

PM 23

8340-20

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12 NOV 1993

Bert Volger, Ph.D.
Hoechst Celanese Corporation
Route 202-206 North
PO Box 2500
Somerville, NJ 08876-1258

Dear Dr. Volger:

Subject: Hoelon[®] 3 EC Herbicide
EPA Registration No. 8340-20
Application Dated October 17, 1993 Requesting
Amendments: Deleting Tank Mix with Harmony, Change
in Use Directions, Worker Protection Standard
Labeling

The proposed amendments referred to above, submitted in connection with registration under section 3 of the Federal Insecticide, Fungicide and Rodenticide Act as amended are acceptable provided that you:

1. Revise the subject labeling by deleting the statement "Due to eye irritation" and replacing that statement with the statement: "Due To Oncogenicity* in Laboratory Mice". Add an asterisk to the oncogenicity statement that is now under "Engineering Control Statement".
2. Revise the Precautionary Statements by replacing the eye precaution with the statement: "Corrosive. Causes irreversible eye damage".
3. Submit five (5) printed copies of your final printed labeling before you release the product for shipment.

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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 this condition.

Based on the dermal sensitization study with the technical active ingredient, identified by EPA 414760-03; this product may be a potential dermal sensitizier. Either amend the subject labeling by adding the Precautionary Statement: "Prolonged or frequently repeated skin contact with this material may cause allergic reactions in some individuals"; or submit an adequate Dermal Sensitization Study (EPA Guidelines Reference No. 81-6) for this product. The study must be submitted within the time frame specified in PR Notice 85-5, 9 months from the date of this letter. This data gap must be addressed prior to any further substantive amendment to this registration.

Sincerely yours,

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

Enclosure

Ewilson:diskette#10001a:11-09-93

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ACCEPTED
with COMMENTS
In EPA Letter Dated
12 NOV 1993

Under the Federal Insecticide,
Fungicide and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
8340-20

Revised: November 3, 1993
(Edition No. 2)

**RESTRICTED USE PESTICIDE
DUE TO EYE IRRITATION**
For retail sale to and use only by Certified
Applicators or persons under their direct
supervision and only for those uses covered
by the Certified Applicator's certification.

HOELON® 3EC HERBICIDE

For Control of Wild Oats and Other Annual Grasses in Wheat
(Including Durum Wheat) and Barley

Active Ingredient*	
diclofop-methyl:methyl 2- [4-(2,4-dichlorophenoxy)phenoxy]propanoate.....	35.49%
Inert Ingredients.....	<u>64.51%</u>
TOTAL	100.00%

* Equivalent to 3.0 pounds of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

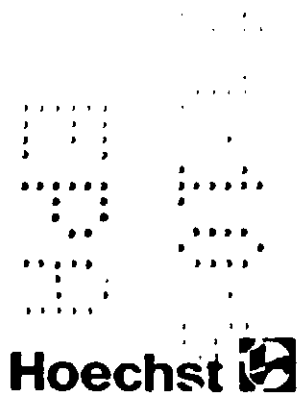
DANGER PELIGRO

Si Usted no entiende la etiqueta, busque a alguien para que se la
explique a Usted en detalle. (If you do not understand the label,
find someone to explain it to you in detail.)

EPA Reg. No. 8340-20

NET CONTENTS:

HOECHST CELANESE CORPORATION
Route 202-206
P.O. Box 2500
Somerville, NJ 08876-1258



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PRECAUTIONARY STATEMENTS

**KEEP OUT OF REACH OF CHILDREN
DANGER**

Hazards to Humans and Domestic Animals

Causes eye and skin damage. Do not get in eyes or on skin or clothing. Avoid contact or inhalation of spray mist. Do not take internally.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

Coveralls over long-sleeved shirt and long pants; chemical-resistant gloves, such as barrier laminate or butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or viton ≥ 14 mils; chemical-resistant footwear plus socks; protective eyewear; chemical-resistant headgear for overhead exposure; chemical-resistant apron when cleaning equipment, mixing or loading; for exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), for exposures outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering control statement:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

The Environmental Protection Agency has concluded that dichloro-methyl, the active ingredient in this product, produced tumors in laboratory mice. This effect was not observed in other species tested. The user must read and follow all precautionary statements on this label. Give particular attention to protective clothing requirements.

