

2016-2511
2016-05-20

Booklet

GROUP	8	HERBICIDE
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AVADEX® LIQUID EC HERBICIDE

Emulsifiable Concentrate for Fall or Spring Treatment to Control Wild Oats in Spring and Durum Wheat, Barley, Rapeseed (including Canola), Flax (not including low linolenic acid varieties), Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets and Dry Peas.

Warning, contains the allergen soy.

COMPLETE DIRECTIONS FOR USE

AGRICULTURAL

WARNING



POISON

READ THE LABEL BEFORE USING

REGISTRATION NO. 16759 PEST CONTROL PRODUCTS ACT

GUARANTEE: TRIALLATE – 480 grams per litre

Use only according to label instructions.

Read NOTICE before buying or using. If notice terms are not acceptable, return at once unopened.

NET CONTENTS: 10L - BULK

Gowan Company
370 S. Main Street
Yuma, Arizona 853664

Product Information: 1-800-883-1844

Gowan™
CANADA

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

COMBUSTIBLE

MAY CAUSE SKIN AND EYE IRRITATION.

MAY BE HARMFUL IF SWALLOWED.

Do not use, pour, spill or store near heat or flame.

Do not take internally.

Do not get in eyes or on skin or on clothing.

Wear a long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear during mixing, loading, application, clean-up and repair. In addition, during clean-up and repair, wear either a respirator with a NIOSH/MSHA/BHSE approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides.

Restricted-Entry Interval

Do not enter or allow worker entry into treated areas during the restricted-entry interval of 12 hours.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., CropLife Canada's website at www.croplife.ca.

ENVIRONMENTAL HAZARDS:

Runoff: To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay). Avoid application of this product when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Leaching: The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

Volatilization: The active ingredient contained in this product is known to volatilize. To reduce the atmospheric loading of triallate, effort should be made to reduce the volatilization such as the following:

- Incorporation into the soil concurrently with application
- Application should occur when soil temperatures are less than 4°C or less.

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries and marine habitats during application. Do not contaminate irrigation or drinking water supplies or aquatic habitats through direct application, disposal of waste or cleaning equipment.

FIRST AID

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

If medical attention is required: Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

This product contains petroleum distillates. Treat symptomatically.

**FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL PROSAR AT
1-888-478-0798.**

In case of FIRE, use water spray, foam, dry chemical or CO₂.

RESTRICTED-ENTRY INTERVAL

Do not enter or allow worker entry into treated areas during the restricted-entry interval of 12 hours.

GENERAL INFORMATION

DO NOT APPLY BY AIR.

This product is recommended for wild oat control in spring and durum wheat, barley, rapeseed (including canola), flax (not including low linolenic acid varieties), Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), sugar beets and dry peas only. Other crops should not be treated with this product because injury may occur.

This product can be either fall or spring applied according to the recommendations on this label. Seeding may be done either before or after application and incorporation in the spring depending upon the crop that is to be sown. Pre-plant incorporated treatments generally provide superior wild oat control as compared to post-plant incorporated treatments.

This herbicide, or any labelled tank mixture of this herbicide, should be applied on the soil and incorporated before weeds germinate. If weeds have emerged prior to application, they must be controlled by tillage.

Application equipment must be properly calibrated. Application of an excessive rate of Avadex Liquid EC herbicide may injure the crop, whereas application of too low a rate may result in poor wild oat control. Before applying this product, be sure the soil is in good working condition. Clay soils may require additional tillage to obtain good tilth. Application to a field which is wet, lumpy, rough or ridged will result in reduced wild oat control and promote crop thinning. See the "Field Preparation" section for additional information.

The incorporation of this product in to the soil must be completed as soon as possible on the day of application. The incorporation should not be deeper than 5 cm, as deeper incorporation tends to dilute the product, thus decreasing wild oat control and increasing the risk of crop injury. See the "How to Incorporate" section for additional information.

