

**Cleat®**

Selective Herbicide

WETTABLE GRANULES

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND THE INTERIOR OF BRITISH COLUMBIA ON WHEAT (SPRING AND DURUM), BARLEY, PASTURE AND RANGELAND, TRIBENURON-METHYL TOLERANT SUNFLOWERS (e.g. ExpressSun® Sunflowers SU7), AND SUMMERFALLOW, AND AS A PRE-SEEDING HERBICIDE ON FIELDS TO BE PLANTED TO WHEAT (SPRING AND DURUM), BARLEY, OATS, FIELD PEAS, DRY BEANS, LENTILS, SOYBEANS AND SULFONYLUREA (SU) TOLERANT CANOLA ONLY

COMMERCIAL

READ THE LABEL AND ENCLOSED BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** TRIBENURON-METHYL 75%

REGISTRATION NO.: 33327 PEST CONTROL PRODUCTS ACT

**NET CONTENTS:** 80 g – 10 kg

WARNING - EYE IRRITANT  
- POTENTIAL SKIN SENSITIZER

Albaugh LLC  
1525 NE 36th Street  
Ankeny, IA 50021 USA  
1-800-247-8013

For medical or treatment information from exposure to this product, call 1-888-347-6732 (7 days/week, 24-hr).

For 24-hour chemical spill, leak, fire, exposure, or accident response information, call CHEMTREC toll free at 1-800-424-9300.

AD032625

**PRECAUTIONS:**

- **KEEP OUT OF REACH OF CHILDREN.**
- WARNING: EYE IRRITANT
- POTENTIAL SKIN SENSITIZER
- MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
- AVOID BREATHING SPRAY MIST OR VAPOURS. USE WITH ADEQUATE VENTILATION.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
- DO NOT CONTAMINATE ANY BODY OF WATER.
- MAY IRRITATE SKIN AND EYES. WHEN USING, DO NOT EAT, DRINK OR SMOKE.
- WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. REMOVE CONTAMINATED CLOTHING IMMEDIATELY AFTER USE.
- WASH THOROUGHLY WITH SOAP AND WATER AFTER USE.

**DO NOT** apply by air

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab. In addition, wear protective eyewear (goggles or face shield) during mixing, loading, clean-up and repair.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**FIRST AID:****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 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 SWALLOWED:**

Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**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.

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

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**ENVIRONMENTAL PRECAUTIONS:**

**TOXIC** to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under **DIRECTIONS FOR USE**.

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.

**STORAGE:**

Store product in original container in a secure, dry area, away from fertilizer and seed. Store this product away from food or feed. Not for use or storage in or around the home. Keep container tightly closed.

**DISPOSAL:**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial/territorial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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 any way that is inconsistent with the directions on the label.

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- AVOID BREATHING SPRAY MIST OR VAPOURS. USE WITH ADEQUATE VENTILATION.
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- MAY IRRITATE SKIN AND EYES. WHEN USING, DO NOT EAT, DRINK OR SMOKE. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. REMOVE CONTAMINATED CLOTHING IMMEDIATELY AFTER USE.
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**DO NOT** apply by air.

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## **FIRST AID:**

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**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**ENVIRONMENTAL PRECAUTIONS:**

**TOXIC** to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under **DIRECTIONS FOR USE**.

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.

**IMPORTANT INFORMATION - READ BEFORE USING**

Injury to or loss of desirable trees, shrubs, flowers, vegetables, fruits or other vegetation may result from failure to observe the following: Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Prevent drift of spray to desirable plants. Do not contaminate any body of water, including irrigation water that may be used on crops.

DO NOT APPLY BY AIR.

Do not apply in high winds.

Carefully observe sprayer clean-up instructions, as spray tank residue may damage crops other than spring wheat, durum or barley. Thoroughly clean all traces of tank mix from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Wash away any spray mixture from the outside of spray tank, nozzle or spray rig.

A MINIMUM RECROPPING INTERVAL OF 2 MONTHS SHOULD BE LEFT BETWEEN THE APPLICATION OF THIS PRODUCT AND SEEDING OF THE NEXT CROP. After 2 months, the following crops can be seeded: canola, flax, alfalfa.

DO NOT APPLY CLEAT WITH A CARRIER OTHER THAN WATER OR ANY ADDITIVE OTHER THAN THOSE INDICATED ON THIS LABEL. Other carriers may accelerate breakdown of this product and reduce its effectiveness.