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User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is toxic to fish. Use with care when applying in areas adjacent to any body of water. Keep out of lakes, streams, ponds, drainage basins, tidal marshes and estuaries. 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 runoff or drift. Avoid direct application or drift of spray material to water surfaces. Do not apply within 100 feet of an aquatic habitat. Do not contaminate arable land and/or water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Do not use or store near heat or open flame.

Do not store below 20°F.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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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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DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at the time of the application. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls over long-sleeved shirt and long pants; chemical-resistant gloves, such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils or viton ≥ 14 mils; chemical-resistant footwear plus socks; protective eyewear

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GENERAL INFORMATION

Hoelon® 3EC Herbicide is a highly effective herbicide for the control of a broad spectrum of annual grassy weeds in wheat (including durum wheat) and barley. Hoelon 3EC Herbicide is a three pound active ingredient per gallon emulsifiable concentrate. Depending on the crop and the grass species being controlled, Hoelon 3EC Herbicide may be applied preplant incorporated (to wheat only), preemergence, or postemergence. Read and carefully follow all label directions specified in this labeling.

APPLICATION EQUIPMENT NOTES

Ground

Whether applying Hoelon 3EC Herbicide preplant incorporated, pre-emergence, or postemergence, thorough uniform coverage of the soil or target weeds is critical to achieving satisfactory results. The use of flat fan nozzles, spaced 10 or 20 inches apart across the boom is recommended for optimum coverage with ground equipment. Ground applications should be in at least 10 gallons of water carrier per acre, using a minimum of 40 PSI. Ground speed for application should not exceed 10 mph.

Aerial

Aerial applications must be applied in at least 5 gallons of water carrier per acre. Use spray nozzle tips and sufficient pressure to provide a uniform pattern and a median droplet size of 200-350 microns. DO NOT wide swath the application; Hoelon 3EC Herbicide is a contact material when used postemergence and highly immobile in the soil when applied preplant incorporated or preemergence. DO NOT make aerial applications when wind is above 8 mph or within 100 feet of a lake, stream, drainage basin, tidal marsh or estuary.

Only clean water, free of suspended matter or other contaminants, should be used when applying Hoelon 3EC Herbicide.

Use Precautions

1. Hoelon 3EC Herbicide does not control broadleaf weeds or perennial grassy weeds.
2. DO NOT allow livestock to graze treated fields. DO NOT harvest forage, hay or straw from treated fields prior to grain harvest.
3. DO NOT apply more than 1 application of Hoelon 3EC Herbicide per growing season to wheat or barley.
4. Hoelon 3EC Herbicide can be tank mixed with the broadleaf herbicides listed on this label for broad spectrum weed control.

5. Applications of MCPA (ester) herbicide may be applied at a rate of 1.5 ounces per acre as a tank mix with Hoelon 3EC Herbicide and Buctril® Herbicide. DO NOT apply any other phenoxy, phenoxy-type, or Banvel® Herbicide within 5 days of a Hoelon 3EC Herbicide application, or reduced grassy weed control will occur.
6. DO NOT apply Hoelon 3EC Herbicide through any type of irrigation system.
7. When controlling mixed infestations of grassy weeds, always use the rate that will control the least susceptible species.
8. In-furrow application of organophosphate type insecticides prior to Hoelon 3EC Herbicide application may result in crop injury.

INFORMATION ON HERBICIDE RESISTANT WEEDS

Repeated use of the same herbicide or related herbicides may result in rare, naturally resistant weeds multiplying to economic infestations. In areas with consistent use of the same herbicide or herbicide mode of action, crop rotation and application of alternative mode of action herbicides are encouraged to prevent and/or reduce weed resistance. For further information, contact a Hoechst-Roussel Agri-Vet Company representative or your local state extension service.

DIRECTIONS FOR THE PREPLANT INCORPORATED USE OF HOELON 3EC HERBICIDE ON WINTER WHEAT

This product is registered for the preplant incorporated use to control Downy Brome, Ripgut Brome, Japanese brome, Windgrass and Bulbous Bluegrass in the states of:

Colorado	Nebraska
Idaho	Oregon
Kansas	South Dakota
Montana	Utah
Washington	

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(The general information section must also be read for complete use instructions).

Application Rate Information

The use rate of Hoelon 3EC Herbicide to control Downy Brome (Bromus tectorum), Ripgut Brome (Bromus rigidus), Japanese Brome (Bromus japonicus), Windgrass (Apera interrupta), and Bulbous Bluegrass (Poa bulbosa) will vary, depending on soil texture, soil organic matter content, soil moisture, and density of grass populations.

