Container LABEL

**GROUP 4 6 HERBICIDES** 

BADGE<sup>®</sup>

### EMULSIFIABLE CONCENTRATE

Contains Bromoxynil and MCPA

For use in WHEAT (spring, durum & winter), BARLEY, OATS, FLAX (including low linolenic varieties), CORN, FALL RYE, CANARY SEED (*Phalaris canariensis*), SEEDLING GRASSES, ESTABLISHED GRASSES

#### **AGRICULTURAL**

ACTIVE INGREDIENTS: Bromoxynil (present as esters) 225 g a.e./L

MCPA (present as the 2-ethylhexyl ester) 225 g a.e./L

REGISTRATION NO. 16164 PEST CONTROL PRODUCTS ACT



READ THE LABEL AND BOOKLET BEFORE USING KEEP OUT OF REACH OF CHILDREN

NET CONTENTS: 4 Litres to 1050 Litres

ADAMA Agricultural Solutions Canada Ltd. 300 – 191 Lombard Avenue Winnipeg, MB R3B 0X1 1-855-264-6262

For emergency medical help and health/safety inquires call ProPharma at 1-877-250-9291 (24 hours a day)

For spill, leak or fire call INFOTRAC at 1-800-535-5053 (24 hours a day)

10 L TREATS 8 HECTARES

#### **PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Wash concentrate from skin or eyes immediately. Avoid working in spray mist. After use wash hands and other exposed skin.

Do not use in residential areas, which are defined as sites where bystanders may be present during or after spraying, including homes, schools, parks, playgrounds, playing fields and public buildings. Wear a chemical- resistant apron during mixing/loading activities.

Only handlers wearing personal protective equipment may be in the area being treated during application. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Apply only when the potential for drift to areas of human habitation or 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.

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.

**Ground applications:** Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair. Wear a long-sleeved shirt and long pants, chemical resistant gloves, and socks plus shoes during applications. Gloves are not required during application within a closed cab.

Aerial applications: the field crew and the mixer/loaders: Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair.

**Aerial applicators**: Wear a long-sleeved shirt, long pants, socks and shoes during application. Gloves are not required during application within a closed cockpit. Do not allow the pilot to mix chemicals to be loaded onto the aircraft.

#### Surface runoff

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted, fine-textured, or low in organic matter such as clay). Avoid applying this product when heavy rain is forecast.

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

### Leaching

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

Avoid contamination of ponds, streams, rivers and other water sources.

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.

**PRE-HARVEST GRAZING INTERVALS:** Do not use treated crops for grazing of livestock or green feed until 30 days after application of BADGE<sup>®</sup>. Withdraw meat animals from treated fields at least 3 days before slaughter. Do not cut treated crops for forage until 30 days after application of BADGE<sup>®</sup>.

### FIRST AID:

Remove person from contaminated area, remove contaminated clothing. Keep patient warm, comfortable, at rest. Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

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 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 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.

### **TOXICOLOGICAL INFORMATION:**

Medical personnel should contact ProPharma at 1-877-250-9291 (24 hours a day). This product contains an aromatic hydrocarbon solvent.

High concentrations of MCPA may cause severe irritation to the eyes. Symptoms of overexposure to MCPA could include slurred speech, twitching, jerking, spasms, drooling, low blood pressure and unconsciousness. Treat symptomatically.

**ENVIRONMENTAL PRECAUTIONS:** Toxic to aquatic organisms and non-target terrestrial

plants. Observe 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 strip between the treated area and the edge of the water body.

### **STORAGE CONDITIONS:**

This BADGE® formulation will solidify at temperatures below -20°C but will become usable at temperatures above 0°C. Insecticides and

fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination.

#### **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.

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

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

## **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.

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GROUP 4 6 HERBICIDES

BADGE<sup>®</sup>

## EMULSIFIABLE CONCENTRATE

Contains Bromoxynil and MCPA

For use in WHEAT (spring, durum & winter), BARLEY, OATS, FLAX (including low linolenic varieties), CORN, FALL RYE, CANARY SEED (*Phalaris canariensis*), SEEDLING GRASSES, ESTABLISHED GRASSES

### **AGRICULTURAL**

ACTIVE INGREDIENTS: Bromoxynil (present as esters) 225 g a.e./L

MCPA (present as the 2-ethylhexyl ester) 225 g a.e./L

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**WARNING** 



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10 L TREATS 8 HECTARES

#### PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Wash concentrate from skin or eyes immediately. Avoid working in spray mist. After use wash hands and other exposed skin.

Do not make more than one application per year to wheat, barley, oats, flax and corn.

Do not use in residential areas, which are defined as sites where bystanders may be present during or after spraying, including homes, schools, parks, playgrounds, playing fields and public buildings. Wear a chemical- resistant apron during mixing/loading activities.

For grasses grown for seed, a maximum of 2 applications is permitted per season with a minimum retreatment interval of 21 days.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours or more.

DO NOT apply this product in a way that this product will contact workers or other persons, either directly or through drift. Only handlers wearing personal protective equipment may be in the area being treated during application.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Apply only when the potential for drift to areas of human habitation or 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.

**Ground applications:** Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair. Wear a long-sleeved shirt and long pants, chemical resistant gloves, and socks plus shoes during applications. Gloves are not required during application within a closed cab.

Aerial applications: the field crew and the mixer/loaders: Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair.

**Aerial applicators**: Wear a long-sleeved shirt, long pants, socks and shoes during application. Gloves are not required during application within a closed cockpit. Do not allow the pilot to mix chemicals to be loaded onto the aircraft.

### Surface runoff

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff

include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted, fine-textured, or low in organic matter such as clay). Avoid applying this product when heavy rain is forecast.

