

PMRA Approved Label - AO

2023-2320

2023-06-28

Updated from last approved precedent label sub. no. 2022-6086, 2023-0907

Container label

# ANTLER CLETHODIM

**Selective Herbicide**

<b>GROUP</b>	<b>1</b>	<b>HERBICIDE</b>
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POST-EMERGENCE HERBICIDE FOR CONTROL OF GRASSES IN CANOLA (including imazethapyr-tolerant varieties), FLAX (including low linolenic acid varieties), FIELD PEAS, LENTILS, DESI and KABULI CHICKPEAS, DRY ONIONS, POTATOES, MUSTARD (oriental, brown, yellow) (condiment type only), SOYBEANS, SEEDLING ALFALFA, SUNFLOWERS, and DRY BEANS (Pinto, Black, Great Northern, Red, Pink and Navy)

COMMERCIAL (AGRICULTURAL)

EMULSIFIABLE CONCENTRATE

ACTIVE INGREDIENT: CLETHODIM 240 g/L

REGISTRATION NO. 33595 PEST CONTROL PRODUCTS ACT

**WARNING: EYE AND SKIN IRRITANT**

**KEEP OUT OF REACH OF CHILDREN**

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING**

NET CONTENTS: 2-1050 LITRES

Winfield United Canada, ULC

101-302 Wellman Lane

Saskatoon, Saskatchewan

Canada S7T 0J1

1 (888) 975-4769

**GENERAL INFORMATION:**

ANTLER CLETHODIM is a selective post-emergence herbicide for control of a broad range of grasses in canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers and dry beans (Pinto, Black, Great Northern, Red, Pink and Navy). **ANTLER CLETHODIM is to be used only with the adjuvant Surf-Act<sup>®</sup>, Destinaire<sup>®</sup> High Surfactant Oil Concentrate, Journey<sup>™</sup> HSOC, Destination<sup>™</sup> MSO, or MSO Concentrate with Leci-Tech.**

ANTLER CLETHODIM is a systemic herbicide which is translocated from the treated foliage to the growing points of the leaves, shoots and roots. Uptake into the plant is primarily through its leaves. Thorough coverage of the foliage is important for consistent grass control. Susceptible grasses that are actively growing will undergo a burn-back and colour change after treatment. Leaf foliage will first change from green to yellowish, then purplish and finally brown colour. The time required for complete control is normally 7 to 21 days following treatment, depending on growing conditions and crop competition.

**PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. May irritate eyes. Avoid contact with eyes and clothing. Causes skin irritation. DO NOT get on skin. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing vapours or spray mist. After use, wash hands and other exposed skin. When using, do not eat, drink, or smoke. Remove and launder contaminated clothing separately from household laundry before reuse. Store the container tightly closed and away from seeds, feeds, fertilizer, plants, and foodstuffs. Observe appropriate provincial buffer zones around bodies of water and wetland areas.

Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

When handling the concentrate, mixing, loading or during cleanup and repair, wear goggles or face shield, rubber apron, chemical-resistant gloves, rubber boots, long-sleeved shirt and long pants. Wear long-sleeved shirt and long pants during application. In addition, for hand-held application equipment, including backpack sprayer, wear chemical-resistant gloves during application.

DO NOT enter or allow worker into treated areas for 12 hours following application.

**ENVIRONMENTAL PRECAUTIONS:**

TOXIC to aquatic organisms and non-target terrestrial plants.

Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This product contains aromatic petroleum distillates that are toxic to aquatic organisms.

**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 the eye. Call a poison control centre or doctor for treatment advice.

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

**TOXICOLOGICAL INFORMATION:** Treat the patient symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

**STORAGE AND DISPOSAL STORAGE:**

To prevent contamination, store this product away from food or feed.

**DISPOSAL:**

**RECYCLABLE CONTAINER DISPOSAL:** 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.

**DISPOSAL OF UNUSED, UNWANTED PRODUCT:** For information on 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 cleanup 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.