HOELON 3EC HERBICIDE APPLICATION RATES

Broadcast Rate in Pints/A		
% Organic Matter 1/2 - 2%	% Organic Matter 2 - 3%	% Organic Matter >3%
2 - 2 2/3	2 2/3	*

Use the highest recommended rate, according to the chart above, when heavy populations of annual grass (more than 25 plants per square foot) are anticipated (based on field history) and/or if soils are dry at the time of application.

* On soils with greater than 3% organic matter, the 2 2/3 pints rate may provide only suppression of the grassy weeds listed on the preplant incorporated section of this label.

Incorporation Directions

Hoelon 3EC Herbicide is highly immobile on the soil and must be mechanically incorporated into the annual grass germination zone to help insure satisfactory control. Incorporate Hoelon 3EC Herbicide into the soil to a maximum depth of 2 inches (do not set incorporation equipment to cut more than 4 inches deep). Incorporate one time within 48 hours after application, followed by a second incorporation, in a different direction from the first, prior to seeding.

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Incorporation Equipment

If the seedbed is free of trash and clods at the time of application, the use of a spiketooth, springtooth or flexline harrow, operated at 3-6 mph, is recommended. If the seedbed is trashy at the time of application, use an implement that is capable of incorporating the trash in the top 2 inches of the soil. A skew treader operated at 4-6 mph is recommended. Chisel plows may be used for first pass incorporation only. Operate at a 3-4 inch depth at 4-6 mph. A chisel plow is defined as having 3 rows of up to 18 inch sweeps on no greater than 12 inch centers. Sweeps should be staggered so that no soil is left unturned. Field cultivators should be set to cut 3-4 inches deep and operated at a speed of at least 5 mph. A field cultivator used to incorporate Hoelon 3EC Herbicide should have 3-4 rows of sweeps with "C" or "S" shaped shanks, spaced 7 inches or less and staggered so that no soil is left unturned. Conventional, deep furrow, or semi-deep furrow drills may be used for seeding.

Preplant Incorporated Special Notes

1. DO NOT apply Hoelon 3EC Herbicide preplant incorporated to barley, as barley damage will occur.
2. Hoelon 3EC Herbicide may be tank mixed with liquid fertilizers. Follow label recommendations concerning rates and incorporation. Before mixing Hoelon 3EC Herbicide with fertilizer, perform a compatibility test in a quart jar. If the materials do not readily mix, do not tank mix Hoelon 3EC Herbicide with the fertilizer.

DIRECTIONS FOR THE PREEMERGENCE USE OF HOELON® 3EC HERBICIDE ON WINTER WHEAT

This product is registered for preemergence use on winter wheat to control annual ryegrass in the states of:

- | | | |
|-----------|----------------|---------------|
| Alabama | Maryland | Tennessee |
| Arkansas | Mississippi | Texas |
| Delaware | Missouri | Virginia |
| Georgia | North Carolina | Washington |
| Indiana | Oklahoma | West Virginia |
| Kentucky | Oregon | |
| Louisiana | South Carolina | |

(The General Information section must also be read for complete use instructions.)

HOELON 3EC HERBICIDE APPLICATION RATES

Soil Texture	Broadcast Rate in Pints/A	
	% Organic Matter 1/2 - 2%	% Organic Matter >2%
Coarse (Sandy Loam, Loamy Sand)	2	2 2/3
Fine (Loam, Silt Loam, Silt)	2 2/3	2 2/3

Use the 2 2/3 pints/acre rate of Hoelon 3EC Herbicide in fields that have a history of heavy annual ryegrass pressure. If rainfall does not occur within 7 days after application, reduced control may occur.

Preemergence Special Instructions

1. DO NOT apply Hoelon 3EC Herbicide preemergence to barley as barley damage will occur.
2. Hoelon 3EC Herbicide may be mixed with liquid fertilizers when making preemergence applications. Follow label recommendations concerning Hoelon 3EC Herbicide rates. Before tank mixing Hoelon 3EC Herbicide with fertilizer, perform a compatibility test in a quart jar. If the materials do not readily mix, do not tank mix Hoelon 3EC Herbicide with the fertilizer.
3. Hoelon 3EC Herbicide applied preemergence surface will not provide adequate brome control or control wild oats.