**DIRECTIONS FOR USE****GENERAL INFORMATION:**

Cleat provides control of certain broad-leaved weeds in spring planted wheat (including durum), barley, pasture and rangeland, tribenuron-methyl tolerant sunflowers (e.g. ExpressSun<sup>®</sup> Sunflowers SU7) and summerfallow, and as a pre-seeding herbicide on fields to be planted to wheat (including durum), barley, oats, lentils, soybeans, dry beans, field peas, and sulfonylurea (SU) tolerant canola.

Warm, moist growing conditions promote active weed growth and enhance the activity of Cleat by allowing maximum foliar uptake and contact activity. Weeds hardened off by environmental

stress such as cold weather, drought stress or excessive heat may not be adequately controlled or suppressed, and regrowth may occur. Cleat may only be applied using ground spray equipment. For best results, ensure thorough spray coverage of target weeds.

Cleat rapidly stops growth of susceptible weeds. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application, depending on growing conditions and weed susceptibility. Degree of control and duration of effect depend on weed sensitivity, weed size, spray coverage and growing conditions. Activity of the herbicide mixture may be delayed by cold, dry conditions after application.

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.

Field sprayer application: DO NOT apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. DO NOT apply with sprays finer than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) Medium 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 ,
- low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage

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), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Crop/Site	Spray Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitat of Depths:		Estuarine/Marine Habitat of Depths:		Terrestrial Habitat:
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	summerfallow, wheat (spring and durum), barley, oats, field peas, lentils, dry beans, soybeans, sulfonylurea (SU) tolerant canola, et Tribenuron-methyl tolerant sunflowers (e.g. ExpressSun™® Sunflowers SU7)	0	0	N/A	N/A	3
	Pasture and rangeland	1	0	N/A	N/A	4

N/A = Not applicable (Spray buffer zones for the protection of estuarine/marine habitats are not applicable for uses registered only in the Prairie provinces (Manitoba, Saskatchewan, Alberta) and the interior of British Columbia, including the Peace River Region.)

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 (ASABE) category indicated on the labels for those tank mix partners.

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

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 Albaugh at 1-800-247-8013 for information before applying any tank mix that is not specifically recommended on this label.



## **FOR WEED CONTROL IN SPRING WHEAT (INCLUDING DURUM) AND BARLEY**

### **Cleat + 2,4-D Ester Tank Mix**

Apply **Cleat** at 10 grams per hectare with 2,4-D Ester at 412.5 grams acid equivalent per hectare (0.625 L/ha 2,4-D Ester 700).

### **WEEDS CONTROLLED**

Annual sunflower  
Ball mustard  
Canada thistle (top growth control)  
Cow cockle  
Flixweed (fall rosettes and spring seedlings)  
Hare's-ear mustard  
Indian mustard  
Kochia (2-10 leaf)  
Lamb's-quarters  
Narrow-leaved hawk's-beard (fall rosettes and spring seedlings)  
Prickly lettuce  
Redroot pigweed  
Russian pigweed  
Russian thistle  
Shepherd's-purse (fall rosettes and spring seedlings)  
Stinkweed (fall rosettes and spring seedlings)  
Sweetclover  
Thyme-leaved spurge  
Tumble mustard  
Wild mustard  
Wild radish  
Wormseed mustard

### **WEEDS SUPPRESSED**

Wild buckwheat\*

\* Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

### **WHEN TO APPLY**

Apply the tank mix from the full 3-leaf stage to just before the flag leaf (shot blade) stage of wheat (including durum) and barley, prior to head emergence. Do not apply after head has emerged.

For best results apply to young, emerged actively growing weeds that are less than 10 cm tall or across, and before the crop canopy closes. Weeds that emerge after treatment will not be controlled.

For wild buckwheat, apply to ACTIVELY GROWING wild buckwheat in the 1 to 3 leaf stage. Under dry conditions, suppression may be reduced. Plants larger than the 3-leaf stage may regrow after treatment.

**NOTE:** If rain occurs soon after application control may be reduced. At least 4-6 hours of dry weather is needed to allow tank mix to be absorbed by weed foliage. Environmental conditions that slow the drying of the spray mixture on the foliage such as high relative humidity, cool air temperatures or cloud cover, may increase the time required.

## **FOR WEED CONTROL IN SUMMERFALLOW**

With any summerfallow treatment, allow at least 10 days to elapse between treatment and tillage. Only weeds that have emerged at the time of application will be controlled.

### **APPLICATION TIMING:**

#### **Cleat + 2,4-D Ester Tank Mix**

Apply Cleat at 10 grams per hectare with 2,4-D ester at 412.5 grams/ha acid equivalent (0.625 L/ha 2,4-D Ester 700).