**Pamphlet label**

**ANTLER CLETHODIM**

**Selective Herbicide**

**GROUP 1 HERBICIDE**

POST-EMERGENCE HERBICIDE FOR CONTROL OF GRASSES IN CANOLA (including imazethapyr-tolerant varieties), FLAX (including low linolenic acid varieties), FIELD PEAS, LENTILS, DESI and KABULI CHICKPEAS, DRY ONIONS, POTATOES, MUSTARD (oriental, brown, yellow) (condiment type only), SOYBEANS, SEEDLING ALFALFA, SUNFLOWERS, and DRY BEANS (Pinto, Black, Great Northern, Red, Pink and Navy)

COMMERCIAL (AGRICULTURAL)

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ACTIVE INGREDIENT: CLETHODIM..... 240 g/L

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101-302 Wellman Lane  
Saskatoon, Saskatchewan  
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**GENERAL INFORMATION:**

ANTLER CLETHODIM is a selective post-emergence herbicide for control of a broad range of grasses in canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, Mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers and dry beans (Pinto, Black, Great Northern, Red, Pink and Navy). **ANTLER CLETHODIM is to be used only with adjuvant Surf-Act<sup>®</sup>, Destinaire<sup>®</sup> High Surfactant Oil Concentrate, Journey<sup>™</sup> HSOC, Destination<sup>™</sup> MSO, or MSO Concentrate with Leci-Tech.**

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Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

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DO NOT enter or allow worker entry into treated areas for 12 hours following application.

**ENVIRONMENTAL PRECAUTIONS:**

TOXIC to aquatic organisms and non-target terrestrial plants.

Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

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**DISPOSAL:**

**RECYCLABLE CONTAINER DISPOSAL:** 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:

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**DISPOSAL OF UNUSED, UNWANTED PRODUCT:** For information on 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 cleanup of spills.

**DIRECTIONS FOR USE:**

ANTLER CLETHODIM is to be used only on canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers and dry beans (Pinto, Black, Great Northern, Red, Pink and Navy). Apply a maximum of one application per season on dry common beans (*Phaseolus vulgaris* varieties only).

**DO NOT apply using aerial application equipment.**

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

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

Not for use in greenhouses.

A 30-day plant-back interval should be observed for all unlabeled crops.

**Time of Application:**

Apply ANTLER CLETHODIM when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage as specified under APPLICATION RATES OF ANTLER CLETHODIM. Most effective control is achieved when application is made prior to tillering when annual grasses are small and actively growing.

For suppression or control of quackgrass, apply ANTLER CLETHODIM when the quackgrass is in the 2 to 6 leaf stage and 6 to 15 cm in height. Most effective results are achieved when application is made at the 3 to 5 leaf stage, when the canopy is uniform and actively growing.

ANTLER CLETHODIM will be less effective when plants are stressed by lack of moisture, excessive moisture, low temperature and/or very low relative humidity. Regrowth by tillering may occur if application is made under any of the above stress conditions. In wide row crops, where the canopy may be slow to close, cultivation may be necessary to control grasses that emerge after treatment.



Canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers and dry beans (Pinto, Black, Great Northern, Red, Pink and Navy) are tolerant to ANTLER CLETHODIM at all stages of growth. However, the pre-harvest interval outlined in the Crop Recommendations table must be followed to avoid excessive crop residues.

For Desi and Kabuli chickpeas, apply ANTLER CLETHODIM at a maximum of one application per season before the crop reaches the 9 node stage (18 cm height maximum) and when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage.

**Application Rates of ANTLER CLETHODIM:**

Rates of use are given below to control various grass species. Refer to crop section for the maximum use rate on each crop.

Grass Species	Leaf Stage	Application Rate of ANTLER CLETHODIM	Application Rate of Adjuvant Surf-Act®, Destinaire® High Surfactant Oil Concentrate, Journey™ HSOC, Destination™ MSO, or MSO Concentrate with Leci-Tech
*Foxtail (green, yellow) Wild oats Volunteer cereals (wheat, barley, oats)	2-4	0.125 L/ha	0.5 % v/v
Barnyard Grass Witchgrass Fall panicum Proso millet Volunteer Corn Volunteer canary grass	2-6	0.125 L/ha	0.5 % v/v
Wild Oats Volunteer cereals (wheat, barley, oats) Foxtail (green, yellow) Persian darnel Crabgrass (smooth and large) Proso millet Witchgrass Fall panicum Barnyard grass Volunteer corn Volunteer canary grass Quackgrass suppression	2-6	0.19 L/ha	0.5 % v/v

