

16-NOV-2005

14-MAR-2007 Allergen update

GROUP	8	HERBICIDE
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**AVADEX® BW 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), Mustard, Sugar Beets and Dry Peas.

AGRICULTURAL

WARNING  POISON

READ THE LABEL BEFORE USING

REGISTRATION NO. 8167 PEST CONTROL PRODUCTS ACT

Use only according to label instructions.  
Read NOTICE before buying or using. If notice terms are not acceptable, return at once unopened.

**GUARANTEE:** TRIALLATE - 400 grams per litre.

Warning, contains the allergen soy.

COMPLETE DIRECTIONS FOR USE

GOWAN COMPANY, LLC.  
370 S. Main Street.  
Yuma, Arizona, 85364 U.S.A.

**Update**

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## 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.

To avoid contact with skin or eyes, wear rubber gloves and goggles when handling or spraying.

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

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., contact 1-866-375-4648 or [www.cropro.org/](http://www.cropro.org/).

## FIRST AID

IN CASE OF CONTACT, **IMMEDIATELY** wash skin with soap and plenty of water **IMMEDIATELY**; FOR EYES, **IMMEDIATELY** flush with plenty of water for at least 15 minutes and get medical attention or contact a poison control centre **IMMEDIATELY**. Launder clothes before reuse.

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

**TOXICOLOGICAL INFORMATION:** This product contains petroleum distillate. **If swallowed**, do not induce vomiting, call a physician or contact a poison control centre.

## PHYSICAL OR CHEMICAL HAZARDS

Flash point 45°C

## IN CASE OF:

**FIRE**, use water spray, foam, dry chemical or CO<sub>2</sub>

**SPILL**, flush area with water spray.

## 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 BW herbicide container closed to prevent spills, evaporation and contamination.

Avoid contamination of seed, feed and foodstuffs.

## **DISPOSAL**

### **RECYCLABLE CONTAINERS:**

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

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, or for the clean-up of spills.

## **NOTICE**

**NOTICE TO BUYER** -- Seller's guarantee shall be limited to the terms set out on the label and, subject thereto, the buyer assumes the risk to person or property arising from the use or handling of this product and accepts the product on that condition.

**NOTICE TO USER** -- This control product is to be used only in accordance with the directions on this label. It is an offense under the *Pest Control Products Act* to use a control product under unsafe conditions.

® Avadex is a registered trademark of Gowan Company, LLC.

## **GENERAL INFORMATION**

**DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT.**

This product is recommended for wild oat control in spring and durum wheat, barley, rapeseed (including canola), flax (not including low linolenic acid varieties), mustard, 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 spraying 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 sprayed on the soil and incorporated before weeds germinate. If weeds have emerged prior to application, they must be controlled by tillage.

Spraying equipment must be properly calibrated - application of an excessive rate of Avadex BW 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 into the soil must be completed as soon as possible on the day of spraying. 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 BW 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.

**CAUTION:** Do not graze the treated crops nor cut for hay; sufficient data are not available to support such use.

## RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Avadex BW Herbicide is a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to Avadex BW 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 BW 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](http://www.gowanco.com).

## **NOTE**

Thinning in wheat following treatment has been known to occur under conditions of heavy rainfall and/or cold weather after spraying 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 BW 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 BW herbicide was used the previous year. There is a possibility that this product may carry over sufficiently to injure this crop.

## **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 BW herbicide, or the labeled tank mixture in a minimum of 90 L of water or sprayable fluid fertilizer carrier (such as 28-0-0) per hectare as a broadcast treatment.

Spraying during winds above 16 km/h 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 BW 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 done any time until crop emergence. If the second incorporation is conducted after seeding it should be done with a harrow or other suitable tillage equipment adjusted to a depth so as not to disturb the seed.

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 labelled crops. 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.

### 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 BW RATES (L/ha) -- FALL TREATMENT

Crop	Organic Matter			Seeding Depth
	Less than 2%	2-4%	Greater than 4%	
Spring & Durum Wheat	3.0	3.5	4.25	5-7.5 cm*
Barley	3.0	3.5	4.25	5-7.5 cm*
Rapeseed, Flax**, Mustard, Sugar Beets	3.5	4.25	5.5	As desired

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

\*\* Does not include 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 incorporation is made as soon as possible after seeding.

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



## AVADEX BW RATES (L/ha) -- SPRING TREATMENT

### Organic Matter

Crop	Application Timing	4% or less	Greater than 4%	Seeding Depth
Spring and Durum Wheat	Before Seeding**	3.0	3.5	5-7.5cm*
	After Seeding	3.5	4.25	5-7.5cm*
Barley	Before & After Seeding	3.5	4.25	5-7.5cm*
Rapeseed, Flax***, Mustard, Sugar Beets	Before Seeding	4.25	5.5	As desired
Peas (dry)	Before Seeding	4.25	4.25	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.

