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45639-173

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MAY 17 1995

Bert Volger, Ph.D.  
Agrevo USA Company  
Little Falls Centre One  
2711 Centerville Road  
Wilmington, DE 19808

Dear Dr. Volger:

Subject: Hoelon<sup>®</sup> 3EC herbicide  
EPA Registration No. 45639-173  
Application Dated April 26, 1995, Request for  
Registration Amendment and Your Letter Dated  
May 8, 1995 Addressed To Mr. Thomas Luminello  
of the Special Review and Reregistration Division

The application to amend the subject pesticide product registration by adding a period to harvest interval (PHI) after last application for wheat and barley is acceptable under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, provided that you:

- o submit one (1) printed copy of the final printed label before releasing the product for shipment.

If this condition is 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.

A stamped copy of the labeling is enclosed for your records.

The comments in your letter addressed to Mr. Thomas Luminello will be addressed by the Special Review and Registration Division, of the Office of Pesticide Programs.

Sincerely yours,

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

Enclosure

19/10

CONCURRENCES

SYMBOL								
SURNAME	Wilson:Diskette #ABC#24:05-17-95							
DATE								

2910



# Specimen Label

A company of Hoechst and NOR-AM

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAY 17 1995

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

45639-173

# Hoelon®

3EC HERBICIDE

EPA Registration Number 45639-173



**RESTRICTED USE PESTICIDE**  
**DUE TO ONCOGENICITY IN LABORATORY MICE\***  
 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:** 64.51%

**TOTAL** 100.00%

\*\*Equivalent to 3.0 pounds of active ingredient per gallon.

EPA Reg. No. 45639-173

Protected by U.S. Patent No. 4,301, . . . 25

**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.)

**STATEMENT OF PRACTICAL TREATMENT**

**IN CASE OF SKIN OR EYE CONTACT:** Immediately flush with plenty of water for at least 15 minutes.

**IF SWALLOWED:** Do not induce vomiting. HOELON® 3EC 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.

**NOTE TO PHYSICIAN:** Aspiration hazard may contraindicate the use of gastric lavage.

**IN CASE OF MEDICAL EMERGENCIES OR HEALTH AND SAFETY INQUIRIES, OR IN CASE OF FIRE, LEAKING, OR DAMAGED CONTAINERS, INFORMATION MAY BE OBTAINED BY CALLING 800-228-5635, EXT. 202.**

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

Corrosive. Causes irreversible eye 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; chemi-

cal-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.

**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.

\*The Environmental Protection Agency has concluded that diclofop-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.

## 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.

## 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.

## 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 3-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, preemergence, 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 an AgrEvo USA 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, riggut brome, Japanese brome, windgrass and bulbous bluegrass in the states of:

Colorado	Montana	South Dakota
Idaho	Nebraska	Utah
Kansas	Oregon	Washington

(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*), riggut 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 1/2	*

\*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.

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.

### 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.

### 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

- DO NOT apply HOELON 3EC Herbicide preplant incorporated to barley, as barley damage will occur.
- 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

#### Broadcast Rate in Pints/A

Soil Texture	% Organic Matter	
	1/2-2%	>2%
Coarse (sandy loam, loamy sand)	2	2 1/2
Fine (loam, silt loam, silt)	2 1/2	2 1/2

Use the 2 1/2 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

- DO NOT apply HOELON 3EC Herbicide preemergence to barley as barley damage will occur.
- 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.
- 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	Idaho	Minnesota	Nevada	Oregon	Utah
Arizona	Indiana	Mississippi	New Mexico	South Carolina	Virginia
Arkansas	Kansas	Missouri	North Carolina	South Dakota	Washington
Colorado	Kentucky	Montana	North Dakota	Tennessee	West Virginia
Delaware	Louisiana	Nebraska	Oklahoma	Texas	
Georgia	Maryland				