Quackgrass control	2-6	0.38 L/ha	1.0 % v/v or Destinaire HSOC or Journey HSOC at 0.5 %v/v
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\*ANTLER CLETHODIM applied at 0.125 L/ha for the control of weeds listed in this section of the table should only be applied under the following conditions:

- Good crop stand
- Early application (as in above table, prior to tillering)
- Do not tank-mix with other pesticides
- Do not apply to volunteer winter cereals
- Light to moderate weed infestation
- Adequate moisture and fertility
- Absence of stress, good growing conditions

If any one of the above conditions is not present at the time of application, use 0.19 L/ha rate of ANTLER CLETHODIM.

**CROP RECOMMENDATIONS:**

<b>Crops</b>	<b>Maximum Application Rate of ANTLER CLETHODIM</b>	<b>Pre-Harvest Interval</b>
Canola	0.38 L/ha	60 days
Flax (including low linolenic acid varieties)	0.38 L/ha	60 days
Field Peas	0.38 L/ha	75 days
Lentils	0.38 L/ha	60 days
Desi and Kabuli Chickpeas	0.19 L/ha	60 days
Dry Onions	0.38 L/ha	45 days
Potatoes	0.38 L/ha	60 days
Mustard (oriental, brown, yellow), (condiment type only)	0.38 L/ha	60 days
Soybeans	0.38 L/ha	75 days
Seedling Alfalfa	0.38 L/ha	30 days
Sunflowers	0.38 L/ha	72 days
Dry Beans (Pinto, Black, Great Northern, Red, Pink and Navy)	0.19 L/ha	60 days

## TANK-MIXES

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Winfield United Canada, ULC at 1-888-975-4769 for information before applying any tank mix that is not specifically recommended on this label.

When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on all product labels.

### **ANTLER CLETHODIM AND BADGE or BROX™ M or DOUBLE TROUBLE:**

**Flax (including low linolenic acid varieties):** ANTLER CLETHODIM may be tank-mixed with **BADGE or BROX™ M or DOUBLE TROUBLE** for control of certain broadleaf and grassy weeds in flax (including low linolenic acid varieties) in one spray operation. Apply in 55 - 110 litres of water per hectare at a spray pressure of 275 kPa. **DO NOT** spray this tank-mix on plants under stress. **DO NOT** spray during periods of hot, humid weather. The most stringent label precautions for any individual pesticide product in a tank-mix should be used.

**Time of Application:** Flax (including low linolenic acid varieties), may be treated from 5 cm high to the early bud stage. For best results, apply when flax (including low linolenic acid varieties) is 5 cm to 10 cm high and weeds are in the seedling stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 - 0.38 L/ha tank-mixed with **BADGE or BROX™ M or DOUBLE TROUBLE** at 1.25 L/ha and the recommended adjuvant at 0.5% - 1.0% v/v.

**Weeds Controlled:** As listed for ANTLER CLETHODIM used alone, plus certain seedling broadleaf weeds. Refer to the **BADGE or BROX™ M or DOUBLE TROUBLE** label for the broadleaf weeds controlled.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. If tank-mixing ANTLER CLETHODIM and **BADGE or BROX™ M or DOUBLE TROUBLE** for once-over grass and broadleaf weed control in flax (including low linolenic acid varieties) add the correct amount of **BADGE or BROX™ M or DOUBLE TROUBLE**. Continue to agitate.
4. Add the correct amount of ANTLER CLETHODIM. Continue to agitate.

5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

*For disposal of cleaning solution see section on DISPOSAL.*

#### **ANTLER CLETHODIM AND MCPA ESTER:**

**Flax:** ANTLER CLETHODIM may be tank-mixed with MCPA ESTER for control of certain broadleaf and grassy weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

**NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.**

**Time of Application:** Flax may be treated from 5 cm tall to just before the bud stage. Do not apply after the early bud stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and broadleaf weeds are in the seedling stage and actively growing. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 - 0.38 L/ha tank-mixed with MCPA ESTER and the recommended adjuvant at 0.5% - 1.0% v/v.