DIRECTIONS FOR THE POSTEMERGENCE USE OF HOELON® 3EC HERBICIDE ON WINTER WHEAT, SPRING WHEAT (INCLUDING DURUM WHEAT)

This product is registered for postemergence use on wheat (including durum wheat) in the following states:

- | | | |
|-----------|----------------|----------------|
| Alabama | Maryland | Oregon |
| Arizona | Minnesota | South Carolina |
| Arkansas | Mississippi | South Dakota |
| Colorado | Missouri | Tennessee |
| Delaware | Montana | Texas |
| Georgia | Nebraska | Utah |
| Idaho | Nevada | Virginia |
| Indiana | New Mexico | Washington |
| Kansas | North Carolina | West Virginia |
| Kentucky | North Dakota | Wyoming |
| Louisiana | Oklahoma | |

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(The General Information section must also be read for complete use instructions.)

Apply Hoelon 3EC Herbicide as a broadcast postemergence spray at the rates listed below:

Amount of Hoelon 3EC Herbicide Per Acre (Pint) ¹ Relative to Growth State of Annual Grassy Weeds			
Susceptible Annual Grassy Weeds	1-3 Leaf	3-4 Leaf	5 Leaf - 2 Tillers
Annual Ryegrass (Italian) ² (<u>Lolium multiflorum</u>)	1 1/3	1 1/3-2	2-2 2/3
Broadleaf Signalgrass (Suppression) (<u>Brachiaria platyphylla</u>)	2 2/3	DO NOT APPLY REDUCED GRASSY WEED CONTROL WILL OCCUR	
Crabgrass ³ (<u>Digitaria sanguinalis</u>)	2 2/3		
Persian Darnel (<u>Lolium persicum</u>)	2 2/3		
Fall Panicum (<u>Panicum dichotomiflorum</u>)			DO NOT APPLY
Barnyardgrass (watergrass) (<u>Echinochloa crusgalli</u>)			REDUCED GRASSY WEED CONTROL WILL OCCUR
Giant Foxtail (<u>Setaria faberii</u>)			
Green Foxtail (pigeongrass) (<u>Setaria viridis</u>)	2 to	2 2/3	
Yellow Foxtail (pigeongrass) ³ (<u>Setaria lutescens</u>)	2 2/3		
Wild Oat (<u>Avena fatua</u>)			
Itchgrass (Raoulgrass) (<u>Rottboellia exaltata</u>)			
Volunteer Corn (<u>Zea mays</u>)			
Witchgrass (Suppression) (<u>Panicum capillare</u>)			
Smallseed Canarygrass (Suppression) ⁴ (<u>Phalaris minor</u>)			
Spring Milletgrass (<u>Millium vernale</u>)			
Hooded Canarygrass ⁴ (<u>Phalaris paradoxa</u>)			

¹When controlling mixed populations of grassy weeds, always use the rate that will control the least susceptible species.

²Annual ryegrass may also be controlled preemergence in winter wheat. See appropriate recommendation section in this labeling.

³For best control of crabgrass and yellow foxtail, application should be made before the second leaf fully emerges.

⁴See specific control recommendations for smallseed and hooded canarygrass in this section of the labeling.

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Postemergence Special Instructions

When using Hoelon 3EC Herbicide postemergence in wheat to control annual grassy weed(s), and the weeds do not include annual ryegrass, broadleaf signalgrass, crabgrass, Persian darnel or yellow foxtail, apply the 2 pints per acre rate when the annual grassy weeds are in the 1-3 leaf stage of growth, and growing conditions are optimal. In the north central region of the United States (east of the Rocky Mountains) in spring wheat and durum under normal growing conditions, the 1-3 leaf stage of wild oat plants generally occurs 16-26 days after planting. In the northwest region of the United States in spring wheat and durum (west of the Rocky Mountains) under normal growing conditions the 1-3 leaf stage of wild oat plants generally occurs 18-28 days after planting. In either region, under normal growing conditions, wild oat plants will add an additional leaf every 4 days. In either region, begin checking your fields 10-12 days after planting to assure correct application timing. Higher application water volumes and use rates of Hoelon 3EC Herbicide should be used when the majority of annual grassy weeds are not clearly in the specified stage of growth, if growth is retarded due to adverse growing conditions, or under heavy weed infestations. Apply Hoelon 3EC Herbicide before the first node (jointing) develops in the wheat plant.

