

PM 23

8340-38 10/19

14 JAN 1993

Mr. Victor A. Dorr
Hoechst Celanese Corporation
Route 202-205, P.O. Box 2500
Somerville, NJ 08876-1258

Dear Mr. Dorr:

Subject: Tiller® EC Herbicide
EPA Registration No. 8340-38
Application Dated November 19, 1992, Request To
Amend Registration To Revise Use Directions and
the Disclaimer and Your Letter Dated December 19, 1992
Re: Revised Disclaimer Statement

The proposed amendments reflected in the labeling submitted have been reviewed and are acceptable for registration under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended provided that you:

1. Submit required data as described as required for conditional registration of the subject product on August 15, 1991.
2. Submit five (5) printed copies of your final printed labeling before you release 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 this 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 (H-7505C)

Enclosure

B. Wilson: Diskette #NC2 01-12-93

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Revised: December 19, 1992

TILLER® EC HERBICIDE

FOR SELECTIVE POSTEMERGENCE CONTROL OF GREEN AND YELLOW
FOXTAIL (PIGEONGRASS), VOLUNTEER AND WILD MILLET SPECIES,
BARNYARDGRASS, WILD OATS AND CERTAIN BROADLEAF WEEDS
IN SPRING WHEAT AND WINTER WHEAT (EXCLUDING DURUM)

ACTIVE INGREDIENTS:

fenoxaprop-ethyl: (±)-ethyl 2-[4-[(6-chloro-2-benzoxazolyl)oxy]phenoxy]propanoate..... 5.17%*0

2,4-D, isooctylester: 2-ethylhexyl-2,4-dichlorophenoxyacetate..... 10.35%**0

(Equivalent to 6.86% of pure
2,4-dichlorophenoxyacetic acid equivalent)

MCPA, isooctylester: isooctyl 2-methyl-4-chlorophenoxyacetate 32.11%***1

(Equivalent to 20.59% of pure 2-methyl-4-chlorophenoxyacetic acid equivalent)

INERT INGREDIENTS:..... 52.37%

TOTAL: 100.00%

*Equivalent to 0.44 pound of pure fenoxaprop-ethyl per gallon

**Equivalent to 0.58 pound of pure 2,4-dichlorophenoxyacetic acid per gallon

***Equivalent to 1.75 pounds of pure 2-methyl-4-chlorophenoxyacetic acid per gallon

KEEP OUT OF REACH OF CHILDREN.

WARNING BEST AVAILABLE COPY

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

SEE ATTACHED FOLDER FOR COMPLETE DIRECTIONS OF USE AND
ADDITIONAL INFORMATION.

EPA Reg. No. 8340-38

EPA EST. NO.

NET CONTENTS: 2.5 GALLONS; 30 GALLONS AND MINI-BULK

HOECHST CELANESE CORPORATION

Route 202-206

P.O. Box 2500

Somerville, NJ 08876-1258

ACCEPTED
with COMMENTS
in EPA Letter Dated

14 JAN 1993

Hoechst

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
8340-38

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

Causes substantial but temporary eye injury. Do not get in eyes. Avoid contact with skin. Harmful if swallowed, absorbed through skin or inhaled. Do not take internally. Avoid inhalation of vapor or spray mist. May cause allergic skin reactions. In case of skin contact, wash skin with soap and water. Get medical attention if irritation persists.

When mixing, loading, or applying this product or repairing or cleaning equipment used with this product, wear eye protection (face shield or safety glasses), chemical-resistant gloves, long-sleeved shirt, long pants, socks and shoes. [This note is not part of the label text: the following one sentence will be used on 2.5 gallon containers only]: Persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron. [This note is not part of the label text: the following two sentences will be used on 30 gallon containers and mini-bulk only]: A mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. For aerial applicators in enclosed cockpits and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required.

Wash hands, face and arms with soap and water as soon as possible after mixing, loading, or applying this product. Wash hands and arms before using toilet. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry. Remove saturated clothing as soon as possible and shower.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, 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 or rinsate.

3013

GROUNDWATER CONTAMINATION

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPA have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D and MCPA pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

CLEANING OF EQUIPMENT

When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources.