**Weeds Controlled:** As listed for ANTLER CLETHODIM used alone, plus certain seedling broadleaf weeds. Refer to the MCPA ESTER label for the rates and broadleaf weeds controlled and specific information on flax.

#### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the correct amount of MCPA ESTER. Continue to agitate.
4. Add the correct amount of ANTLER CLETHODIM. Continue to agitate.
5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

**ANTLER CLETHODIM AND LONTREL<sup>®</sup> 360 or SPUR 360:**

**Flax:** ANTLER CLETHODIM may be tank-mixed with LONTREL 360 or SPUR 360 for control of certain broadleaf and grass weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

**NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.**

**Time of Application:** Flax may be treated from 5 cm to 10 cm in height. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 L/ha tank-mixed with LONTREL 360 or SPUR 360 at 0.56 to 0.83 L/ha and with the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats, wild buckwheat.

Canada thistle	0.56 L LONTREL 360 or SPUR 360/ha	Season-long control
	0.83 L LONTREL 360 or SPUR 360/ha	Control extended into following year

**MIXING INSTRUCTIONS:** For mixing instructions, refer to ANTLER CLETHODIM AND LONTREL 360 or SPUR 360 tank-mix on canola.

**Canola:** ANTLER CLETHODIM may be tank-mixed with LONTREL 360 or SPUR 360 for control of certain broadleaf and grass weeds in canola in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the LONTREL 360 or SPUR 360 label.

**Time of Application:** Canola may be treated from the 2 to 6 leaf stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 L/ha tank-mixed with LONTREL 360 or SPUR 360 at 0.42 to 0.83 L/ha and with the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats.

Wild Buckwheat	0.56 L LONTREL 360 or SPUR 360/ha	Season-long control
Canada thistle	0.42 L LONTREL 360 or SPUR 360/ha	Top growth control to 6 - 8 weeks
	0.56 L LONTREL 360 or SPUR 360/ha	Season-long control
	0.83 L LONTREL 360 or SPUR 360/ha	Control into following year

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of LONTREL 360 or SPUR 360 to the tank. Continue to agitate.
4. Add the correct amount of ANTLER CLETHODIM. Continue to agitate.
5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **ANTLER CLETHODIM AND PURSUIT<sup>®</sup> :**

**Field Peas:** ANTLER CLETHODIM may be tank-mixed with PURSUIT for control of certain broadleaf and grassy weeds in field peas in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa.

**Time of Application:** Field peas may be treated up to the sixth (6th) trifoliolate leaf stage. Apply when volunteer wheat, volunteer barley, wild oats and green foxtail are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 L/ha tank-mixed with PURSUIT at 210 mL/ha and the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat plus the weeds as listed on the PURSUIT label.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. If tank-mixing ANTLER CLETHODIM and PURSUIT for once over grass and broadleaf weed control in field peas, add the correct amount of PURSUIT. Continue to agitate.
4. Add the required amount of ANTLER CLETHODIM to the tank. Continue to agitate.
5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
8. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

**Imazethapyr Tolerant Canola (e.g. canola varieties with the SMART trait):** ANTLER CLETHODIM may be tank-mixed with PURSUIT for control of certain broadleaf and grassy weeds in imazethapyr-tolerant canola varieties in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the PURSUIT label.

**Time of Application:** Imazethapyr-tolerant canola varieties may be treated after the crop has developed one (1) fully expanded leaf. Apply when grassy weeds are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds.

**Application Rate:** ANTLER CLETHODIM at 0.19L/ha tank-mixed with PURSUIT at 0.105 or 0.21 L/ha and the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** As listed for ANTLER CLETHODIM plus the following additional weeds. PURSUIT at 0.105 L/ha for control of chickweed, hempnettle, redroot pigweed\*, stinkweed, volunteer canola (not imazethapyr-tolerant), wild mustard and wild buckwheat\*, in the 1 to 4 leaf stage.

\*For the control of light infestations only. For heavy infestations use the 0.21 L/ha rate of PURSUIT.

PURSUIT at 0.21 L/ha for control of weeds as listed on the PURSUIT label.