Crop Oil Concentrate

In spring wheat (including durum wheat) and winter wheat, it may be helpful to add 1 pint to 1 quart of crop oil concentrate per acre approved for use on growing crops. Use a crop oil concentrate containing a blend of 80 percent (minimum) petroleum or vegetable base oil and the remaining composed of a tolerance-exempt surfactant. Do not use crop oil concentrate with Hoelon 3EC Herbicide in winter wheat when conditions are cool and wet. Some slight wheat yellowing may be noted when crop oil concentrates are added to Hoelon 3EC Herbicide.

Fungicide Tank Mixes - For Postemergence Applications in Wheat

Hoelon 3EC Herbicide can be tank mixed with mancozeb, Tilt®, Topsin®, Mertect® DF or Benlate® fungicides when application timing is correct for both products. All fungicides should be used in accordance with the label limitations and precautions for each product. No label dosage rates should be exceeded.

Broadleaf Tank Mixes - For Postemergence Applications in Wheat

All broadleaf herbicides should be used in accordance with the label limitations and precautions for each product. No label dosage rates should be exceeded. For best results, tank mixes should be used when growing conditions (air temperature and soil moisture) are optimum, and grasses are in the 1-3 leaf stage of growth with light to moderate infestations.

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Hoelon 3EC Herbicide + Buctril® Herbicide

Hoelon 3EC Herbicide may be tank mixed with Buctril Herbicide for broadleaf weed control in spring wheat (including durum wheat) and winter wheat. Hoelon 3EC Herbicide should be used at a rate of 2 to 2 2/3 pints per acre (depending on size of annual grasses) as specified on this label. Buctril Herbicide should be mixed at a rate of 1 to 1 1/2 pints per acre, according to the directions specified on the respective label.

Hoelon 3EC Herbicide + Buctril Herbicide + MCPA (ester) 4EC

Low rates of MCPA (ester) 4EC may be added to a tank mix of Hoelon 3EC Herbicide + Buctril Herbicide. Hoelon 3EC Herbicide should be used at a rate of 2 2/3 pints per acre. When using Buctril Herbicide, 1 pint per acre should be tank mixed with MCPA (ester) 4EC at 1 1/2 ounces per acre. MCPA (ester) 4EC rates in excess of 1 1/2 ounces per acre may reduce the grassy weed control provided by Hoelon 3EC Herbicide. No other formulations of MCPA should be substituted for the 4 pound active ingredient ester formulation.

Hoelon 3EC Herbicide + Buctril Herbicide + Glean® Herbicide - Winter Wheat Only

A three-way tank mix of Hoelon 3EC Herbicide + Buctril Herbicide + Glean Herbicide can be applied for annual ryegrass (in the Pacific Northwest only), wild oat and broadleaf weed control in winter wheat. The use rate of Hoelon 3EC Herbicide should be 2 2/3 pints per acre with a maximum of 1/4 ounce Glean Herbicide. Buctril Herbicide should be used at 1 to 1 1/2 pints per acre. This tank mixture should only be used when soil moisture is good and wild oats are in the 1-4 leaf stage. Reduced control of foxtail is likely when tank mixing with Glean Herbicide. When foxtail is the major grassy weed in the field, DO NOT tank mix Hoelon 3EC Herbicide + Glean Herbicide. Use sequential treatments. Refer to the Glean Herbicide label for crop rotation restrictions.

Hoelon 3EC Herbicide + Buctril Herbicide + Harmony Extra Herbicide - Winter Wheat Only

A three-way tank mix of Hoelon 3EC Herbicide + Buctril Herbicide + Harmony Extra Herbicide can be applied for annual ryegrass (in the Pacific Northwest only), wild oat and broadleaf weed control in winter wheat. The Hoelon 3EC Herbicide rate should be 2 2/3 pints per acre with a maximum of 0.4 ounce per acre Harmony Extra Herbicide. Buctril Herbicide should be used at 1 to 1 1/2 pints per acre. This tank mixture should only be used under good soil moisture conditions when wild oats are in the 1-4 leaf stage. Reduced control of foxtail is likely when tank mixing with Harmony Extra Herbicide. When foxtail is the major grassy weed in the field, DO NOT tank mix Hoelon 3EC Herbicide + Harmony Extra Herbicide. Use sequential treatments. Refer to the Harmony Extra Herbicide label for crop rotation restrictions.

