

RESTRICTED USE PESTICIDE

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

NOT REVIEWED
In Accordance with FR Notice 82-2.
EPA's Labeling Rules

For Control of
Wild Oats and Other
Annual Grasses in
Wheat (Including Durum),
Barley, Lentils, Soybeans
and Acreage Conservation
Reserve (Set Aside).

Keep Out of Reach of Children.

DANGER

See Additional Precautionary
Statements at End of Label.

EPA Reg. No. 8340-20-5438 2

Active Ingredient*

Diclofop-methyl methyl 2-
[4-(2,4-dichlorophenoxy) phenoxy] propanoate

Inert Ingredients

	35.49
	64.51
TOTAL	100.00

*Equivalent to 50 pounds of active
ingredient per gallon

Marketed by
Hoechst-Roussel Agri-Vet Company
Agricultural Chemicals Unit
Somerville, N.J. 08876

Hoechst 
Roussel 

Directions for Use

This product is registered for use in the following states:

Wheat, Barley, Soybeans and Acreage Conservation Reserve

Wheat and Barley Only

Lentils

Wheat Only

Soybeans & Acreage Conservation Reserve

Wheat, Soybeans & Acreage Conservation Reserve

Delaware	Arizona	Oklahoma	Idaho	Alabama	Illinois	Missouri	Louisiana
Kansas	California	Oregon	Washington	Arkansas	Indiana	New Jersey	
Maryland	Colorado	South Carolina		Florida	Iowa	Ohio	
Minnesota	Idaho	Texas		Georgia	Kentucky	Pennsylvania	
Nebraska	Montana	Utah		Mississippi	Michigan	Wisconsin	
North Dakota	Nevada	Washington		Tennessee			
South Dakota	New Mexico	West Virginia					
Virginia	North Carolina	Wyoming					

GENERAL INFORMATION

HOELON® 3EC Herbicide is a highly selective herbicide for the control of a broad spectrum of annual grassy weeds in wheat (including durum), barley, lentils, soybeans and acreage conservation reserve. HOELON® 3EC Herbicide is a three pound active ingredient per gallon emulsifiable concentrate. For best results applications should be made when the majority of annual grassy weeds are in the one-to-three leaf stage of growth. Larger weeds, three-to-four leaves, will require a higher dosage rate. The stage of weed growth is as important as the number of weeds. In high populations, thorough uniform spray coverage of weeds is critical and use of flat fan nozzles is recommended for optimum coverage with ground equipment.

Special Notes:

1. HOELON® 3EC Herbicide does NOT control broadleaf weeds or perennial grassy weeds.
2. HOELON® 3EC Herbicide is a slow acting product, therefore, visual results will not be evident immediately following application.
3. DO NOT exceed 3 1/2 pints per acre of HOELON® 3EC Herbicide in a growing season. Do not apply beyond the specified crop growth stages.
4. DO NOT allow livestock to graze treated fields. DO NOT harvest forage, hay or straw from treated fields prior to grain harvest.

Equipment Notes

Thorough uniform spray coverage of weeds is essential. Ground applications should be in at least 10 gallons of carrier per acre using a minimum of 40 psi and use of flat fan or hollow cone nozzles is recommended. Aerial applications must be applied in at least 5 gallons of carrier per acre. Use spray nozzle tips and spraying pressures which provide a small uniform droplet size (200-350 micron range).

Do not make aerial applications when wind is above 5 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.

2 to 2½ pints per acre. Apply the 2 pint per acre rate only when the annual grassy weeds are in the 1 to 2 leaf stage of growth and growing conditions are normal. The higher rate should be used when the development of the annual grassy weeds are not clearly in the specified stages of growth or if the growth is retarded due to adverse growing conditions. Thorough uniform spray coverage of weeds is essential. Ground applications should be made in at least 10 gallons of water per acre using a minimum of 40 psi and the use of fan type or hollow cone nozzles is recommended.

Special Notes for Lentils:

1. DO NOT apply more than one application per growing season.
2. DO NOT tank mix with any broadleaf herbicides.
3. Only ground applications should be made on lentils.
4. Apply prior to the bloom stage of the lentils.

DIRECTIONS FOR THE USE OF HOELON® 3EC HERBICIDE ON SOYBEANS

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

Apply HOELON® 3EC Herbicide at the higher labeled rates when the development of the majority of grassy weeds is not clearly in the specified stages of growth or if growth is retarded due to adverse growing conditions.

Under these conditions, the addition of 1 pint to 1 quart of crop oil concentrate may result in improved weed control. Use a crop oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil with the remaining composed of a tolerance exempt surfactant.

Banded applications may be made using the following formula to calculate applications.