Apply the tank mix in the spring after emergence, up to the early flowering stage of the target weeds.

### **WEEDS CONTROLLED:**

Flixweed and Stinkweed (fall rosettes and spring seedlings)

## **CONTROL OF BROADLEAF WEEDS AND GRASSES IN FALLOW AND PRE-SEED TO SPRING WHEAT (INCLUDING DURUM), BARLEY, OATS, DRY BEANS, FIELD PEAS, LENTILS, SOYBEANS AND SULFONYLUREA (SU) TOLERANT CANOLA.**

With any summerfallow treatment, allow 10 days to elapse between treatment and tillage. Only weeds emerged at time of application will be controlled.

Fields treated with Cleat can be seeded to wheat (spring or durum), barley, oats, dry beans, field peas, lentils, soybeans or Sulfonylurea (SU) tolerant canola a minimum of 24 hours after application.

**Apply Cleat at 10 grams per hectare, tank mixed with one of the following companion herbicides and adjuvant (where required) in a total spray volume of 55-110 L/ha.**

<b>Companion Herbicide</b>	<b>Application Rate</b>	<b>Application Stage</b>	<b>Weeds Controlled</b>	<b>Weeds Suppressed*</b>
Glyphosate (present as potassium salt, isopropylamine salt or trimethylsulfonium salt)	450 g ae/ha	Up to 8 cm	Canada fleabane, Common ragweed, Narrow-leaved hawk's beard	
		Up to 15 cm	Dandelion, Downy brome, Giant foxtail, Green foxtail, Hemp nettle, Kochia, Lady's thumb, Lamb's-quarters, Persian dandel, Redroot pigweed,	

			Russian thistle, Stinkweed, Volunteer barley, Volunteer canola (including glyphosate-tolerant varieties), Volunteer flax, Volunteer wheat, Wild mustard, Wild oats	
		Up to 3-leaf	Wild buckwheat, Cow cockle	
		Rosette		Canada thistle
Glyphosate (present as potassium salt, isopropylamine salt or trimethylsulfonium salt) plus Agral 90 <sup>†</sup>	270 g ae/ha 0.35% v/v	Any stage	Volunteer canola (including glyphosate tolerant varieties)	
		Seedlings And rosettes (nonflowering)		Narrow-leaved hawk's beard
		Up to 10 cm	Kochia, Lamb's-quarters	Redroot pigweed, Russian thistle
		Up to 8 cm	Green foxtail, Lady's thumb, Stinkweed, Volunteer barley, Volunteer wheat, Wild mustard, Wild oats (1-3- leaf), Wild buckwheat (1-3 leaf)	
Glyphosate (present as potassium salt, isopropylamine salt or trimethylsulfonium salt) plus Agral 90 <sup>†</sup>	360 g ae/ha 0.35% v/v	Rosettes (nonflowering)	Dandelion (top growth)	Canada thistle (top growth)
Glyphosate (present as potassium salt, isopropylamine salt, ammonium salt) + InStep™ Herbicide	450 g ae/ha + 36.5 – 117 mL/ha	Up to 8 cm	Canada fleabane, common ragweed, narrow leaved hawk's beard	Scentless chamomile
		Up to 15 cm	Dandelion, downy brome, flaxweed, giant foxtail, green foxtail, hemp nettle, kochia, lady's thumb, lamb's-quarters, Persian dandelion, redroot pigweed, Russian thistle, stinkweed,	

			volunteer barley, volunteer canola (including glyphosate tolerant varieties), volunteer flax, volunteer wheat, wild mustard, wild oats	
		Up to 3-Leaf	Cow cockle, wild buckwheat	
		Rosette		Canada thistle, White cockle
Glyphosate (present as potassium salt, isopropylamine salt, ammonium salt) + InStep + Agral® 90†	270 g ae/ha + 36.5 – 117 mL/ha + 0.35% v/v	Any stage	Volunteer canola (including glyphosate tolerant varieties)	
		Seedling and rosettes		Narrow leaved hawk's beard
		Up to 8cm	Green foxtail, lady's thumb, stinkweed, volunteer barley, volunteer wheat, wild buckwheat (1-3 leaf), wild mustard, wild oats (1-3 leaf)	
		Up to 10 cm	Kochia, lamb's quarters	Redroot pigweed, Russian thistle
Glyphosate (present as potassium salt, isopropylamine salt, ammonium salt) + InStep + Agral 90†	360 g ae/ha + 36.5 – 117 mL/ha + 0.35% v/v	Rosettes (non-flowering)	Dandelion (top growth)	Canada thistle (top growth)

\*Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

†Agral 90 Non-Ionic Wetting & Spreading Agent Liquid or Agral 90 Non-Ionic Liquid Wetting & Spreading Agent.