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**HOELON 3EC Herbicide + Bucril Herbicide + Amber® Herbicide -
Winter Wheat Only**

A three-way tank mix of Hoelon 3EC Herbicide + Bucril Herbicide + Amber Herbicide can be applied for annual ryegrass (in the Pacific Northwest only), wild oat and broadleaf weed control in winter wheat. The Amber Herbicide rate should not exceed 0.28 ounce per acre when used in this tank mix. The Hoelon 3EC Herbicide rate must be 2 2/3 pints per acre. Bucril Herbicide should be used at 1 to 1 1/2 pints per acre. To utilize this tank mix, good soil moisture and wild oat in the 1-4 leaf stage are required. Reduced control of foxtail is likely when tank mixing with Amber Herbicide. When foxtail is the major grassy weed in the field, DO NOT tank mix Hoelon 3EC Herbicide + Amber Herbicide. Use sequential treatments. Refer to the Amber Herbicide label for crop rotation restrictions.

SPECIAL NOTE: DO NOT tank mix Hoelon 3EC Herbicide with any broadleaf herbicides in the states of Alabama, Delaware, Georgia, Maryland, North Carolina, South Carolina, and Virginia as reduced annual ryegrass control may occur.

Fertilizer Tank Mixes Postemergence in Wheat

Hoelon 3EC Herbicide applied postemergence in wheat may only be tank mixed with liquid nitrogen fertilizer (28-32%) if the timing for use is compatible. The concentration of liquid nitrogen fertilizer to water should not exceed 50% of the total carrier in the spray tank. When mixing with liquid nitrogen fertilizer as a partial carrier, crop burn may occur. This condition is intensified under higher temperatures (greater than 75°F daytime) and/or low soil moisture. This mixture should not be used when these environmental conditions are present.

DO NOT use less than 2.0 pints per acre Hoelon 3EC Herbicide when tank mixing with liquid nitrogen.

DO NOT tank mix Hoelon 3EC Herbicide and liquid fertilizer in the states of Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia. Reduced annual grass control may occur from this tank mix.

In all of the above-labeled tank mix options, ground applications should be made with a minimum of 10 gallons of carrier per acre, and air applications with a minimum of 5 gallons of carrier per acre. If other broadleaf herbicides are applied within 5 days, reduced grassy weed control may occur.

**DIRECTIONS FOR THE POSTEMERGENCE CONTROL OF SMALLSEED CANARYGRASS
AND WILD OAT IN WHEAT IN ARIZONA ONLY**

Apply Hoelon 3EC Herbicide as a broadcast postemergence spray at the rates listed below.

Amount of Hoelon 3EC Herbicide Per Acre (Pints) Relative to Growth Stage of Annual Grassy Weeds		
Susceptible Annual Grassy Weeds	Stage of Growth	Pints/Acre Rate
Wild Oat ¹	1-3 leaves	2-2 2/3
	4 leaves	2 2/3
Smallseed Canarygrass (Suppression) ¹	1-2 leaves	2 2/3

¹ Under dry conditions add 1 pint to 1 quart per acre of crop oil concentrate.

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DIRECTIONS FOR THE POSTEMERGENCE CONTROL OF ANNUAL RYEGRASS, WILD OAT, SMALLSEED CANARYGRASS AND HOODED CANARYGRASS IN WHEAT IN CALIFORNIA ONLY

HOELON 3EC HERBICIDE APPLICATION RATES

Grasses	Hoelon Broadcast Rate in Pints per Acre			
	1-3 Leaf ¹	4 Leaf	4-5 Leaf	5 Lf-2 Tiller
Annual Ryegrass	1 1/3	1 1/3	2	2 2/3
Wild Oats	2-2 2/3	2 2/3	DO NOT APPLY	
Hooded Canarygrass	2-2 2/3	DO NOT APPLY		DO NOT APPLY
Smallseed Canarygrass ¹	2 2/3	DO NOT APPLY		DO NOT APPLY

¹ The maximum stage of growth for smallseed canarygrass is 2 leaves.

WEATHER CONSIDERATIONS

In fall-seeded winter or spring wheat varieties, if one or a combination of the following environmental conditions are present or prolonged preceding a Hoelon 3EC Herbicide application, crop injury may occur.