Band width in inches	Rate/acre	Amount needed
Row width in inches	broadcast	for treatment

Volunteer Corn and Itchgrass

Heavy infestations of volunteer corn (especially when uneven emergence is occurring from ears buried at varying soil depths) should be treated as a special weed problem. Apply after ALL of the volunteer corn has emerged but before the first emerged corn grows to a height where thorough coverage (including the whorl) is not possible. Spray boom height and pressures should be adjusted to obtain total coverage of the entire volunteer corn plant. Thorough coverage of the volunteer corn foliage and penetration of clumps is essential. Use 2 to 3½ pints of HOELON® 3EC Herbicide in 10 to 40 gallons of water per acre at not less than 40 psi.

At the lower labeled use rate, use 1 pint to 1 quart of crop oil concentrate approved for use on growing crops. Use an oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil with the remaining composed of a tolerance exempt surfactant. Spot treatments of clumps may be necessary.

For treatment of individual clumps of volunteer corn use 1½ fluid ounces per one gallon of spray/acre (3½ pints per 40 gallons). In mixed annual grassy weed/volunteer corn infestations, the delayed broadcast application of HOELON® 3EC Herbicide to control heavy infestations of volunteer corn could result in reduced control of any annual grassy weeds that have grown beyond the recommended leaf stages. Do not apply more than one application in a growing season.

For postemergence control of itchgrass, apply to emerged itchgrass before it has grown beyond 10-12 inches in height. Use 2½ pints of HOELON® 3EC Herbicide in at least 10 gallons of water per acre. Flat fan nozzles and a pressure of at least 40 pounds per square inch have proven most effective. HOELON® 3EC Herbicide may be used on a broadcast basis sprayed directly over the top of the soybeans. Complete coverage of itchgrass is essential. Delayed application to control heavy infestations of itchgrass may give reduced control of other susceptible annual grasses. HOELON® 3EC Herbicide is most effective when the grasses are actively growing. It is less effective when used under drought stress.

Special Notes:

1. DO NOT tank mix HOELON® 3EC Herbicide with any other herbicide or apply any other herbicide within one week of a HOELON® 3EC Herbicide application.
2. Banvel®, 2,4-D and other phenoxy herbicide injury sometimes occurs in soybean fields treated with HOELON® 3EC Herbicide even though these herbicides were not recently used in the sprayer. This situation is not caused by HOELON® 3EC Herbicide and is often caused by sprayer contamination. If these products have been used in your sprayer, refer to Hoechst-Roussel Agri-Vet Company Technical Bulletin No. 100, "How to Avoid Sprayer Contamination," available through your HOELON® 3EC Herbicide supplier.

DIRECTIONS FOR THE USE OF HOELON® 3EC HERBICIDE ON ACREAGE CONSERVATION RESERVE (SET-ASIDE)

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

HOELON® 3EC Herbicide may be used to control the annual grassy weeds in acreage conservation, reserve or set-aside programs. This acreage is often seeded to wheat, clover or alfalfa as a cover crop. These cover crops have excellent tolerance to HOELON® 3EC Herbicide. Use 2 pints to 3½ pints per acre when the annual grassy weeds are in the one to four leaf stage as noted in the use directions section of this labeling. In most situations, 2 pints of HOELON® 3EC Herbicide plus 2 pints of crop oil concentrate will offer commercially acceptable control of annual grasses in acreage conservation reserve programs. Apply early to young actively growing grassy weeds. DO NOT harvest or graze cover crops treated with HOELON® 3EC Herbicide. DO NOT apply to cover crops such as oats, sorghum, and sudan grass as injury may occur.

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	1-3 Leaf	3-4 Leaf	4-5 Leaf	5 Leaf— 2 Tillers	
Annual Ryegrass (Italian) (<i>Lolium multiflorum</i>) ¹	1 1/3 pints	1 1/3 pints	2 pints	2 2/3 pints	
Broadleaf Signalgrass (Suppression) (<i>Brachiaria platyphylla</i>)	2 2/3-3 1/3 pints	Do Not Apply	<div>Do Not Apply</div>		
Crabgrass (<i>Digitaria sanguinalis</i>)	2 2/3-3 1/3 pints	Do Not Apply			
Fall Panicum (<i>Panicum dichotomiflorum</i>)	<div><</div>	<div><</div>			
Barnyardgrass (watergrass) (<i>Echinochloa crusgalli</i>)					
Giant Foxtail (<i>Setaria faberii</i>)					
Green Foxtail (pigeongrass) (<i>Setaria viridis</i>)					
Persian Darnel (<i>Lolium persicum</i>)					
Wild Oats (<i>Avena fatua</i>)					
Yellow Foxtail (pigeongrass) (<i>Setaria lutescens</i>)					
Witchgrass (Suppression) (<i>Panicum capillare</i>)					
Itchgrass (Raoulgrass) (<i>Rottboellia exaltata</i>)					
Volunteer Corn (<i>Zea mays</i>)					
	2-2 2/3 pints	2 2/3-3 1/3 pints			
See specific control recommendations for Itchgrass and Volunteer Corn in this labeling					

See specific control recommendations for Itchgrass and Volunteer Corn in this labeling

¹ Annual ryegrass can also be controlled preemergence in wheat. See appropriate recommendation section in this labeling.