Fields treated with **Cleat** + Glyphosate or **Cleat** + InStep + Glyphosate can be seeded with wheat (spring or durum), barley, oats, dry beans, field peas, lentils, soybeans or sulfonylurea tolerant (SU) canola a minimum of 24 hours after application.

Dry bean varieties may vary in their tolerance to herbicides, including to Cleat. Since not all dry bean varieties have been tested for tolerance to Cleat, first use of Cleat should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your seed supplier for information on the tolerance of specific varieties of dry beans to Cleat.

## TRIBENURON-METHYL TOLERANT SUNFLOWERS (e.g. EXPRESSSUN® SUNFLOWERS SU7)

### **CLEAT plus HASTEN® NT Ultra Spray Adjuvant for control of lamb's-quarters and suppression of wild buckwheat.**

Apply Cleat at 10 g/ha and HASTEN NT Ultra Spray Adjuvant at 0.5% v/v (5 L per 1000 L of water) at the 2-8 leaf stage of the tribenuron-methyl tolerant sunflowers (e.g. ExpressSun® sunflowers SU7) for control of up to 9 leaf lamb's-quarters and suppression of 1-6 leaf wild buckwheat. Application should be made using a minimum spray volume of 55 L/ha.

CLEAT at 10 g /ha + HASTEN NT Ultra Spray Adjuvant at 0.5% v/v	
Weeds Controlled	Weeds Suppressed
Lamb's-quarters	Wild Buckwheat

### **CLEAT plus Assure® II Herbicide plus Merge® Adjuvant at 0.5-1.0% v/v (0.5-1.0 litres per 100 litres of spray solution) or SURE-MIX® Surfactant at 0.5% v/v (0.5 litres per 100 litres of spray solution) for control and suppression of grassy and broadleaf weeds listed below.**

Apply **CLEAT** at 10 g/ha and Assure II Herbicide at labelled rates plus Merge Adjuvant at 0.5-1.0 % v/v (0.5-1.0 litres per 100 litres of spray solution) or SURE-MIX Surfactant at 0.5% v/v (0.5 litres per 100 litres of spray solution) at the 2-8 leaf stage of the tribenuron-methyl tolerant sunflowers (e.g. ExpressSun® sunflowers SU7) and at the leaf stage of the grass and broadleaf weeds indicated below. Application should be made using a minimum spray volume of 55 L/ha.

**CLEAT** at 10 g /ha + Assure II Herbicide at label rate plus Merge Adjuvant at 0.5-1.0% v/v or Sure-Mix Surfactant 0.5%v/v

Weeds Controlled	Weeds Suppressed
Lamb's-quarters	Wild Buckwheat
Plus all weeds according to rates of use on the Assure II Herbicide label	

DO NOT harvest sunflowers within 70 days of application.

## **PASTURE AND RANGELAND**

For season-long control of broadleaf weeds in pasture and rangeland, apply **CLEAT** at either 10 or 20 grams per hectare with a non-ionic surfactant at 0.2% v/v (2 L per 1000 L of water) to broadleaf weeds in the early bud to pre-bloom stage using a minimum spray volume of 55 L/hectare. Use a maximum of 20 grams of **CLEAT** per hectare per year.

### **WEEDS:**

Rates (grams per hectare)	Season long control
10	Tall buttercup and narrow-leaved hawk's beard
20	Dandelion, white cockle, and common tansy

NOTE: Livestock may graze without restriction following treatment

**INSTRUCTIONS:**

1. Add one-third of the necessary volume of water to the spray tank.
2. With the agitator running, add the Cleat.
3. When Cleat is in suspension, add the required amount of the appropriate tank mix partners.
4. Specific Tank Mix Instructions:

Cleat + 2,4-D Ester: Once Cleat is completely in suspension, add the required amount of 2,4-D Ester while maintaining agitation. Do not add a surfactant.