- (1) COLD TEMPERATURES - if at anytime during the 72 hours (3 days) preceding a Hoelon 3EC Herbicide application the temperature drops below 35°F
- (2) MOISTURE CONDITIONS
 - A. water-logged or poorly drained fields
 - B. moisture content is at field capacity

If the above adverse environmental conditions are present, the wheat is already under severe environmental stress; do not compound the stress with chemical applications. With respect to the foregoing statement: buyer specifically assumes all risks should cold and/or wet weather conditions occur prior to or during the Hoelon 3EC Herbicide application.

If freezing temperatures are predicted within three days after application, Hoelon 3EC Herbicide use should be delayed.

NOTES

- 1. Hoelon 3EC Herbicide may only be tank mixed with Buctril® Herbicide. Follow the label limitations and precautions on each label. No label dosage rates should be exceeded.
- 2. In California, Hoelon 3EC Herbicide should be applied postemergence only to wheat.
- 3. DO NOT apply Hoelon 3EC Herbicide in Monterey, Santa Clara, Kern, Los Angeles, San Louis Obispo, and Riverside counties.

2024

DIRECTIONS FOR THE POSTEMERGENCE USE OF HOELON 3EC HERBICIDE ON BARLEY

This product is registered for postemergence use on all spring barley varieties in the following states:

Arizona	Minnesota	North Carolina	Utah
Colorado	Montana	Oklahoma	Virginia
Delaware	Nebraska	Oregon	Washington
Idaho	Nevada	South Carolina	West Virginia
Kansas	New Mexico	South Dakota	Wyoming
Maryland	North Carolina	Texas	

(The General Information section must also be read for complete use instructions.)

Apply Hoelon 3EC Herbicide as a broadcast postemergence spray at the rates listed below.

Susceptible Annual Grassy Weeds	Amount of Hoelon 3EC Herbicide Per Acre (Pints) ¹ Relative to Growth Stage of Annual Grassy Weeds			
	1-3 Leaf	4 Leaf	5 Leaf	5 Leaf- 2 Tillers
Annual Ryegrass (Italian) ² (<u>Lolium multiflorum</u>)	1 1/3	1 1/3	2	2 2/3
Broadleaf Signalgrass (Suppression) (<u>Brachiaria platyphylla</u>)	2 2/3			
Crabgrass ³ (<u>Digitaria sanguinalis</u>)	2 2/3			
Smallseed canarygrass ³ (<u>Phalaris minor</u>)	2 2/3			
Persian Darnel (<u>Lolium persicum</u>)	2 2/3			
Fall Panicum (<u>Panicum dichotomiflorum</u>)				
Barnyardgrass (watergrass) (<u>Echinochloa crus-galli</u>)				
Giant Foxtail (<u>Setaria faberii</u>)				
Green Foxtail (pigeongrass) (<u>Setaria viridis</u>)	2 to	2 2/3		DO NOT APPLY
Yellow Foxtail (pigeongrass) ³ (<u>Setaria lutescens</u>)	2 2/3			
Wild oat (<u>Avena fatua</u>)				Reduced Grassy Weed Control Will Occur
Itchgrass (Raoulgrass) (<u>Rottboellia exaltata</u>)				
Volunteer Corn (<u>Zea mays</u>)				
Witchgrass (Suppression) (<u>Panicum capillare</u>)				

¹ When controlling mixed populations of grassy weeds, always use the rate that will control the least susceptible species.
² Annual ryegrass may also be controlled preemergence in winter wheat. See appropriate recommendation section in this labeling.
³ For best control of crabgrass, smallseed canarygrass and yellow foxtail, application should be made before the second leaf fully emerges.

2/10/24

HOELON 3EC HERBICIDE RECOMMENDATIONS FOR SPRING BARLEY IN THE NORTH CENTRAL, SOUTHWEST AND WESTERN REGIONS OF THE UNITED STATES EXCEPT CALIFORNIA

When using Hoelon 3EC Herbicide to control annual grassy weeds and the weeds do not include annual ryegrass, broadleaf signalgrass, crabgrass, smallseed canarygrass or Persian darnel, apply the 2 pint per acre rate when the annual grassy weeds are in the 1-4 leaf stage of growth and growing conditions are optimal. The higher rate of 2 2/3 pints per acre and higher application water volumes should be used (see chart) when the majority of grassy weeds is not clearly in the specified stage of growth, if grassy weed infestations are high or if growth is retarded due to a lack of moisture. Thorough spray coverage is essential.

Weather Considerations

In spring-seeded barley, DO NOT apply if one or a combination of the following environmental conditions are present the day before or predicted within three days after a Hoelon 3EC Herbicide application, as crop injury may occur.