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

Special Notes:

For best results, application should be made when the majority of annual grassy weeds is in the one-to-four leaf stage of growth. For best control of crabgrass and yellow foxtail, application should be made before the second leaf fully emerges. The stage of weed growth is more important than the number of weeds. Thorough uniform spray coverage of weeds is essential.

Rate Range for Each Crop/Region

Registered Crops	Rate Range For Each Crop/Region	Crop Growth Stage	
		Minimum	Maximum
1. Wheat, including durum (All Regions)	1 1/3-3 1/3 pints	None	Before one node (jointing)
2. Barley (North Central, Southwest and Western Regions of U.S.)	1 1/3-2 2/3 pints	After emergence	Before one node (jointing)
3. Barley (Southeast and Midatlantic Regions of U.S.) [*]	1 1/3-2 pints	After Tiller (Stooling) Initiation	Before one node (jointing)
4. Soybeans, All registered states	2-3 1/3 pints	None	Before formation of sixth trifoliate leaf
5. Lentils	2-2 2/3 pints	After emergence	Before bloom

* HOELON 3EC Herbicide can only be used on the following varieties of barley in the Southeast and Midatlantic Regions: Boone, Milton, Henry and Sussex. Applications of this product to other varieties may result in crop damage.

Barley must be developed to tiller initiation in the Southeast and Midatlantic Regions prior to application or increased crop response may be noted.

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DIRECTIONS FOR THE USE OF HOELON® 3EC HERBICIDE ON WHEAT AND BARLEY

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

When using HOELON® 3EC Herbicide to control grassy weeds in the North Central, Southwest and Western U.S. and the grassy weed(s) do not include annual ryegrass, apply the 2 pint rate when the annual grassy weeds are in the 1-3 leaf stage of growth and growing conditions are optimal. Higher rates should be used (see chart) when the majority of the grassy weeds is not clearly in the specified stage of growth or if growth is retarded due to lack of moisture. Thorough spray coverage is essential.

Cold (lower than 40°F) and/or prolonged wet weather conditions increase the sensitivity of barley to HOELON® 3EC Herbicide, and should not be used under these adverse growing conditions.

DO NOT exceed 2½ pints per acre of HOELON® 3EC Herbicide on barley.

TANK MIXES

Broadleaf Herbicides

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 only when growing conditions (air temperature and soil moisture) are optimum, and grasses are in the 2 to 3 leaf stage of growth with light to moderate infestations.

ME 4 Brominal® or Buctril® (2EC)

HOELON® 3EC Herbicide can be tank mixed with ME 4 Brominal or Buctril (2EC) herbicide for broadleaf weed control in wheat and barley. HOELON® 3EC Herbicide should be used at the 2 to 3½ pints per acre rate as specified on the label. If ME 4 Brominal is used, it should be mixed at a rate of ¾ to 1 pint per acre according to the directions specified on the label. If Buctril (2EC) is used, it should be mixed at a rate of 1½ to 2 pints per acre as specified on the label.

ME 4 Brominal or Buctril (2EC) Plus MCPA (ester) (4EC)

Low rates of MCPA (ester) (4EC) can be added to a tank mix of HOELON® 3EC Herbicide plus ME 4 Brominal or Buctril (2EC). HOELON® 3EC Herbicide should be used at a rate of 2½ to 3½ pints per acre. If Buctril (2EC) is used, a rate of 1 pint per acre should be tank mixed with MCPA (ester) (4EC) at 1½ ounces per acre. If ME 4 Brominal is used, a rate of ½ pint per acre should be tank mixed with MCPA (ester) (4EC) at 1½ ounces per acre. MCPA rates in excess of 1½ ounces per acre may reduce the grassy weed control from HOELON® 3EC Herbicide. No other formulations of MCPA should be substituted for the 40 pound active ingredient ester formulation.

Glean® Herbicide

HOELON® 3EC Herbicide can be tank mixed with Glean for broadleaf weed control in winter wheat only. HOELON® 3EC Herbicide should be used at a rate of 2½ to 3½ pints per acre. The rate of Glean should not exceed ¼ ounce per acre rate. Refer to the Glean label for crop rotation restrictions and weed species controlled at the ¼ ounce per acre rate. Prior to the use of Glean, determine the soil pH by laboratory analysis

using a 1:1 soil water suspension. Do not use Glean on soils with a pH greater than 7.5.

In all cases, ground applications should be made with a minimum of 10 gallons of water per acre and air applications with a minimum of 5 gallons of water per acre. If other broadleaf herbicides are applied within 5 days, reduced grassy weed control may occur.