**MIXING INSTRUCTIONS:** For mixing instructions, refer to ANTLER CLETHODIM AND PURSUIT tank-mix on field peas.

#### **ANTLER CLETHODIM AND MUSTER<sup>®</sup> :**

**Canola:** ANTLER CLETHODIM may be tank-mixed with MUSTER for control of certain broadleaf and grassy weeds in canola in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa.

**Time of Application:** Canola may be treated from the 2 leaf stage to the beginning of bolting. Apply when the grassy weeds are in the 2 to 6 leaf stage and when the broadleaf weeds are in the cotyledon to 6 leaf stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 L/ha tank-mixed with MUSTER at 20 or 30 g/ha and the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** MUSTER at 20 or 30 g/ha: Wild oats, green foxtail, volunteer barley, volunteer oats, volunteer wheat, hempnettle, wild mustard, green smartweed, flixweed (spring seedlings), stinkweed\*, and redroot pigweed.

\* *Stinkweed suppression at the lower rate. Apply to stinkweed in the 1 to 4 leaf stage.*

#### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of MUSTER to the tank. Continue to agitate.



4. Once MUSTER is in suspension, add the required amount of ANTLER CLETHODIM. Continue to agitate.
5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. On repeat tankloads, prepare a MUSTER/water slurry and add to required water volume in the spray tank prior to adding ANTLER CLETHODIM and the adjuvant.
8. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight.
9. Immediately after use, refer to MUSTER label for appropriate tank cleanout instructions.

### **ANTLER CLETHODIM AND LIBERTY<sup>®</sup>:**

**Canola: For use on Glufosinate Ammonium tolerant canola varieties only (e.g. varieties or hybrids labelled LIBERTY LINK).** ANTLER CLETHODIM may be tank-mixed with LIBERTY for control of certain broadleaf and grass weeds in Glufosinate Ammonium tolerant canola varieties in one spray operation. Apply in a minimum of 110 L/ha spray volume at a pressure of 275 kPa. Follow all precautions, limitations and timing recommendations on the LIBERTY label.

**Time of Application:** Glufosinate Ammonium tolerant canola varieties may be treated from the cotyledon stage up to the early bolting stage. Apply when the wild oats, volunteer wheat, volunteer oats and green foxtail are in the 1 to 5 leaf stage. Refer to LIBERTY label for application timing on all remaining grass and broadleaf weeds for 2.7 or 3.3 L/ha.

**Application Rate:** ANTLER CLETHODIM at 0.06 L/ha tank-mixed with LIBERTY at 2.7 to 3.3 L/ha and with the recommended adjuvant at 0.5% v/v.

**Weeds Controlled:** Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats plus all remaining grass weeds and broadleaf weeds listed on the LIBERTY label at the application rates of 2.7 and 3.3 L/ha.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of the adjuvant to the tank. Continue to agitate until thoroughly mixed.
4. STOP agitation. Add the correct amount of LIBERTY to the spray tank. Start agitation system.
5. Add the correct amount of ANTLER CLETHODIM along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system and spray out immediately.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.

9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **ANTLER CLETHODIM AND CURTAIL<sup>®</sup> M OR SPUR M:**

**Flax (including low linolenic acid varieties):** ANTLER CLETHODIM may be tank-mixed with CURTAIL M or SPUR M for control of certain broadleaf and grass weeds in flax in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

**Time of Application:** Flax may be treated from 5 to 15 cm in height. Apply when the grassy weeds are in the 2-6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is between 10 cm and up to the pre-bud stage. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

**Application Rate:** ANTLER CLETHODIM at 0.19 L/ha tank-mixed with CURTAIL M or SPUR M at 1.5 to 2.0 L/ha and with the recommended surfactant at 0.5% v/v.

**Weeds Controlled:** Weed claims listed on the ANTLER CLETHODIM Herbicide label plus weed claims listed on CURTAIL M or SPUR M label. Refer to the CURTAIL M or SPUR M label for the broadleaf weeds controlled.