- (1) COLD TEMPERATURES - Cold (below 35°F) or freezing temperatures
- (2) MOISTURE CONDITIONS - when soils are either water-logged or poorly drained

If the above adverse environmental conditions are present, barley is already under severe environmental stress; do not compound the stress with any chemical applications. With respect to the foregoing statement: buyer specifically assumes all risks should cold and/or wet weather conditions occur prior to or after the Hoelon 3EC Herbicide application.

Broadleaf Tank Mixes for Postemergence Applications in Spring Barley

All broadleaf herbicides should be used in accordance with the label limitations and precautions for each product. No label dosage rates should be exceeded. For best results, tank mixes should be used when growing conditions (air temperature and soil moisture are optimum) and grasses are in the 1-3 leaf stage of growth with light to moderate infestations (less than 25 wild oat plants per square foot).

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Hoelon 3EC Herbicide + Bucril Herbicide

Hoelon 3EC Herbicide may be tank mixed with Bucril Herbicide for broadleaf weed control in spring barley. Hoelon 3EC Herbicide should be used at a rate of 2 to 2 2/3 pints per acre (depending on the size of the annual grasses, environmental conditions, and density of grass populations) as specified on this label. Bucril Herbicide should be mixed at a rate of 1 to 1 1/2 pints per acre, according to the directions specified on the respective label.

Hoelon 3EC Herbicide + Bucril Herbicide + MCPA (ester) 4EC

Low rates of MCPA (ester) 4EC may be added to a tank mix of Hoelon 3EC Herbicide + Bucril Herbicide. Hoelon 3EC Herbicide should be used at a rate of 2 2/3 pints per acre. When using Bucril Herbicide, 1 pint per acre should be tank mixed with MCPA (ester) 4EC at 1 1/2 oz. per acre. MCPA (ester) 4EC rates in excess of 1 1/2 oz. per acre may reduce the grassy weed control provided by Hoelon 3EC Herbicide. No other formulations of MCPA should be substituted for the 4 pound active ingredient ester formulation.

Special Notes for Spring Barley

- 1) DO NOT tank mix Hoelon 3EC Herbicide with Glean Herbicide.
- 2) DO NOT tank mix Hoelon 3EC Herbicide with crop oil concentrate.
- 3) DO NOT tank mix Hoelon 3EC Herbicide with liquid fertilizers.
- 4) Hoelon 3EC Herbicide is registered for use on all varieties of spring-seeded barley.
- 5) Hoelon 3EC Herbicide should be applied to 1-4 leaf barley. Applications made to tillered barley during cold temperatures and/or wet soil conditions may result in crop damage.
- 6) DO NOT apply preemergence to barley.

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HOELON 3EC HERBICIDE RECOMMENDATIONS FOR WINTER BARLEY IN THE MIDATLANTIC AND SOUTHEAST REGIONS OF THE UNITED STATES

When using Hoelon 3EC Herbicide to control annual ryegrass in fall seeded barley, use the 1 1/3 pints per acre rate when the ryegrass is in the 1-4 leaf stage of growth. The low rate of 1 1/3 pints per acre should only be used under optimum growing conditions. If the crop and annual ryegrass is under drought stress, increase the rate of Hoelon 3EC Herbicide from 2 - 2 2/3 pints per acre, depending on the severity of infestation and size of annual ryegrass. For mixed grass infestations, refer to the rate and timing chart for grasses controlled in barley.

Broadleaf Tank Mixes for Postemergence Applications in Winter Barley

See broadleaf tank mixes approved for use on spring barley.

Fertilizer Tank Mixes Postemergence in Winter Barley

DO NOT tank mix Hoelon 3EC Herbicide with liquid fertilizers in winter barley as reduced annual ryegrass control may occur.

Special Notes for Winter Barley

- 1) DO NOT tank mix Hoelon 3EC Herbicide with Glean Herbicide.
- 2) DO NOT tank mix Hoelon 3EC Herbicide with crop oil concentrate.
- 3) Use only on the following winter barley varieties: Milton, Boone, Molly Bloom, Wysor, Pennco, Nomini, Anson, Mulligan, Henry and Sussex.
- 4) Apply Hoelon 3EC Herbicide after tiller initiation but prior to jointing of the winter barley.
- 5) DO NOT apply preemergence to winter barley.

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