When using Avadex Liquid EC herbicide, an untreated strip should be left for proof of results. Weed control may be evaluated by removing a surface 2.5 to 5 cm of soil at the time of germination to inspect the number of wild oats that were killed. This product is primarily absorbed by wild oat shoots from the treated layer of the soil. Wild oats are usually controlled before they emerge through the soil. Occasionally, and particularly under dry conditions and/or cool soil temperatures, some wild oats may emerge and reach the 3 to 4 leaf stage before dying.

Rainfall of at least 1.5 cm within 2 weeks after application in the spring is required to ensure maximum performance of the spring treatment.

Under conditions of prolonged cool soil temperatures at the time of germination, or extreme drought in spring, this product may not maintain the usual high standard of wild oat control.

Underseeding legumes: This product can be used in labelled crops which are to be underseeded to forage legumes such as alfalfa, clovers and trefoil provided that the legumes are not harvested for green chop, silage or hay in the year of seeding.

NOTE

Thinning in wheat following treatment has been known to occur under conditions of heavy rainfall and/or cold weather after application and before crop emergence. Thinning is usually avoided by applications after seeding in the spring and minimized WHEN THE SEED IS PLACED 1.5 TO 2.5 CM BELOW THE AVADEX LIQUID EC HERBICIDE TREATED SOIL LAYER. Thinning is usually more than offset by tillering and increased yields.

Some wheat thinning may be noted on eroded knolls.

Domestic oats should not be seeded where Avadex Liquid EC herbicide was used the previous year. There is a possibility that this product may carry over sufficiently to injure this crop.

CAUTION: Do not graze the treated crops or cut for hay; there are not sufficient data to support such use.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Avadex Liquid EC Herbicide is a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to Avadex Liquid EC Herbicide and other Group 8 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of Avadex Liquid EC Herbicide or other Group 8 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Gowan Company at 1-800-883-1844 or at www.gowanco.com.

HOW TO MIX AND APPLY

Herbicides may not always mix evenly throughout a sprayable fluid fertilizer or the components may separate too quickly to make their combined use of practical value. This may be due to certain characteristics of the different fluid fertilizers. Always predetermine the compatibility of this product with a sprayable fluid fertilizer carrier by mixing small proportional quantities in advance. If large flakes, sludge, gel or other precipitates occur, do not use the carrier with this product in the same spray tank.

Apply Avadex Liquid EC Herbicide, or the labelled tank mixture in a minimum of 90 litres of water or sprayable fluid fertilizer carrier (such as 28-0-0) per hectare as a broadcast treatment.

Spraying during winds above 16 kilometres per hour will result in a loss of this product or the labelled tank mixture and may result in less than optimum wild oat control.

Mix this product or the labelled tank mixture with the appropriate carrier as follows:

1. Fill the tank approximately three-quarters full with carrier.
2. Carefully add the proper amount of this product or the labelled tank mixture while mixing.

3. Complete filling the sprayer tank with carrier. Remove the hose from the tank immediately to avoid siphoning back into the carrier source. Maintain good agitation at all times until the contents of the tank are sprayed.

NOTE: If spray mixture is allowed to settle at anytime, thorough agitation is required to resuspend the mixture before spraying is resumed.

4. The sprayer by-pass valve should be in operation before and during application.

Before spraying, check all hose connections to see that they are properly secured. Adjust the height of the spray boom in the field to ensure an even distribution of the product on the soil. Avoid overlapping of the spray. Overlapping will double the recommended rate and crop injury may result. Pressure should not be above 200 kPa and just high enough to provide a uniform spray pattern. Boomless sprayers should not be used as the distribution of Avadex Liquid EC herbicide will be uneven. Flush the sprayer with clean water after use.

Promptly change clothing which becomes wetted by accidental spillage or drift from spray. Wash clothing before reuse.

FIELD PREPARATION

Before applying this product be sure the soil is in good working condition. All deep tillage by cultivation or double disc implements must be completed prior to application of this product. Application of this product to soil which has 30% or greater trash cover will result in less than optimum wild oat control. If excessive trash is present, additional tillage will be necessary to reduce the trash cover to an acceptable level before application.