Fertilizers

HOELON® 3EC Herbicide can be tank mixed with liquid nitrogen fertilizers (e.g., 28-32%) if the timing for use is compatible. The concentration of liquid nitrogen fertilizer to water should not exceed a 1:1 ratio of total carrier in the spray tank. When mixing with liquid nitrogen fertilizers, 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. Thorough spray coverage is essential when using HOELON® 3EC Herbicide and fan-type nozzles are recommended for ground applications. Do not use less than 2 pints per acre of HOELON® 3EC Herbicide when tank mixing with liquid nitrogen fertilizers.

Crop Oil Concentrates

In spring wheat only, at the lower labeled usage rates, it may be helpful to use 1 pint to 1 quart of crop oil concentrate, approved for use on growing crops. Use a crop oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil and the remaining composed of a tolerance exempt surfactant. Some slight wheat yellowing may be noted when crop oil concentrates are added to HOELON® 3EC Herbicide. DO NOT apply crop oil concentrate or other additives with HOELON® 3EC Herbicide for use on barley.

For more detailed information on determining the low use rates in combination with crop oil concentrates, refer to the Hoechst-Roussel Agri-Vet Company Technical Bulletin No. 110, "Low Rate Technology." Contact your local dealer or Hoechst-Roussel Agri-Vet Company representative for this Technical Bulletin.

Preemergence Use to Control Annual Ryegrass in Fall Planted Wheat (Winter Wheat)

Apply HOELON® 3EC Herbicide preemergence (at planting) to wheat to control annual ryegrass. HOELON® 3EC Herbicide should be applied at a rate of 2 to 2½ pints depending upon soil type and annual ryegrass density. In coarse textured soils with less than 2% organic matter, use the 2 pint per acre rate. In fine textured soils with greater than 2% organic matter, use the 2½ pint per acre rate. In fields that have a history of heavy annual ryegrass pressures, always use the 2½ pint rate. If rainfall does not occur within seven (7) days after application, reduced control may occur.

DO NOT apply HOELON® 3EC Herbicide preemergence to barley as barley damage will occur. HOELON® 3EC Herbicide applied preemergence will not control wild oats.

DIRECTIONS FOR THE USE OF HOELON® 3EC HERBICIDE ON LENTILS

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

HOELON® 3EC Herbicide should be applied at a rate of

NOT AVAILABLE

Keep Out of Reach of Children

DANGER

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes eye and skin damage. Do not get in eyes or on skin or clothing. Wear goggles and respirator when handling. Avoid contact or inhalation of spray mist. Wash thoroughly after using and change clothing. Do not take internally.

The following protective apparel must be worn during all loading and mixing operations and when applied by ground equipment: gloves, waterproof boots, impermeable pants and shirts, goggles and a cartridge type respirator. Aerial pilots are not to be involved in the mixing and loading unless the aforementioned equipment is worn. Pilots must wear a cartridge type respirator during application unless the aircraft is equipped with an air filter system.

The Environmental Protection Agency has concluded that diclofop-methyl, the active ingredient in this product, produces 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.

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 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 aquatic habitat. Do not contaminate arable land and/or water by cleaning of equipment and/or disposal of waste.

First Aid

In case of skin or eye contact, immediately flush with plenty of water for at least 15 minutes.

If swallowed, DO NOT INDUCE VOMITING but seek medical attention immediately.

Note to Physician: Aspiration hazard may contraindicate the use of gastric lavage.

For emergency assistance call (201) 231-2244.

Storage and Disposal

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

Do not store below 20 °F

Important Notice: Disclaimer

Read "IMPORTANT NOTICE: DISCLAIMER" before buying or using. If terms are not acceptable, return at once unopened. HOECHST-ROUSSEL AGRI-VET COMPANY 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-ROUSSEL AGRI-VET COMPANY and user assumes the risk of any such use. HOECHST-ROUSSEL AGRI-VET COMPANY 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-ROUSSEL AGRI-VET COMPANY 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-ROUSSEL AGRI-VET COMPANY.

HOELON® 3EC Herbicide is a registered trademark of Hoechst AG.

ME 4 Brominal® Bromoxynil Broadleaf Herbicide is a registered trademark of Union Carbide Agricultural Products Company, Inc.

Buctril® Herbicide is a registered trademark of Rhône-Poulenc Inc., Agrochemical Division.

Glean® Herbicide is a registered trademark of E. I. DuPont de Nemours and Company, Inc.