STATEMENT OF PRACTICAL TREATMENT

In case of eye contact, immediately flush with plenty of water for 15 minutes. Get medical attention. If on skin, wash with plenty of soap and water. If swallowed, do not induce vomiting. Tiller® EC Herbicide contains petroleum distillates. Call a physician. Vomiting should be supervised by a physician because of the possible pulmonary damage via aspiration of the solvent.

If possible, bring this container and labeling to the attending physician.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Keep container tightly closed when not in use. Avoid cross contamination with other pesticides.

Do not store over 100°F or below 10°F. Do not use or store near heat or open flame.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Empty containers should be triple rinsed into the spray tank during the spray operation. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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EMERGENCY PHONE NUMBER

For Human, Fire, Spill or Environmental Emergency:

call 1-800-228-5635, Extension 132

IMPORTANT NOTICE: DISCLAIMER

Read "IMPORTANT NOTICE: DISCLAIMER" before buying or using. If terms are not acceptable, return at once unopened.

The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended or other influencing factors in the use of the product, or use of this product in a manner inconsistent with its labeling, all of which are beyond the control of the seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Seller harmless for any claims relating to such factors.

HOECHST CELANESE CORPORATION warrants only that the product conforms to the chemical description on the label and is reasonably fit for the purpose stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonably foreseeable to HOECHST CELANESE CORPORATION and user assumes the risk of any such use. HOECHST CELANESE CORPORATION MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY. In no case shall HOECHST CELANESE CORPORATION be liable for consequential, special, indirect or incidental damages resulting from the use or handling of this product. The foregoing conditions of sale and warranty can be varied only by an agreement in writing signed by a duly authorized representative of HOECHST CELANESE CORPORATION.

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[Attached Use Directions]
IMPORTANT INSTRUCTIONS ENCLOSED

GENERAL INFORMATION

Tiller® EC Herbicide is a postemergence herbicide for the control of green and yellow foxtail (pigeongrass), volunteer and wild millet species, barnyardgrass, wild oats and certain broadleaf weeds in spring wheat and winter wheat (excluding durum). Application to wheat that is not tillered may result in malformed spikes (heads).

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply until you have read the entire label.

APPLICATION INFORMATION

Ground Application: DO NOT apply when winds are gusty, or when conditions will favor movement of spray particles off the desired spray target. To avoid drift and insure consistent weed control, apply Tiller® EC Herbicide with the spray boom as low as possible while maintaining a uniform spray pattern. Apply a minimum of 10 gallons of spray solution per acre, using a spray pressure of 30-40 PSI with flat-fan nozzle tips. Ground speed for application should not exceed 10 mph. DO NOT apply with hollow cone type insecticide nozzles or other nozzles that produce a fine droplet spray. Under dense weed populations, high spray volume (15-20 gpa) is required for obtaining thorough coverage.

Aerial Application: For the control of green and yellow foxtail species only. Calibrate the spray equipment prior to use. Tiller® EC Herbicide should be applied in a minimum of 5 gallons of water per broadcast acre. To get uniform spray coverage, use nozzles to provide 200-350 micron size droplets. DO NOT use raindrop nozzles. Aerial applications with this product should be made at a maximum height of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi and wind speed not exceeding 10 mph to assure accurate application within the target area. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

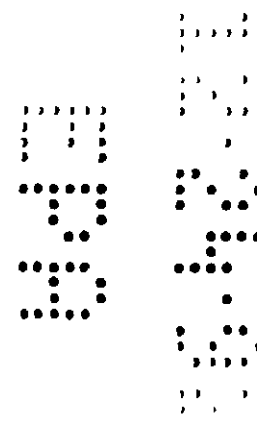
Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin, and should wash thoroughly before eating and at the end of each day's operation.

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PRECAUTIONS TO BE TAKEN TO AVOID SPRAY DRIFT

Do not allow spray from aerial equipment to drift onto adjacent land or crops. When drift may be a problem, do everything possible to reduce spray drift, including the following:

- Do not spray if wind speeds are or become excessive. Do not spray if the wind is 10 mph or greater. If sensitive crops or plants are downwind, extreme caution must be used under all conditions. Do not spray if winds are gusty.
- Use extreme caution when conditions are favorable for drift (high temperatures, drought, low relative humidity), especially when sensitive crops are located nearby.
- Drift from aerial applications of the herbicide is likely to result in damage to sensitive plants adjacent to the treatment site. This damage can occur at levels below the concentrations which can be detected with chemical analysis.
- Do not apply when a temperature inversion exists. If inversion conditions are suspected, consult with local weather services before making an application.
- Use the lowest number of nozzles practical with the largest possible orifice size within the specified range to obtain the minimum 5 gallon per acre spray volume. Application height and boom length should be set according to manufacturer's instructions to minimize drift.
- Reduce the volume of spray mixture by using higher flow rate nozzles. Using lower pressure with the appropriate nozzle to obtain higher volumes will also reduce spray drift.
- Apply as close to target plants as practical while maintaining a good spray pattern for adequate coverage.



