

SEP 27 1991

Mr. Victor A. Dorr
 Hoechst Celanese Corporation
 Route 202-205, P.O. Box 2500
 Somerville, NJ 08876-1258
 Fenoxaprop-ethyl technical, EPA Registration No. 8340-43

Dear Mr. Dorr:

Re: Application for Registration for Fenoxaprop-ethyl technical

Subject: Tiller[®] Herbicide
 EPA Registration No. 8340-38
 1. Application To Amend Registration Dated September 18, 1991
 To Add the Brand Name "Tiller[®] EC Herbicide" and To Formulate
 with A New Technical Fenoxaprop-ethyl Containing 85:15 to 1
 Racemic Isomers

The following proposed brand name is acceptable and has
 been added to the records of this product registration:
 "Tiller[®] EC Herbicide"

The requests to amend the subject EPA pesticide product
 registration to allow its formulation with a new technical
 fenoxaprop-ethyl that contains 85:15 (d to l) racemic isomers
 of this active ingredient is acceptable under the Federal
 Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended
 provided that you:

1. Submit required data as described as the basis of conditional
 registration of Fenoxaprop-ethyl Technical (EPA Registration
 No. 8340-43). A copy of these conditions is attached.
2. Submit five (5) printed copies of the final printed
 labeling 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 consti-
 tutes acceptance of these conditions. A stamped copy of the
 labeling is enclosed for your records.

Sincerely yours,

Joanne I. Miller
 Product Manager (23)
 Fungicide-Herbicide Branch
 Registration Division (H7505C)

Attachment (1)
 Enclosure

Ewilson;diskette #10001a;09-27-91

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Mr. Victor H. Long
 National Inland Corporation

Second Page of Notice of Pesticide Registration
 Intervenor, No. 000-1230

Penoxaprop-Ethyl Technical, EPA Registration No. 8340-43

Letter No. 000-1230

Required Data and Deadlines for Submission of the Data:

Subject: **Penoxaprop-Ethyl**

EPA Registration No. 8340-43

Due Dates

- 08-15-92** 1. **Mouse Oncogenicity Study, EPA Ref. Guidelines 83-2,**
 to include data from "Tier II" of the study.
- 09-26-92** 2. **Acute LC50 Estuarine and Marine Organisms Study, EPA Ref. Guidelines 72-3,**
 & 96-hour LC50 for a shrimp species,
- 06-26-92** 3. **Tier II Aquatic Plant Growth Study, EPA Ref. Guidelines 123-3,**
 to include data from "Tier II" of the study.
- 09-26-92** 4. **Leaching and Adsorption/Desorption, EPA Ref. Guidelines 163-1,**
- 12-26-93** 5. **Dissipation Study - Field Soil, EPA Ref. Guidelines 164-1,**
- 12-26-93** 6. **Dissipation Study - Field Aquatic (sediment), EPA Ref. Guidelines 164-2,**
- 12-26-94** 7. **Accumulation Studies, Rotational Crops, Irrigated Crops, EPA Ref. Guidelines 165-3,**
- Reserved** 8. **Tier III: a Terrestrial field, EPA Ref. Guidelines 124-1**
 & Aquatic field, EPA Ref. Guidelines 124-2,
- Reserved** 9. **Anaerobic Aquatic Metabolism, EPA Ref. Guidelines 162-2,**
- Reserved** 10. **Aerobic Aquatic Metabolism, EPA Ref. Guidelines 162-4,**
- Reserved** 11. **Accumulation in Confined Rotational Crops, EPA Ref. Guidelines 165-1,**
- Reserved** 12. **Accumulation in Fish, EPA Ref. Guidelines 165-4.**

* Data may be requested if determined that it is needed to support the perception that this chemical is environmentally safe.

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[Container Label -- 3 Pages]

Revised September 26, 1991

TILLER[®] EC HERBICIDE

ACTIVE INGREDIENTS:

fenoxaprop-ethyl: (±)-ethyl 2-[4-[(6-chloro-2-benzoxazolyl)
oxy]phenoxy]propanoate 5.08%*

2,4-D, isooctylester: 2-ethylhexyl-2,4-
dichlorophenoxyacetate 10.81%**

(Equivalent to 6.74% of pure
2,4-dichlorophenoxyacetic acid equivalent)

MCPA, isooctylester: Isooctyl 2-methyl-
4-chlorophenoxyacetate 33.87%***

(Equivalent to 20.20% of pure
2-methyl-4-chlorophenoxyacetic acid equivalent)

INERT INGREDIENTS: 50.24%
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

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

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

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EPA EST. NO. 8340-CN-01

NET CONTENTS:

ACCEPTED
with COMMENT EPA Reg. No. 8340-38
in EPA Letter Dated:
SEP 27 1991

Hoechst Celanese

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
8340-38

Hoechst Celanese Corporation
Route 202-206
PO Box 2500
Somerville, NJ 08876-1258

Hoechst 

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

Causes substantial but temporary eye injury. Do not get in eyes. Avoid contact with skin. When handling this product, mixers/loaders or applicators are required to use face shields or goggles and wear chemical-resistant gloves (such as neoprene or PVC). Harmful if swallowed, absorbed through skin or inhaled. Do not take internally. Avoid inhalation of vapor or spray mist. Remove contaminated clothing and wash before reuse. May cause allergic skin reactions. In case of skin contact, wash skin with soap and water. Get medical attention if irritation persists.

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.

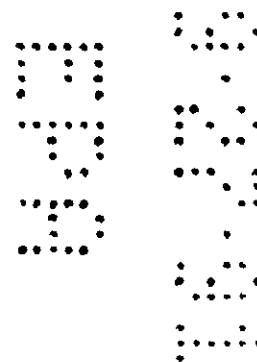
GROUNDWATER CONTAMINATION

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.