Hoechst-Roussel Agri-Vet Company
Agricultural Chemicals Unit
Somerville, New Jersey 08876

Nov 1985 TH 8501007

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Hoelon®

3EC Herbicide

Important
Instructions
Enclosed

Marketed by
Hoechst-Roussel Agri-Vet Company
Agricultural Chemicals Unit
Somerville, NJ 08876

Hoechst
Roussel



▲ Cut or tear along perforation ▲

U.S. PAT. NO. 4,323,608
Form 6 Form
CHICAGO, IL 60646

Hoelon®

3EC Herbicide

Important
Instructions
Enclosed

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Agricultural Chemicals Unit
Somerville, NJ 08876


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NOT REVIEWED
In Accordance with FR Notice 8
See on Draft Labeling Dated

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U.S. PAT. NO. 4,323,608
 EPA Reg. No. 106-108-01
 CHICAGO, IL 60646

RESTRICTED USE PESTICIDE

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

For Control of Wild Oats and Other
Annual Grasses in Wheat (Including Durum),
Barley, Lentils, Soybeans and Acreage
Conservation Reserve (Set-Aside).

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

Keep Out of Reach of Children.

DANGER

See Additional Precautionary Statements at
End of Label

EPA Reg. No. 8340-20-54382

Directions for Use

This product is registered for use in the following:

Wheat, Barley, Soybeans and Acreage Conservation Reserve		Wheat and Barley Only		Lentils
Delaware	Nebraska	Arizona	Oklahoma	Idaho
Kansas	North Dakota	California	Oregon	Washington
Maryland	South Dakota	Colorado	South Carolina	
Minnesota	Virginia	Idaho	Texas	
		Montana	Utah	
		Nevada	Washington	
		New Mexico	West Virginia	
		North Carolina	Wyoming	

Wheat Only	Soybeans and Acreage Conservation Reserve	Wheat, Soybeans and Acreage Conservation Reserve	
Alabama	Illinois	Missouri	Louisiana
Arkansas	Indiana	New Jersey	
Florida	Iowa	Ohio	
Georgia	Kentucky	Pennsylvania	
Mississippi	Michigan	Wisconsin	
Tennessee			

GENERAL INFORMATION

HOELON® 3EC Herbicide is a highly selective herbicide for
the control of a broad spectrum of annual grassy weeds in
wheat (including durum), barley, lentils, soybeans and acreage
conservation reserve. HOELON® 3EC Herbicide is a three

▲ Cut or tear along perforation

U.S. PAT. NO. 4,322,000
EPA Reg. No. 8340-20-54382
CHICAGO, ILL. 60646

pound active ingredient per gallon emulsifiable concentrate. For best results, application should be made when the majority of annual grassy weeds are in the one-to-three leaf stage of growth.

Larger weeds, three-to-four leaves, will require a higher dosage rate. The stage of weed growth is as important as the number of weeds. In high populations, thorough uniform spray coverage of weeds is critical and use of flat fan nozzles is recommended for optimum coverage with ground equipment.

Special Notes:

1. HOELON* 3EC Herbicide does NOT control broadleaf weeds or perennial grassy weeds.
2. HOELON* 3EC Herbicide is a slow acting product, therefore, visual results will not be evident immediately following application.
3. DO NOT exceed 3 1/3 pints per acre of HOELON* 3EC Herbicide in a growing season. DO NOT apply beyond the specified crop growth stages.
4. DO NOT allow livestock to graze treated fields. DO NOT harvest forage, hay or straw from treated fields prior to grain harvest.

Equipment Notes

Thorough uniform spray coverage of weeds is essential. Ground applications should be in at least 10 gallons of carrier per acre using a minimum of 40 psi and use of flat fan or hollow cone nozzles is recommended. Aerial applications must be applied in at least 5 gallons of carrier per acre. Use spray nozzle tips and spraying pressures which provide a small uniform droplet size (200-350 micron range).

Do not make aerial applications when wind is above 5 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.

▲ Cut or tear along perforation ▲

U.S. PAT. NO. 4,373,608
For a Form
CHICAGO, IL 60646

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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)* Relative To Growth Stage Of Annual Grassy Weeds			
	1-3 Leaf	3-4 Leaf	4-5 Leaf	5 Leaf - 2 Tillers
Annual Ryegrass (1/3 acre)	2 1/2 pints	2 1/2 pints	2 pints	2 1/2 pints
(Lolium multiflorum)				
Broadleaf Signalgrass (bushes)	2 1/2 x 3 1/2 pints	Do Not Apply		
(Brachiaria distachya)				
Crabgrass	2 1/2 x 3 1/2 pints	Do Not Apply		
(Digitaria sanguinalis)				
Fall Panicle				
(Panicum dichotomiflorum)				
Barnyardgrass (watergrass)				
(Echinochloa crusgalli)				
Giant Foxtail				
(Setaria faberii)				
Green Foxtail (bigleafgrass)	2 2 1/2 pints	2 1/2 x 3 1/2 pints		
(Setaria viridis)				
Parrot Grass				
(Panicum polyanthemum)				
Wild Oats				
(Avena fatua)				
Yellow Foxtail (pigweed)				
(Setaria viridis)				
Witchgrass (Sudangrass)				
(Panicum capillare)				
Redgrass (Ragwort)				
(Rumex crispus)				
Jointweed				
(Sida sp.)				