If the soil is excessively wet or lumpy, making proper incorporation difficult, cultivation with suitable tillage equipment may be required before application and incorporation to improve the soil condition. If ridging is a problem, suitable tillage is recommended prior to application to eliminate the ridging and ensure uniform distribution of the herbicide.

HOW TO INCORPORATE

This product or labelled tank mixtures must be incorporated into the soil, using suitable tillage equipment, in order to provide wild oat control. Two incorporation operations at right angles to one another are necessary for thorough mixing of this product in the soil. The first incorporation should be completed as soon as possible on the day of spraying, whereas the second incorporation may or may not be done immediately thereafter, depending upon the timing of the application. See the "Fall Incorporation" and "Spring Incorporation" sections of this label for additional information.

Do not incorporate this product more than 5 cm. This can be accomplished by setting the tillage equipment to work the soil no deeper than 7.5 cm to 10 cm. Shallow incorporation is necessary to prevent dilution of the product, thus decreasing wild oat control and increasing the risk of crop injury.

Harrowing does not provide effective incorporation if compact soil prevents penetration of harrow teeth or if trash accumulates in the harrow sections or if harrows bounce.

FALL INCORPORATION

This product must be incorporated as described in the "How to Incorporate" section of this label.

For fall applications, only one incorporation is required in the fall. The second incorporation may be done either in the fall (prior to soil freeze-up) or in the spring. See the "Spring Incorporation" section for additional information.

SPRING INCORPORATION

Before Seeding

This product must be incorporated as described in the "How to Incorporate" section of this label.

This product may be incorporated prior to the seeding of any labelled crop. See the "Directions for Use" section for exceptions.

The second incorporation may then be conducted any time until crop emergence. If the second incorporation is conducted after seeding, a harrow or other suitable tillage equipment adjusted to a depth so as not to disturb the seed should be used.

If ridging is a problem after seeding, one harrowing is recommended to eliminate the ridging and ensure uniform distribution of the herbicide.

After Seeding

This product must be incorporated as described in the "How to Incorporate" section of this label.

This product may be incorporated after the seeding of any labelled crop. See the "Directions for Use" section for exceptions.

Seed to a depth of 5 to 7.5 cm, then immediately shallowly incorporate to a depth of 4 to 5 cm using suitable equipment, such as harrows.

The second incorporation must be conducted at a right angle to the first incorporation, any time prior to crop emergence.

Adjust incorporation equipment to a depth so as not to disturb the seed.

DIRECTIONS FOR USE

The recommended higher rates of this product should be used in soils with greater than 4% organic matter content.

DO NOT apply more than one application per year.

DO NOT apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries and marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT handle more than 189 kg a.i./day (394 L for Avadex Liquid EC Herbicide). Mixtures must be prepared by using a closed mix/load system. Applicators using ground equipment must use a closed cab.

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers medium classification.

BUFFER ZONES

The buffer zones specified below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, pastures, rangeland and shrub lands) sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine or marine habitats.

Method of Application	Buffer Zone (metres) Required for the Protection of:			
	Aquatic Habitat at Water Depths:			Terrestrial Habitat
	< 1 metre	1-3 metres	> 3 metres	
Ground sprayer*	5	2	1	5
Ground sprayer with shrouds	2	1	0	2
Ground sprayer with cones	4	1	0	4

*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labeled buffer zone can be reduced by 70%. When using a spray boom where the individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labeled buffer zone can be reduced by 30%.

Fall Treatment

Fall applications of this product must be made after October 1 and until soil freeze-up. Applications made before October 1 may result in reduced effectiveness of the herbicide. See the "Field Preparation" and "How to Incorporate" sections of this label for additional information.

AVADEX LIQUID EC HERBICIDE RATES (L/ha) -- FALL				
Organic Matter				
Crop	< 2%	2-4%	> 4%	Seeding Depth
Spring and Durum Wheat	2.5	2.9	3.5	5-7.5 cm*
Barley	2.5	2.9	3.5	5-7.5 cm*

Rapeseed, Flax** Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	2.9	3.5	4.6	As desired
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* This seeding depth will ensure placement below the treated layer. DO NOT SEED DEEPER THAN 7.5 CM>

** not including low linolenic acid varieties

Spring Treatment

This product can be applied either before or after seeding labelled crops, except as noted in the following table. For applications before seeding, seed to the proper depth immediately or up to 3 weeks after application. Superior wild oat control is generally achieved from applications made before seeding.