(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) <sup>1</sup> Relative to Growth Stage of Annual Grassy Weeds		
	1-3 Leaf	3-4 Leaf	5 Leaf-2 Tillers
Annual ryegrass (Italian) <sup>2</sup> ..... <i>Lolium multiflorum</i>	1½	1½-2	2-2½
Broadleaf signalgrass (suppression) ... <i>Brachiaria platyphylla</i>	2½		
Crabgrass <sup>3</sup> ..... <i>Digitaria sanguinalis</i>	2½		
Persian darnel <sup>1</sup> ..... <i>Lolium persicum</i>	2½		
Fall panicum ..... <i>Panicum dichotomiflorum</i>			
Barnyardgrass watergrass ..... <i>Echinochloa crus-galli</i>			
Giant foxtail ..... <i>Setaria faberii</i>			
Green foxtail pigeongrass ..... <i>Setaria viridis</i>			
Yellow foxtail pigeongrass <sup>3</sup> ..... <i>Setaria lutescens</i>			
Wild oat ..... <i>Avena fatua</i>	2 to 2½	2½	
Itchgrass Raoulgrass ..... <i>Rottboellia exaltata</i>			
Volunteer corn ..... <i>Zea mays</i>			
Witchgrass (suppression) ..... <i>Panicum capillare</i>			
Smallseed canarygrass (suppression) <sup>4</sup> ..... <i>Phalaris minor</i>			
Spring milletgrass ..... <i>Millium vernalc</i>			
Hooded canarygrass <sup>4</sup> ..... <i>Phalaris paradoxa</i>			

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

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

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

<sup>4</sup> See specific control recommendations for smallseed and hooded canarygrass in that section of the labeling.

**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. Do not apply HOELON 3EC Herbicide less than 77 days before harvesting wheat.

**CROP OIL CONCENTRATE**

In spring wheat (including durum wheat) and winter wheat, it may be helpful to add 1 pint to 1 quart per acre of crop oil concentrate 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.

**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.

**HOELON 3EC HERBICIDE + BUCTRIL HERBICIDE + AMBER® HERBICIDE—WINTER WHEAT ONLY**

A three-way tank-mix of HOELON 3EC Herbicide + Buctril 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. Buctril 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 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 <sup>1</sup>	1-3 leaves	2-2 2/3
	4 leaves	2 2/3
Smallseed canarygrass (suppression) <sup>1</sup>	1-2 leaves	2 2/3

<sup>1</sup>Under dry conditions add 1 pint to 1 quart per acre of crop oil concentrate

**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	Broadcast Rate in Pints per Acre			
	1-3 Leaf <sup>1</sup>	4 Leaf	4-5 Leaf	5 Leaf - 2 Tiller
Annual ryegrass	1½	1½	2	2½
Wild oat	2-2½	2½	DO NOT APPLY	
Hooded canarygrass	2-2½	DO NOT APPLY		DO NOT APPLY

**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. In California, 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.

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

(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) <sup>1</sup> Relative to Growth Stage of Annual Grassy Weeds			
	1-3 Leaf	4 Leaf	5 Leaf	5 Leaf-2 Tillers
Annual ryegrass Italian <sup>2</sup> ..... <i>Lolium multiflorum</i>	1½	1½	2	2½
Broadleaf signalgrass suppression .... <i>Brachiaria platyphylla</i>	2½			
Crabgrass <sup>3</sup> ..... <i>Digitaria sanguinalis</i>	2½			
Persian darnel ..... <i>Lolium persicum</i>	2½			
Smallseed canarygrass ..... <i>Phalaris minor</i>	2½			
Fall panicum ..... <i>Panicum dichotomiflorum</i>				
Barnyardgrass watergrass ..... <i>Echinochloa crus-galli</i>				
Giant foxtail ..... <i>Setaria faberii</i>				
Green foxtail pigeongrass ..... <i>Setaria viridis</i>				
Yellow foxtail pigeongrass <sup>3</sup> ..... <i>Setaria lutescens</i>	2 to 2½	2½		
Wild oat ..... <i>Avena fatua</i>				
Itchgrass Raoulgrass ..... <i>Rottboellia exaltata</i>				
Volunteer corn ..... <i>Zea mays</i>				
Witchgrass suppression ..... <i>Panicum capillare</i>				

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



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### 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 pints 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 2½ 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 or freezing temperatures (below 35°F)
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).

#### HOELON 3EC HERBICIDE + BUCTRIL HERBICIDE

HOELON 3EC Herbicide may be tank-mixed with Buctril Herbicide for broadleaf weed control in spring barley. HOELON 3EC Herbicide should be used at a rate of 2 to 2½ pints per acre (depending on the size of the annual grasses, environmental conditions, and density of grass populations) as specified on this label. Buctril Herbicide should be mixed at a rate of 1 to 1½ 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 2½ pints per acre. When using Buctril Herbicide, 1 pint per acre should be tank-mixed with MCPA (ester) 4EC at 1½ ounces per acre. MCPA (ester) 4EC rates in excess of 1½ 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.

#### 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.
7. DO NOT apply less than 66 days before harvesting.

### 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 1½ pints per acre rate when the ryegrass is in the 1-4 leaf stage of growth. The low rate of 1½ 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 2-2½ 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.
6. DO NOT apply less than 66 days before harvesting.

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