Do
Not
Apply

Special Notes:

For best results, application should be made when the majority of annual grassy weeds is in the one-to-four leaf stage of growth. For best control of crabgrass and yellow foxtail, application should be made before the second leaf fully emerges. The stage of weed growth is more important than the number of weeds. Thorough uniform spray coverage of weeds is essential.

Rate Range for Each Crop/Region

Registered Crops	Rate Range For Each Crop/Region	Crop Growth Stage	
		Minimum	Maximum
1. Wheat (including durum) (A)	1 1/2 - 3 pints	None	Before one node jointing
Regions:			
2. Barley (North Central, Southwest and Western Regions of U.S.)	1 1/2 - 2 1/2 pints	After Emergence	Before one node jointing
3. Barley (Southeast and Midatlantic Regions of U.S.)	1 1/2 - 2 pints	After Tiller Stunting Initiation	Before one node jointing
4. Soybeans (A, registered states)	2 3/4 pints	None	Before formation of third true leaf
5. Corn (A)	2 2 1/2 pints	After Emergence	Before bloom

*For all crops, apply the herbicide at the rate indicated in the following table. In the Southeast and Midatlantic Regions, Barley, Millet, Sorghum and Corn. Apply at the rate indicated in the following table to avoid crop damage.

Barley must be developed to tiller initiation in the Southeast and Midatlantic Regions prior to application or increased crop response may be noted.

▲ Cut or tear along perforation

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Form 1/74
CHICAGO, IL 60646

**DIRECTIONS FOR THE USE OF HOELON® 3EC HERBICIDE
ON WHEAT AND BARLEY**

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

When using HOELON® 3EC Herbicide to control grassy weeds in the North Central, Southwest and Western U.S. and the grassy weed(s) do not include annual ryegrass, apply the 2 pint rate when the annual grassy weeds are in the 1-3 leaf stage of growth and growing conditions are optimal. Higher rates should be used (see chart) when the majority of the grassy weeds is not clearly in the specified stage of growth or if growth is retarded due to lack of moisture. Thorough spray coverage is essential.

Cold (lower than 40°F) and/or prolonged wet weather conditions increase the sensitivity of barley to HOELON® 3EC Herbicide and it should not be used under these adverse growing conditions.

DO NOT exceed 2½ pints per acre of HOELON® 3EC Herbicide on barley.

TANK MIXES

Broadleaf Herbicides

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 only when growing conditions (air temperature and soil moisture) are optimum, and grasses are

in the 2 to 3 leaf stage of growth with light to moderate infestations.

ME 4 Brominal® or Buctril® (2EC)

HOELON® 3EC Herbicide can be tank mixed with the ME 4 Brominal or Buctril (2EC) herbicide for broadleaf weed control in wheat and barley. HOELON® 3EC Herbicide should be used at the 2 to 3½ pints per acre rate as specified on the label. If ME 4 Brominal is used, it should be mixed at a rate of ¾ to 1 pint per acre according to the directions specified on the label. If Buctril (2EC) is used, it should be mixed at a rate of 1½ to 2 pints per acre as specified on the label.

ME 4 Brominal or Buctril (2EC) Plus MCPA (ester) (4EC)

Low rates of MCPA (ester) (4EC) can be added to a tank mix of HOELON® 3EC Herbicide plus ME 4 Brominal or Buctril (2EC). HOELON® 3EC Herbicide should be used at a rate of 2½ to 3½ pints per acre. If Buctril (2EC) is used, a rate of 1 pint per acre should be tank mixed with MCPA (ester) (4EC) at 1½ ounces per acre. If ME 4 Brominal is used, a rate of ½ pint per acre should be tank mixed with MCPA (ester) (4EC) at 1½ ounces per acre. MCPA rates in excess of 1½ ounces per acre may reduce the grassy weed control from HOELON® 3EC Herbicide. No other formulations of MCPA should be substituted for the 40 pound active ingredient per gallon ester formulation.

Glean® Herbicide

HOELON® 3EC Herbicide can be tank mixed with Glean for broadleaf weed control in winter wheat only. HOELON® 3EC

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Herbicide should be used at a rate of 2 $\frac{2}{3}$ to 3 $\frac{1}{2}$ pints per acre. The rate of Glean should not exceed $\frac{1}{4}$ ounce per acre. Refer to the Glean label for crop rotation restrictions and weed species controlled at the $\frac{1}{4}$ ounce per acre rate. Prior to the use of Glean, determine the soil pH by laboratory analysis using a 1:1 soil water suspension. Do not use Glean on soils with a pH greater than 7.5.