Cleat + Glyphosate:

Once Cleat is completely in suspension, add the required amount of glyphosate as indicated in the APPLICATION RATES AND TIMING tables. Once components are in suspension, if required, add Agral 90 Non-Ionic Wetting & Spreading Agent Liquid or Agral 90 Non-Ionic Liquid Wetting & Spreading Agent at 3.5 L per 1000 L of spray solutions (0.35% v/v)

Cleat + InStep + Glyphosate: Once Cleat is completely in suspension, add the required amount of InStep and add the required amount of Glyphosate as indicated in the APPLICATION RATES AND TIMING tables. Once components are in suspension, if required, add Agral 90 Non-Ionic Wetting & Spreading Agent Liquid or Agral 90 Non-Ionic Liquid Wetting & Spreading Agent at 3.5 L per 1000 L of spray solution (0.35% v/v).

5. Add the rest of the water. If an antifoam agent is required, add this last.
6. Use a minimum spray volume of 55 L/ha.
7. For repeat tankloads, reduce the material remaining in the tank to 10% of the original volume or less before proceeding with step 1. If this is not possible, pre-slurry Cleat in a small amount (5-10 L) of water before adding to the tank.

Continuous agitation is required to keep Cleat in suspension. If the spray preparation is left standing without agitation, thoroughly agitate to re-suspend the mixture before spraying. Use spray preparation within 24 hours or product degradation may occur.

**MINIMUM RECROPPING INTERVAL AND CROP ROTATION GUIDELINES:**

A minimum recropping interval of 2 months should be left between the application of this product and seeding of the next crop. The following crops can be seeded two months after application of Cleat + 2,4-D Ester: canola, flax, lentils, and alfalfa.

**EQUIPMENT-SPRAY VOLUMES:**

Apply the spray mixture uniformly with properly calibrated ground equipment only. Ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended (minimum 55 litres spray volume per hectare). Use 50 mesh filter screens or larger (metal or nylon).

Continuous agitation is required to keep the spray materials in suspension. Apply uniformly and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to prevent crop injury from over application.

Reduce drift with high water volume, low pressure, coarse sprays and drop nozzles.

### **SPRAYER CLEANUP:**

It is difficult to remove all traces of 2,4-D Ester from a sprayer. A sprayer used to apply this herbicide should not be used to spray crops sensitive to this herbicide. The following clean-out procedure will remove traces of Cleat from the sprayer.

1. Drain tank; then flush tank, boom and hoses with clean water for a minimum of ten minutes to remove all visible residues.
2. Fill the tank with clean water then add 1 litre household AMMONIA (containing a minimum of 3% ammonia) per 100 litres of water. Fill boom and hoses with solution and allow sprayer to sit for 15 minutes. Drain.
3. Repeat step 2.
4. Nozzles and screens should be removed and cleaned separately. To remove traces of ammonia, rinse the tank, hoses and booms thoroughly with clean water.
5. Dispose of tank rinsate according to provincial or territorial directions.

**CAUTION:** Do not use ammonia with chlorine bleach. Using ammonia with chlorine bleach will release a gas with a musty chlorine odour which can cause eye, nose, throat and lung irritation. Do not clean equipment in an enclosed area.

### **RESISTANCE MANAGEMENT RECOMMENDATIONS:**

For resistance management, Cleat is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Cleat and other Group 2 herbicides. The resistance 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 Cleat or other Group 2 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 different groups 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 your local Albaugh representative or at 1-800-247-8013 for further information.

**USE PRECAUTIONS:**

Licensed wheat and barley varieties have shown acceptable tolerance to Cleat. Consult Albaugh prior to use on unlicensed varieties for crop tolerance information.

Do not apply to irrigated land where tail water will be used to irrigate other crop land.

Do not contaminate irrigation water.

Use a maximum of 10 grams of Cleat per hectare per year (20 g/ha for pasture and rangeland).

Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls or calcium deposits.

Do not apply to fields to be planted to spring wheat, durum wheat or barley undersown with legumes or grasses as injury to the forage may result.

Cleat applied to fields to be planted to spring wheat, durum wheat, barley, oats, field peas, lentils, soybeans or sulfonylurea tolerant (SU) canola that is stressed by severe conditions such as drought, low fertility, saline soils, waterlogged soils (soils at or near field capacity), disease or insect damage may result in crop injury. Drought, disease or insect damage following application may also result in crop injury, grade or yield loss.

Do not remove soil from treated fields for use on lawns, in gardens or for backfill.

Under certain conditions such as prolonged cool weather temperature or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.

Control of weeds growing in wheel tracks may be reduced Cleat is applied under dry, dusty conditions.

**STORAGE:**

Store product in original container in a secure, dry area, away from fertilizer and seed. Store this product away from food or feed. Not for use or storage in or around the home. Keep container tightly closed.

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**DISPOSAL:**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial/territorial requirements.



5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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 any way that is inconsistent with the directions on the label.

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