\*\*\* Does not include low linolenic acid varieties

### **AVADEX BW PLUS TREFLAN®, RIVAL® OR BONANZA™ (Tank Mixture)**

Avadex BW Herbicide can be tank mixed with Treflan, Rival or Bonanza 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 BW 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 Texture Group**	<u>Soil Organic Matter Content</u>	
	4% or less	Greater than 4%
Coarse and Medium	1.1	1.5
Fine	1.5	1.5

\*If tank mixing Rival herbicide, multiply the rates recommended for Treflan by 1.1 to obtain the proper rate of Rival. (Rival is a 500 g per litre formulation and Treflan is a 545 g per litre formulation.) If tank mixing Bonanza herbicide, multiply the rates recommended for Treflan by 1.36 for Bonanza 400 herbicide (400 g/L formulation).

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

Soil Texture Group	Soil Texture
Coarse:	Sand, loamy sandy, sandy loam
Medium:	Loam, silt loam, silt, sandy clay loam
Fine:	Silty clay loam, clay loam, sandy clay, silty clay, 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 registered trademark of Dow-Elanco Canada Ltd.

® Rival is a registered trademark of Hoechst-NORAM AgrEvo Inc.

™ Bonanza is a trademark of United Agri Products.

### APPLICATION WITH DRY BULK FERTILIZER

**NOTE:** Do not mix ammonium nitrate, potassium nitrate or sodium nitrate with Avadex BW since these nitrate fertilizers may cause explosions and fires.

Dry bulk fertilizer may be impregnated or coated with Avadex BW herbicide. Applications of dry bulk fertilizer impregnated with this product can be made in the fall or spring. Wheat should be

seeded in fall applications only. Application should be made as soon as possible after blending. Only pre-plant incorporated applications are recommended in the spring prior to seeding of barley, flax (not including low linolenic acid varieties), rapeseed, mustards, sugar beets or dry peas. All labelled crops may be seeded in fall applications. For rates and times of applications for various crops refer to "Directions for Use" section of this label.

### **Mixing and Blending**

Compliance with the Fertilizer Act is the responsibility of the individual/company selling the herbicide/fertilizer mixture.

A minimum of 150 kg/ha of dry bulk fertilizer impregnated with Avadex BW herbicide at the recommended rates must be applied. Mix and blend the dry bulk fertilizer and the product in rotary mixers commonly used in dry fertilizer blending. The nozzle or nozzles used to spray Avadex BW herbicide on the urea should be placed to provide uniform spray coverage. Sufficient mixing and blending time should be allowed to ensure uniform coverage of dry bulk fertilizer with this product.

See the rate table that follows to determine the amount of Avadex BW herbicide to be impregnated on a tonne of dry bulk fertilizer based on the amount of fertilizer to be applied per hectare.

**NOTE:** When using Avadex BW the total combined liquid volume must not exceed 28.5 L/tonne of dry fertilizer. If applying Avadex BW at a rate of 5.5 L/ha, DO NOT impregnate on less than 200 kg of dry fertilizer.

### **APPLICATION**

Spread the fertilizer chemical mixture using a properly calibrated applicator. Be certain the material is applied uniformly to the soil surface. When using spin spreaders a 100% overlap is recommended to ensure even distribution. Spin applicators should be calibrated to put out one-half the desired rate per hectare and application overlapped by doubling back to cover one half of the previous swath. Dribble spreaders must be calibrated with the fertilizer chemical mixture since the flow pattern for the Avadex BW herbicide coated dry bulk fertilizer will generally be slower than straight dry bulk fertilizer. Non-uniform spreading of the fertilizer/herbicide mixture may result in unsatisfactory weed control or crop injury.

### **INCORPORATION**

Follow normal Avadex BW herbicide incorporation procedures.

**NOTE:** Only pre-plant incorporated applications are recommended in the spring. **FOR BEST RESULTS ON SPRING PRE-PLANT APPLICATIONS, DELAY SECOND INCORPORATION FOR AT LEAST 24 HOURS FOLLOWING THE FIRST.** Under conditions of prolonged cool soil temperatures or extreme drought, a longer delay may be utilized to maximize control. Shallow and uniform incorporation of the herbicide treatment is essential for both fall and spring applications.

A partial list of fertilizers which may be impregnated with Avadex BW:

Diammonium phosphate	18-46-0
Treble super-phosphate	0-46-0
Urea	45-0-0
Ammonium sulfate	21-0-0
Potassium chloride	0-0-60
Potassium sulfate	0-0-52

The following table provides a reference to determine the amount of liquid herbicide to be mixed per tonne of dry bulk fertilizer.

Dry Bulk Kg/ha	(L/ha) ha/TONNE	Avadex BW Fertilizer Rate Fertilizer		
		3.5	4.25	5.50*
		L/tonne		
150	6.7	23.5	28.5	--
160	6.3	22.0	26.8	--
170	5.9	20.7	25.0	--
180	5.6	19.6	23.8	--
190	5.3	18.6	22.5	--
200	5.0	17.5	21.3	27.5
225	4.4	15.4	18.7	24.2
250	4.0	14.0	17.0	22.0

\*Do not use this rate on less than 200 kg of dry bulk fertilizer.

IN CASE OF A MEDICAL EMERGENCY involving this product, call Prosar at 1-888-478-0798:

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