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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. For emergency assistance, call (908) 231-4125.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Keep container tightly closed when not in use. Do not store near other pesticides or seeds.

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.

IMPORTANT NOTICE: DISCLAIMER

Read "Important Notice: Disclaimer" before buying or using. If terms are not acceptable, return at once unopened. 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. HOECHST CELANESE CORPORATION and user assumes the risk of any such use. HOECHST CELANESE CORPORATION MAKES NO OTHER WARRANTY, EXPRESSED 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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Revised September 16, 1991

TILLER™ EC HERBICIDE

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, barnyard-grass, 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 weather conditions favor drift. Spray drift can be lessened by keeping the spray boom as low as possible, by applying 10 gallons or more of spray per acre, by using no more than 40 pounds spraying pressure with flat fan nozzle tips, by spraying when wind velocity is low, and by stopping all spraying when wind exceeds 6 to 7 miles per hour. Do not apply with hollow cone-type or other nozzles that produce a fine droplet spray. Under dense weed/crop canopies, increased spray volume is very important for obtaining thorough coverage; therefore, use higher spray volume under these conditions.

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.

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TIMING OF APPLICATION

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 will control susceptible grassy weeds in the 2-leaf to 2-tiller stage of growth. Blackgrass can be controlled over a wide range of growth stages, from the 2-leaf through the advanced tillering stage. Wild oats should not exceed six inches in height when sprayed. For optimum control, Tiller EC Herbicide should be applied only to light-to-moderate populations of wild oats; up to 10 - 20 plants per square foot. Early control is essential with higher wild oat populations. Annual broadleaf weeds must not exceed 4 inches in height. Applications should be made to young, vigorously growing weeds.

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			
<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	(<u>Panicum miliaceum</u>)		
(volunteer, wild)			
<u>Broadleaf Weeds</u>			
Common Lambsquarters	(<u>Chenopodium album</u>)		
Wild Mustard	(<u>Sinapis arvensis</u>)		
<u>Grass Species</u>			
Barnyardgrass	(<u>Echinochloa-crusgalli</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 (Jim 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.

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Moisture Effects on Annual Grassy Weed Control

The following conditions will result in optimum wild oat control:

1. Adequate soil moisture which occurs under normal rainfall or in wheat following a fallow year.
2. Temperatures generally lower than 85°F for several days prior to application.

Low soil moisture levels, low humidity and high temperatures will all interact to reduce the wild oat control by Tiller EC Herbicide.

Foxtail (pigeongrass) can be well controlled over a wide range of soil moisture conditions. Foxtail under drought stress exhibits rolled leaves ("onion leaf") and should not be sprayed as poor control may result.

Broadleaf Herbicide Tank Mix CombinationsFor Foxtail and Foxtail Millets

In fields where foxtails and foxtail millets are the dominant grassy weed species, additional broadleaf weed control can be achieved by tank mixing Tiller EC Herbicide with the following herbicides. No rate change is necessary when tank mixing Tiller EC Herbicide with these products. The addition of Buctril 2EC Herbicide to Tiller EC Herbicide may cause temporary yellowing and/or a reduction in wheat height.

Ally 60DF**.....	at a maximum of one-tenth (0.1) ounce of product per acre
Banvel (4 lb/gal)...	at two (2) fluid ounces of product per acre
Banvel SGF (2 lb/gal)...	at four (4) fluid ounces of product per acre
Buctril 2EC*.....	at a maximum of one (1) pint of product per acre
Express 60DF**.....	at a maximum of seventeen-hundredths (0.17) ounce of product per acre
Harmony 75 DF*.....	at a maximum of one-third (0.33) ounce of product per acre
Harmony Extra 75DF**...	at a maximum of three-tenths (0.3) ounce of product per acre
MCPA ester (4 lb/gal)...	at a maximum of one-half (0.5) pint of product per acre
Stinger.....	at one-quarter to one-third (0.25 - 0.33) pint of product per acre
Tordon 22K.....	at one - one and one-half (1.0 - 1.5) fluid ounces of product per acre

For green foxtail and foxtail millets only. DO NOT use the broadleaf herbicides identified with an asterisk () when yellow foxtail and wild oats are to be controlled.

**For green foxtail and foxtail millets only. Use Tiller EC Herbicide at a minimum of 1.2 pints per acre. DO NOT use Harmony Extra, Express, or Ally when yellow foxtail and/or wild oats are to be controlled.

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For Wild Oats and Barnyardgrass in Spring Wheat

In fields where wild oats and/or barnyardgrass are the dominant grassy weed species, additional broadleaf weed control can be achieved by tank mixing Tiller EC Herbicide with the following herbicides.

Stinger.....at a maximum of one-third (0.33) pint of product
per acre
Tordon 22K.....at one - one and one-half (1.0 - 1.5) fluid
ounces per acre

For Wild Oats and Blackgrass in Winter Wheat

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 one (1) pint of product per acre
Harmony Extra 75DF.....at a maximum of one-third (0.33) ounce of product
per acre

SPECIAL NOTES

1. Do not apply to durum, barley, rye, or tame oats.
2. Rainfall within one (1) hour of an application may cause a reduction in weed control.
3. DO NOT apply more than one (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 this product aerially.
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.

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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.

Ally 60DF, Express 60DF, Harmony 75DF, 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 is a registered trademark of Rhone Poulenc, Inc.

Stinger and Tordon 22K are registered trademarks of Dow Chemical Company.

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