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The time of application is determined by the growth stage of the wheat. Apply Tiller® EC Herbicide when spring wheat begins to tiller (3-4 leaf stage) up to the 6-leaf stage. Winter wheat should have a minimum of three tillers before application. DO NOT SPRAY SPRING OR WINTER WHEAT AFTER JOINTING BEGINS.

Tiller® EC Herbicide has no effect via the soil and will only control emerged grassy and broadleaf weeds.

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Tiller® EC Herbicide, when applied as recommended, controls the following annual grassy and broadleaf weeds:

RATE RECOMMENDATION CHART*

<u>Grass Species</u>		<u>Pints per Acre</u>	<u>Fl. Oz. Per Acre</u>
Green Foxtail	(<u>Setaria viridis</u>)	1.0	16.0
Foxtail millets (Vol.)	(<u>Setaria italica</u>)		
Common, Siberian, Hungarian, German Millet			
Volunteer Corn	(<u>Zea mays</u>)		
<u>Broadleaf Weeds</u>			
Common Lambsquarters	(<u>Chenopodium album</u>)		
Wild Mustard	(<u>Sinapis arvensis</u>)		
<u>Grass Species</u>			
Yellow Foxtail	(<u>Setaria lutescens</u>)	1.2	19.0
Proso Millet (volunteer, wild)	(<u>Panicum miliaceum</u>)		
<u>Broadleaf Weeds</u>			
Common Lambsquarters	(<u>Chenopodium album</u>)		
Wild Mustard	(<u>Sinapis arvensis</u>)		
<u>Grass Species</u>			
Barnyardgrass	(<u>Echinochloa crus-galli</u>)	1.7	27.0
Blackgrass	(<u>Alopecurus myosuroides</u>)		
Wild Oats	(<u>Avena fatua</u>)		
Windgrass	(<u>Apera interrupta</u>)		
<u>Broadleaf Weeds</u>			
Annual Sowthistle	(<u>Sonchus oleraceus</u>)		
Canada Thistle (suppression)	(<u>Cirsium arvense</u>)		
Common Lambsquarters	(<u>Chenopodium album</u>)		
Field Pennycress	(<u>Thlaspi arvense</u>)		
Pigweed (suppression)	(<u>Amaranthus spp.</u>)		
Purslane	(<u>Portulaca oleracea</u>)		
Ragweed	(<u>Ambrosia artemisiifolia</u>)		
Shepherdspurse	(<u>Capsella bursa-pastoris</u>)		
Tumble (im Hill)			
Mustard	(<u>Sisymbrium altissimum</u>)		
Wild Mustard	(<u>Sinapis arvensis</u>)		
Wild Radish	(<u>Raphanus raphanistrum</u>)		
*Use the higher rate for the control of less susceptible species in a mixed population.			

When tank mixing, read and follow the label for each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions. Use in accordance with the most restrictive of label limitations and precautions. No label dosage should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Figure 1 shows a 4x4 grid of 16 small diagrams. Each diagram represents a step in a 2D random walk. The walk starts at the top-left corner (0,0) and ends at the bottom-right corner (3,3). The steps are numbered 1 through 16, showing a path that moves right, down, and right again, with some backtracking.