**Grazing Interval:** Do not cut treated crops for feed or graze until 60 days after application.

### **MIXING INSTRUCTIONS:**

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of CURTAIL M or SPUR M to the tank. Continue to agitate.
4. Add the correct amount of ANTLER CLETHODIM. Continue to agitate.
5. Add the correct amount of adjuvant along with the remaining amount of water necessary to fill the spray tank.
6. Continue to agitate or run the by-pass system.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

### **FOR USE ON DRY BEANS (PINTO, BLACK, GREAT NORTHERN, RED, PINK AND NAVY):**

For control of weeds listed on the ANTLER CLETHODIM label.

**Time of application:** Apply a maximum of one application per year, post-emergent by ground application. Apply ANTLER CLETHODIM at 0.125 to 0.19 L/ha with the recommended adjuvant at 0.5% v/v when grassy weeds are in the 2 to 6 leaf stage.

**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR USE ON DRY ONIONS:**

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Winfield United Canada, ULC under the User Requested Minor Use Label Expansion program. For these uses, Winfield United Canada, ULC has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**PRODUCT FOR USE ON DRY ONIONS:**

**DIRECTIONS FOR USE:**

**FOR USE ON DRY ONIONS**

For suppression of annual bluegrass and control of other annual weeds listed on the ANTLER CLETHODIM label.

**Time of Application:** Apply ANTLER CLETHODIM post-emergent when the crop is in the 1 to 4 leaf stage. Apply by ground application. One application per year. Observe a PHI of 45 days.

<b>Grass Species</b>	<b>Leaf Stage</b>	<b>Application Rate of ANTLER CLETHODIM</b>	<b>Application Rate Adjuvant Surf-Act<sup>®</sup>, Destinaire High Surfactant Oil Concentrate, Journey<sup>™</sup> HSOC, Destination MSO, or MSO Concentrate with Leci-Tech</b>
Suppression of annual bluegrass	2-6	0.38 L/ha	0.5% v/v

## SPRAYING INSTRUCTIONS:

### DO NOT apply using aerial application equipment

#### Water volume and spray pressure:

For Ground Application, use sprayers equipped with standard flat fan nozzles. For optimum spray coverage use nozzles tilted 45° forward.

The use of flood jet or hollow cone nozzles is not recommended, because of uneven and inadequate spray coverage. Thorough and uniform spray coverage over the entire leaf area of the target weeds is necessary for optimum weed control.

Thoroughly clean all screens to prevent nozzle clogging, especially when water volumes of 55 to 110 L/ha are used.

In general, use water volumes of 55 to 225 L/ha and a minimum of 275 kPa pressure. For applications to dense weed infestations or to dense crop canopies, use a minimum of 110 litres of water per hectare at pressures of 275 to 425 kPa. In any situation, ensure the proper rate of adjuvant is maintained as listed on the label under APPLICATION RATES OF ANTLER CLETHODIM.

Field sprayer application: **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 Engineers (ASAE S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

#### Spray Buffer zones:

A spray buffer zone is NOT required for uses with hand-held application equipment permitted on this label.

The spray buffer zones specified in the table 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, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop	Spray Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field sprayer	All crops	1	1	1

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

## RESTRICTIONS AND LIMITATIONS:

1. Use only for crops listed on the label.
2. Thorough pre-plant tillage operations are required to fields where sod or forage grass crops may have grown in the previous year.
3. Take necessary precautions to avoid sprayer overlaps.
4. Rainfall within one hour of application may reduce the effectiveness of the spray.
5. Allow 4 days between application of ANTLER CLETHODIM and any other chemical not recommended as a tank-mix combination on the label.
6. Do not apply more than 0.38 L/ha (90 grams a.i./ha) per season.
7. Do not use crops for grazing of livestock or green feed following application of ANTLER CLETHODIM until after the appropriate interval as specified in the crop recommendations table has been observed. Do not cut treated crops for forage until the appropriate interval as specified in the crop recommendations table has been observed.
8. **DO NOT apply using aerial application equipment.** Use ground equipment only.

### **RESISTANCE MANAGEMENT RECOMMENDATIONS:**

For resistance management, ANTLER CLETHODIM is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to ANTLER CLETHODIM and other Group 1 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 ANTLER CLETHODIM or other Group 1 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- 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 Winfield United Canada, ULC.

**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.