-off. Treatment controls woody plants such as cottonwood, hackberry, maple, oak, poplar, red bud, sweet gum, wild cherry, willow, and winged elm.*

*It is permissible to treat seasonally dry flood plains, deltas, marshes, swamps, bogs and transitional areas between upland and lowland sites.

SELECTIVE USE IN CROPS

All dosages of "Hyvar" X are expressed as broadcast rates. For band treatment, use proportionately less.

Moisture is necessary to activate the chemical; best results are obtained if moisture is supplied by rainfall or irrigation within two weeks after application.

CITRUS

Apply as a band or broadcast treatment beneath and/or between trees. Avoid contact of foliage and fruit with spray or mist. Temporary yellowing of citrus leaves may occur following treatment. Do not use on citrus in Kern County, California.

Dosage rates are expressed as broadcast rates; for band treatment use proportionately less.

Because injury to citrus trees may result: do not use on soils low in organic matter (less than 1%) nor on poorly drained soils; do not apply more than 8 lbs. per acre per year; do not treat trees planted in irrigation furrows; do not treat diseased trees such as those with foot rot. Do not use in citrus orchards interplanted with other trees or desirable plants, nor in home citrus plantings or in areas where roots of other valuable plants or trees may extend as plant injury may result. Do not graze cattle in treated areas. Treated areas may be planted to citrus trees one year after last application; do not replant to other crops within 2 years after last application as plant injury may result.

FLORIDA ONLY

East Coast/Flatwoods Areas - (low permeable soils)

- The maximum allowable is 6.4 lbs active (bromacil) per acre per year. The allowable amount is inclusive of all bromacil formulations used within one year.

- Under the above guidelines, do not apply more than 8 lbs per acre per year of "Hyvar" which contains 6.4 lbs active (bromacil).

- Multiple applications may improve control of "hard-to-kill" species.

Trees Established Less Than One Year: For control of annuals, apply 2-3 lbs of "Hyvar" X per acre as needed to maintain weed control. Do not apply at less than 60 day intervals; do not apply more than 6 pounds per acre within any 6 month period, or more than 8 pounds during the first year.

Trees Established One to Three Years: For control of annuals, apply 2-3 lbs of "Hyvar" X per acre as needed to maintain weed control. Do not apply more than 6 pounds per acre within any 6 month period, or more than 8 pounds per acre per year.

Trees Established Three or More Years: Apply 2-4 lbs per acre as needed to maintain weed control. Do not use more than 4 pounds per acre in any one application, nor more than 8 pounds per acre per year. Use the higher rate for control of perennials listed below. Repeat annual treatments are required to control perennials.

Ridge areas - (highly permeable soils; sands, loamy sands)

- The maximum allowable is 4 lbs active (bromacil) per acre per year. The allowable amount is inclusive of all bromacil formulations used within one year.

- Under the above guidelines, do not apply more than 5 lbs per acre per year of "Hyvar" X which contains 4 lbs active (bromacil).

- Multiple applications may improve control of "hard-to-kill" species.

Trees Established Less Than One Year: For control of annual weeds, apply 2 - 3 lbs of "Hyvar" X per acre as needed to maintain weed control. Do not apply at less than 60 day intervals; do not use more than 5 lbs per acre per year.

Trees Established One to Three Years: For control of annual weeds, apply 2 - 3 lbs of "Hyvar" X per acre as needed to maintain weed control. Do not use more than 5 lbs per acre per year.

Trees Established Three or More Years: For control of annual weeds, apply 2 - 4 lbs of "Hyvar" X per acre as needed to maintain weed control. Do not use more than 4 pounds per acre in any one application, nor more than 5 lbs per acre per year. To control established perennials (listed below) use the seasonal use rate of 5 lbs "Hyvar" X per acre. Repeat annual treatments are required to control perennials.

WEEDS CONTROLLED (annuals)

Barnyardgrass	Puncturevine
Crabgrass	Field bindweed
Crowfootgrass	Smartweed
Florida pusiey	Sedge (annual)
Henbit	Spring stop
Lambsquarters	Texas panicum
Mustard	Turkey mullein
Natalgrass (red top)	

WEEDS CONTROLLED (perennials)

Bahiagrass	Pangolagrass
Bermudagrass	Paragrass
Johnsongrass	Torpedograss
Nutsedge	

NOTE: Partial control of perennials usually occurs with a single treatment; repeat applications are required to control perennials. Control of perennials may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

TEXAS ONLY

Trees Established for at Least One Year to Four Years

Apply 2 to 4 lbs "Hyvar" X per acre. Use the lower rate for 1 to 2 year old trees and the higher rate for trees more than 2 years old. A second application may be made if needed, but do not apply more than 4 lbs "Hyvar" X per acre per year as injury to the trees may result.