In all cases, ground applications should be made with a minimum of 10 gallons of water per acre and air applications with a minimum of 5 gallons of water per acre. Other broadleaf herbicides should not be applied within 5 days of a HOELON[®] 3EC Herbicide application. If other broadleaf herbicides are applied within 5 days, reduced grassy weed control may occur.

Fertilizers

HOELON[®] 3EC Herbicide can be tank mixed with liquid nitrogen fertilizers (e.g., 28-32%) if the timing for use is compatible. The concentration of liquid nitrogen fertilizer to water should not exceed a 1:1 ratio of total carrier in the spray tank. When mixing with liquid nitrogen fertilizers, 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. Thorough spray coverage is essential when using HOELON[®] 3EC Herbicide and fan-type nozzles are recommended for ground applications. Do not use less than 2 pints per acre of HOELON[®] 3EC Herbicide when tank mixing with liquid nitrogen fertilizers.

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Crop Oil Concentrates

In spring wheat only, at the lower labeled usage rates, it may be helpful to use 1 pint to 1 quart of crop oil concentrate, approved for use on growing crops. Use a crop oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil and the remaining composed of a tolerance exempt surfactant. Some slight wheat yellowing may be noted when crop oil concentrates are added to HOELON[®] 3EC Herbicide. DO NOT apply crop oil concentrate or other additives with HOELON[®] 3EC Herbicide for use on barley.

For more detailed information on determining the low use rates in combination with crop oil concentrates, refer to the Hoechst-Roussel Agri-Vet Company Technical Bulletin No. 110, "Low Rate Technology." Contact your local dealer or Hoechst-Roussel Agri-Vet Company representative for this Technical Bulletin.

Preemergence Use to Control Annual Ryegrass in Fall Planted Wheat (Winter Wheat)

Apply HOELON[®] 3EC Herbicide preemergence (at planting) to wheat to control annual ryegrass. HOELON[®] 3EC Herbicide should be applied at a rate of 2 to 2 $\frac{2}{3}$ pints depending upon soil type and annual ryegrass density. In coarse textured soils with less than 2% organic matter, use the 2 pint per acre rate. In fine textured soils with greater than 2% organic matter, use the 2 $\frac{2}{3}$ pint per acre rate. In fields that have a history of heavy annual ryegrass pressures, always use the 2 $\frac{2}{3}$ pint rate. If rainfall does not occur within

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seven days after application, reduced control may occur. **DO NOT** apply HOELON* 3EC Herbicide preemergence to barley as barley damage will occur. HOELON* 3EC Herbicide applied preemergence will not control wild oats.

DIRECTIONS FOR THE USE OF HOELON* 3EC HERBICIDE ON LENTILS

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

HOELON* 3EC Herbicide should be applied at a rate of 2 to 2½ pints per acre. Apply the 2 pint per acre rate only when the annual grassy weeds are in the 1 to 2 leaf stage of growth and growing conditions are normal. The higher rate should be used when the development of the annual grassy weeds are not clearly in the specified stages of growth or if the growth is retarded due to adverse growing conditions. Thorough uniform spray coverage of weeds is essential. Ground applications should be made in at least 10 gallons of water per acre using a minimum of 40 psi and the use of fan type or hollow cone nozzles is recommended.

Special Notes for Lentils:

1. DO NOT apply more than one application per growing season.
2. DO NOT tank mix with any broadleaf herbicides.
3. Only ground applications should be made on lentils.
4. Apply prior to the bloom stage of the lentils.

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DIRECTIONS FOR THE USE OF HOELON* 3EC HERBICIDE ON SOYBEANS

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

Apply HOELON* 3EC Herbicide at the higher labeled rates when the development of the majority of grassy weeds is not clearly in the specified stages of growth or if growth is retarded due to adverse growing conditions.

Under these conditions, the addition of 1 pint to 1 quart of crop oil concentrate approved for use on growing crops may result in improved weed control. Use a crop oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil with the remaining composed of a tolerance exempt surfactant.

Banded applications may be made using the following formula to calculate applications:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \frac{\text{Rate/acre broadcast}}{\text{Amount needed for treatment}}$$

Volunteer Corn and Itchgrass

Heavy infestations of volunteer corn (especially when uneven emergence is occurring from ears buried at varying soil depths) should be treated as a special weed problem.

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Apply ALL of the volunteer corn has emerged but before the first emerged corn grows to a height where thorough coverage (including the whorl) is not possible. Spray boom height and pressures should be adjusted to obtain total coverage of the entire volunteer corn plant. Thorough coverage of the volunteer corn foliage and penetration of clumps is essential. Use 2 to 3½ pints of HOELON® 3EC Herbicide in 10 to 40 gallons of water per acre at not less than 40 psi.

At the lower labeled use rate, use 1 pint to 1 quart of crop oil concentrate approved for use on growing crops. Use a crop oil concentrate containing a blend of 80% (minimum) petroleum or vegetable base oil with the remaining composed of a tolerance exempt surfactant.