Broadleaf Herbicide	Green Foxtail Foxtail Millets Volunteer Corn
	Tiller® EC Herbicide Rate 1 pt/A
Buctril 2EC----->	1.0 pt/A
MCPA Ester (4 lb/gal)----->	0.5 pt/A
Stinger----->	0.25 - 0.33 pt/A
Tordon 22K----->	1.0 - 1.5 fl oz/A
Banvel (4 lb/gal)----->	2.0 fl oz/A
Banvel SGF (2 lb/gal)----->	4.0 fl oz/A

Broadleaf Herbicide	Green Foxtail Foxtail Millets Volunteer Corn
	Tiller® EC Herbicide Rate 1.2 pt/A
Express 600F----->	0.17 oz/A
Harmony Extra 75 DF----->	0.30 oz/A
Amber 750F----->	0.28 oz/A
Ally----->	0.10 oz/A

Broadleaf Herbicide	Yellow Foxtail Wild & Volunteer Proso Millets
	Tiller® EC Herbicide Rate 1.2 pt/A
MCPA Ester (4 lb/gal)----->	0.5 pt/A
Stinger----->	0.25 - 0.33 pt/A
Tordon 22K----->	1.0 - 1.5 fl oz/A
Banvel (4 lb/gal)----->	2.0 fl oz/A
Banvel SGF (2 lb/gal)----->	4.0 fl oz/A

Broadleaf Herbicide	Wild Oats Blackgrass Barnyardgrass
	Tiller® EC Herbicide Rate 1.7 pt/A
Buctril 2EC----->	0.75 - 1 pt/A
Stinger----->	0.25 - 0.33 pt/A
Tordon 22K----->	1.0 - 1.5 fl oz/A

NOTE: When tank mixing Tiller® EC Herbicide with the recommended herbicides above, do not exceed the rate shown for each tank mix partner, as reduced annual grass control will occur.

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For Wild Oats and Blackgrass in Winter Wheat**IN THE STATES OF WASHINGTON, OREGON AND NORTHERN IDAHO ONLY.**

In winter wheat only, the following broadleaf herbicides may be tank mixed with Tiller® EC Herbicide when the target grassy weeds are wild oats and/or blackgrass:

Buctril 2EC at a maximum of 1 pint of product per acre.

Harmony Extra 75DF at a maximum of 0.33 oz. product per acre.

Buctril 2EC + Harmony Extra 75DF at a maximum of 1 pt/A + 0.33 oz./A.

SPRAY EQUIPMENT CLEANING

Tiller® EC Herbicide contains the herbicides 2,4-D and MCPA as two of the active ingredients. Therefore, spray equipment used in applying this product should be thoroughly cleaned before using for any other purposes. Use repeated flushings with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides.

SPECIAL NOTES

1. Do not apply to durum wheat, rye, tame oats or corn.
2. Rainfall within 1 hour of an application may cause a reduction in weed control.
3. DO NOT apply more than 1 application in a growing season; DO NOT apply more than 1.7 pints per acre per growing season.
4. DO NOT apply Tiller® EC Herbicide within 70 days of harvest.
5. DO NOT apply this product through any irrigation system.
6. DO NOT apply this product around houses, recreation sites, or similar areas.
7. DO NOT apply any pesticides other than those listed on this label within 5 days of a Tiller® EC Herbicide application as reduced grassy weed control may occur.

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8. DO NOT tank mix Tiller® EC Herbicide with other herbicides, surfactants or liquid fertilizers unless specifically recommended on the Tiller® EC Herbicide Label.
9. Tiller® EC Herbicide contains the herbicides 2,4-D and MCPA as two of the active ingredients. Therefore, this product may kill or seriously injure many desirable forms of vegetation. Do not apply directly to flowers, fruits, vegetables, grapes, ornamentals, cotton, or other desirable plants. Do not use when there is hazard from drifting mists. (Coarse sprays are less likely to drift.) vapors from this product may injure susceptible plants in the immediate vicinity.
10. Tiller® EC Herbicide contains the herbicides 2,4-D and MCPA as two of the active ingredients. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth.
11. Cool, wet conditions at the time of application may result in temporary yellowing and/or height reduction of the wheat.
12. Tiller® EC Herbicide can be applied to the following soft white spring wheat varieties: Wakanz, Waverly, Sprite and Centennial.
13. Tiller® EC Herbicide can be used on all winter wheat varieties and Hard red spring wheat varieties except NK 751.

 Ally 60DF, Express 60DF, and Harmony Extra 75DF are registered trademarks of E.I. duPont de Nemours & Co., Inc.

Banvel Herbicide is a registered trademark of Sandoz Ltd.

Buctril 2EC and Sevin XLR PLUS are registered trademarks of Rhone-Poulenc Ag Company.

Stinger and Tordon 22K are registered trademarks of DowElanco.

Furadan 4F is a registered trademark of FMC Corporation.

Amber 75DF is a registered trademark of CIBA-GEIGY Corporation.

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