U.S. (Except Florida)

Do not use on citrus in Kern County, California.

Trees Established for Four Years or More

Annual Weeds--Including barnyardgrass (watergrass), crabgrass, crowfootgrass, Florida pusley, henbit, lambsquarters, mustard, natalgrass (red top), puncturevine, purslane, sandspur, sedge (annual), sprangletop, Texas panicum (Colorado grass), and turkey mullein, apply 2 to 4 lbs. per acre. Apply anytime of the year, preferably shortly before or after weed growth begins when adequate moisture is available.

Perennial Weeds--Best results are obtained if application is made shortly before or shortly after weed growth begins; if dense growth is present, remove tops and spray the ground. Effects on perennial weeds are slow to appear, usually progressing over a period of several months.

Make a single application per year during the period from winter to early summer; use at the following rates:

<u>Soil Texture</u>	<u>Lbs "Hyvar" X Per Acre</u>
Sand, loamy sand	4 to 5
Sandy loam	5 to 6
Silt loam, clay loam	6 to 3

Alternatively, make two applications of 3 to 4 lbs. "Hyvar" X per acre per year. In Texas, and Louisiana, apply in spring and summer; in California and Arizona, apply in fall and spring.

Note: Partial control usually occurs with a single treatment; repeat applications are required to control perennials.

"Hyvar" X controls the following:

Bermudagrass	All areas U.S.
Johnsongrass	Texas
Nutsedge	Texas, California

Control of perennials may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

PINEAPPLE

Do not replant treated areas to any crop other than pineapple within 2 years after last application as injury to subsequent crops may result.

Hawaii and Florida--For control of seedling weeds such as amaranthus, balsamapple, chloris, crabgrass, Floras paintbrush, foxtail, goosegrass (wiregrass), and Hialoa, apply 2 to 6 lbs. per acre broadcast before the planting material begins to grow. Use the lower rates in low rainfall areas (5 to 10 inches annually) and on clean-culture fields; use the higher rates in high rainfall areas (above 10 inches annually) and in trashmulch fields. Follow with 2 to 4 lbs. per acre as directed interline spray as needed prior to differentiation, or apply 2 lbs. per acre broadcast as needed after plants are 8 months old but before differentiation. Do not apply more than 10 lbs. total per acre per plant crop.

For ratoon crop, apply 1 to 4 lbs. per acre broadcast after harvesting plant crop but before differentiation. Do not apply more than 4 lbs. total per acre per ratoon crop.

Puerto Rico--For control of seedling weeds such as crabgrass, goosegrass, jungle rice, pigweed, and purslane, apply 2 to 4 lbs. per acre broadcast immediately after planting and before planting material begins to grow.

SPRAY PREPARATION

Mixing in water - Fill tank 1/2 full with water. Start agitation system, add "Hyvar" X and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

Mixing in liquid fertilizer (citrus only) - A fertilizer solution may be used in the spray mixture. Small quantities should be tested for compatibility by the following procedures before full scale mixing.

- Put 1 pint fertilizer solution in a quart jar.
- Mix 2 teaspoons "Hyvar" X with 2 tablespoonfuls of water; mix thoroughly and add to fertilizer solution.
- Close jar and shake well.
- If other herbicides are used in the mixture, premix 2 teaspoonfuls of dry materials to 1 teaspoonful of liquids with 2 tablespoons of water, add to "Hyvar" X/fertilizer solution mixture.
- Close jar and shake well.
- Watch mixture for several seconds; check again in 30 minutes.
- If mixture does not separate, foam, gel or become lumpy it may be used.

Provided the above procedure shows the mixture to be compatible, prepare the tank mixture as follows: add the fertilizer solution to the spray tank first, mix the required amount of "Hyvar" X with water to form a slurry, with the agitator running, slowly add the slurry and mix thoroughly. For other herbicides, follow directions above. When tank mixing with other herbicides, all applicable directions, restrictions, and precautions for the additional herbicides are also to be followed.

Thoroughly reagituate before using if allowed to settle

STORAGE AND DISPOSAL

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food, or feed.

PRODUCT DISPOSAL: Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Then 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.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

[1] Registered trademark of Sandoz Crop Protection Corporation.

[2] Registered trademark of Inter-Ag Corporation.

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