For treatment of individual clumps of volunteer corn, spot treatment may be necessary. Use 1½ fluid ounces per one gallon of spray/acre (3½ pints per 40 gallons). In mixed annual grassy weed/volunteer corn infestations, the delayed broadcast application of HOELON® 3EC Herbicide to control heavy infestations of volunteer corn could result in reduced control of any annual grassy weeds that have grown beyond the recommended leaf stages. Do not apply more than one application in a growing season.

For postemergence control of itchgrass, apply to emerged itchgrass before it has grown beyond 10 to 12 inches in height. Use 2½ pints of HOELON® 3EC Herbicide in at least 10 gallons of water per acre. Flat fan nozzles and a pressure of

at least 40 pounds per square inch have proven most effective. HOELON® 3EC Herbicide may be used on a broadcast basis sprayed directly over the top of the soybeans. Complete coverage of itchgrass is essential. Delayed application of HOELON® 3EC Herbicide to control heavy infestations of itchgrass may give reduced control of other susceptible annual grasses. HOELON® 3EC Herbicide is most effective when the grasses are actively growing. It is less effective when used under drought stress.

Special Notes:

1. DO NOT tank mix HOELON® 3EC Herbicide with any other herbicide or apply any other herbicide within one week of a HOELON® 3EC Herbicide application.
2. Banvel®, 2,4-D and other phenoxy herbicide injury sometimes occurs in soybean fields treated with HOELON® 3EC Herbicide even though these herbicides were not recently used in the sprayer. This situation is not caused by HOELON® 3EC Herbicide and is often caused by sprayer contamination. If these products have been used in your sprayer, refer to Hoechst-Roussel Agri-Vet Company Technical Bulletin No. 100 "How to Avoid Sprayer Contamination" available through your HOELON® 3EC Herbicide supplier.

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**DIRECTIONS FOR THE USE OF HOELON[®] 3EC HERBICIDE
ON ACREAGE CONSERVATION RESERVE (SET-ASIDE)**

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

HOELON[®] 3EC Herbicide may be used to control the annual grassy weeds in acreage conservation reserve or set-aside programs. This acreage is often seeded to wheat, clover or alfalfa as a cover crop. These cover crops have excellent tolerance to HOELON[®] 3EC Herbicide. Use 2 pints to 3 1/2 pints per acre when the annual grassy weeds are in the one to four leaf stage as noted in the use directions section of this labeling. In most situations, 2 pints of HOELON[®] 3EC Herbicide plus 2 pints of crop oil concentrate will offer commercially acceptable control of annual grasses in acreage conservation reserve programs. Apply early to young actively growing grassy weeds. DO NOT harvest or graze cover crops treated with this product. DO NOT apply to cover crops such as oats, sorghum, and sudan grass as injury may occur.

Keep Out of Reach of Children

DANGER

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes eye and skin damage. Do not get in eyes or on skin or clothing. Wear goggles and respirator when handling. Avoid contact or inhalation of spray mist. Wash thoroughly after using and change clothing. Do not take internally.

The following protective apparel must be worn during all loading and mixing operations and when applied by ground equipment: gloves, waterproof boots, impermeable pants and shirts, goggles and a cartridge type respirator. Aerial pilots are not to be involved in the mixing and loading unless the aforementioned equipment is worn. Pilots must wear a cartridge type respirator during application unless the aircraft is equipped with an air filter system.

The Environmental Protection Agency has concluded that diclofop-methyl, the active ingredient in this product, produces 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.

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 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 aquatic habitat. Do not contaminate arable land and/or water by cleaning of equipment and/or disposal of waste.

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First Aid

In case of skin or eye contact, immediately flush with plenty of water for at least 15 minutes.

If swallowed, DO NOT INDUCE VOMITING but seek medical attention immediately.

Note to Physician: Aspiration hazard may contraindicate the use of gastric lavage.

For Emergency Assistance, call (201) 231-2244.

Storage and Disposal

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

Do not store below 20°F.

Important Notice: Disclaimer

Read IMPORTANT NOTICE/DISCLAIMER before buying. Using terms are not acceptable return at once unopened. HOECHST-ROUSSEL AGRIVET COMPANY 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-ROUSSEL AGRIVET COMPANY and user assumes the risk of any such use. HOECHST-ROUSSEL AGRIVET COMPANY 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-ROUSSEL AGRIVET COMPANY 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-ROUSSEL AGRIVET COMPANY.

HOELON® 3 EC Herbicide is the registered trademark of HOECHST AG.

ME 4 Brominal® Bromoxynil Broadleaf Herbicide is the registered trademark of Union Carbide Agricultural Products Company, Inc.

Budrit® Herbicide is the registered trademark of Rhône-Poulenc Inc. Agrochemical Division.

Glean® Herbicide is the registered trademark of E. I. du Pont de Nemours and Company, Inc.

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