For applications made after seeding, application and both incorporations must be completed prior to emergence of the crop. For after seeding applications, optimum wild oat control is achieved when the application and initial incorporation are made as soon as possible after seeding.

See the "Field Preparation" and "How to Incorporate" sections of this label for additional information.

AVADEX LIQUID EC HERBICIDE RATES (L/ha) – SPRING				
Organic Matter				
Crop	Application Timing	4% of less	Greater than 4%	Seeding Depth
Spring and Durum Wheat	Before seeding**	2.5	2.9	5-7.5 cm*
	After seeding	2.9	3.5	5-7.5 cm*
Barley	Before and After seeding	2.9	3.5	5-7.5 cm*
Rapeseed, Flax*** Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	Before seeding	3.5	4.6	As desired
Peas (dry)	Before seeding	3.5	3.5	As desired

*This seeding depth will ensure placement below the treated layer. DO NOT SEED DEEPER THAN 7.5 CM.

**DO NOT APPLY this product before seeding wheat in soils with 4% or less organic matter (brown, dark brown or grey-wooded soil zones) where discers are to be used for the seeding operation. If an air seeder is to be used, it must be equipped with a depth control device to ensure accurate seed placement, otherwise crop injury may occur.

*** not including low linolenic acid varieties

AVADEX LIQUID EC HERBICIDE PLUS TREFLAN® OR RIVAL®

(Tank Mixture)

Avadex Liquid EC Herbicide can be tank mixed with Treflan or Rival herbicide for the control of both wild oats and wild millet (green and yellow foxtail).

This tank mixture can be applied after seeding wheat and barley only.

Refer to the “Field Preparation”, “How to Mix and Apply” and “How to Incorporate” sections of this label for specific information.

Rates to Apply

Apply Avadex Liquid EC Herbicide at the rate recommended in the “Directions for Use” section, tank mixed with Treflan herbicide at the rate recommended in the following table:

TREFLAN RATES (L/ha)		
SOIL ORGANIC MATTER CONTENT		
Soil Texture Group*	4% or less	Greater than 4%
Coarse and Medium	1.1	1.5
Fine	1.5	1.5

RIVAL RATES (L/ha)		
SOIL ORGANIC MATTER CONTENT		
Soil Texture Group*	4% or less	Greater than 4%
Coarse and Medium	1.21	1.65
Fine	1.65	1.65

*Refer to the following table to determine the corresponding soil texture group for the soil to be treated:

Soil Texture Group	Soil Texture
Coarse	Sandy, loamy sand, sandy loam
Medium	Loam, silt loam, silt, sandy clay loam
Fine	Silty clay loam, clay loam, sandy clay

ATTENTION

- Refer to the label for Treflan or Rival liquid herbicide for additional precautions.
- Seeding depth should be 5-7.5 cm. DO NOT seed deeper than 7.5 cm.

© Treflan is a trademark of Dow AgroSciences Canada Ltd.

© Rival is a registered trademark of Aventis CropSciences.

**IN CASE OF A MEDICAL EMERGENCY involving this product, Call Prosar
1-888-478-0798**

STORAGE

STORE ABOVE 0°C TO KEEP FROM FREEZING.

Freezing will result in crystals which settle to the bottom of the can. If allowed to freeze, place in a warm room (22°C) and roll and shake the can frequently for several days to redissolve.

Keep Avadex Liquid EC Herbicide container closed to prevent spills, evaporation and contamination.

Avoid contamination of seed, feed and foodstuffs.

DISPOSAL

RECYCLABLE CONTAINERS:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

RETURNABLE CONTAINERS:

Do not reuse container for any other purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

REFILLABLE CONTAINERS:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the Provincial Regulatory Agency in case of a spill, and for clean-up of spills.

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.