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

## Leaching

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

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.

Avoid contamination of ponds, streams, rivers and other water sources.

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.

**PRE-HARVEST GRAZING INTERVALS:** Do not use treated crops for grazing of livestock or green feed until 30 days after application of BADGE<sup>®</sup>. Do not cut treated crops for forage until 30 days after application of BADGE<sup>®</sup>. Withdraw meat animals from treated fields at least 3 days before slaughter.

#### FIRST AID:

Remove person from contaminated area, remove contaminated clothing. Keep patient warm, comfortable, at rest. Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**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 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 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.

## **TOXICOLOGICAL INFORMATION:**

Medical personnel should contact ProPharma at 1-877-250-9291 (24 hours a day). This product

contains an aromatic hydrocarbon solvent.

High concentrations of MCPA may cause severe irritation to the eyes. Symptoms of overexposure to MCPA could include slurred speech, twitching, jerking and spasms, drooling, low blood pressure and unconsciousness. Treat symptomatically.

### **ENVIRONMENTAL PRECAUTIONS:**

TOXIC to aquatic organisms and non-target terrestrial plants. Observe 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 strip between the treated area and the edge of the water body.

## **STORAGE CONDITIONS:**

This BADGE® formulation will solidify at temperatures below -20°C but will become usable at temperatures above 0°C. Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross- contamination.

#### **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.

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

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

**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.

### **DIRECTIONS FOR USE:**

**TIMING:** For best results, spray when weeds are in the seedling stage. Apply in good growing conditions. Application **must** be made before the crop shields the weeds.

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.

**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 ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262 for information before applying any tank mix that is not specifically recommended on this label.

**SPRAYER:** Wash the tank and clean all filters, screens and tips. Select nozzle tips to apply the recommended volume per hectare. Flood jet type tips are not recommended. Adjust boom height to ensure uniform coverage of the weeds. For ground applications, spray at 5 - 10 Kph. Ensure that all tips are in good condition and spraying the same volume.

## **DIRECTIONS FOR USE:**

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 and Biological Engineers (ASABE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wingspan or rotorspan.

## FOR AERIAL APPLICATION (wheat, barley and oats only):

## **Aerial Application Instructions**

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

### **Use Precautions**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other nontarget areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelterbelt) or aquatic habitat.

## **Operator Precautions**

Wear a long-sleeved shirt, long pants, socks and shoes during application. Gloves are not required during application within a closed cockpit. Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. Aircraft must be closed cab. Mixer/loader and applicator must be different individuals. No human flaggers permitted.

The field crew and the mixer/loaders: Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

## **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call ADAMA at 1-855-264-6262 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

- 1. Weeds must be treated at the *recommended* growth stages while actively growing. Weed stage should be checked prior to spraying.
- 2. BADGE® must be applied in volume rates of not *less than* 20 L/ha. For best results when there is a heavy crop canopy, or when the majority of the weeds are cow cockle, smartweed, hempnettle, pigweed or Canada thistle a volume rate of 40 L/ha is recommended.
- 3. The 1.25 L/ha rate of BADGE® must *not* be reduced.
- 4. Effective swath width (as determined by boom width and spray pattern overlaps) must be accurately maintained. Conduct tests to determine the effective swath width of your aircraft. (For example, the effective swath width may be less than one-half of the overall swath.)
- 5. Flat-fan or hollow cone nozzles are recommended.
- 6. Nozzles should be positioned to compensate for prop-wash and wing-tip vortex effects. Nozzles should not be placed within 1 m of wing tips.
- 7. Orient nozzles (measured from direction of flight) to achieve desired minimum droplet density with maximum coverage.

Volume Rate	Nozzle Type	Nozzle Orientation
20 L/ha	Flat Fan	90°
20 L/na	Hollow Cone	135°
20 I /l	Flat Fan	90° – 135°
30 L/ha	Hollow Cone	135°
40 I /lao	Flat Fan	135°
40 L/ha	Hollow Cone	135° – 180°

- 8. Efficient track-marking is essential ("Automatic Flagmen" markers should only be used as a back-up system).
- 9. Avoid spraying in temperatures greater than 25°C.
- 10. Spray only when wind is blowing away from a sensitive crop.
- 11. Do not spray in a dead calm and when wind speed exceeds 8 Kph.

**MIXING:** Half fill the tank with clean water. Add the required amount of BADGE® and agitate thoroughly. Fill the tank and agitate again before use.

## HERBICIDE RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, please note that BADGE® is a Group 4 and 6 herbicide. Any weed

population may contain or develop plants naturally resistant to BADGE<sup>®</sup> and other Group 4 and 6 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 BADGE® or other Group 4 and 6 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 ADAMA at 1-855-264-6262.

#### **Buffer zones:**

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment.

The 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		<b>Buffer Zones (metres)</b>	Required for the Pro	otection of:
	Crop	Freshwater Habitat of	Estuarine/Marine	Terrestrial
Application		Depths:	Habitats of	Habitat

					Depths:		
			Less	Greater	Less	Greater	
			than 1 m	than 1 m	than 1 m	than 1 m	
Field sprayer*	All crops		1	1	1	1	4
Aerial	Oats	Fixed wing	15	2	1	1	60
		Rotary wing	15	1	1	1	50
	Barley	Fixed wing	20	5	1	1	60
	and wheat	Rotary wing	20	3	1	1	50

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

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.

## WHEAT (Spring, Durum & Winter) (not underseeded to legumes)

### **BADGE® USED ALONE:**

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Spring and durum wheat may be treated from the 2-leaf until the early flag leaf stage. Winter wheat may be treated from the 2 to 4-leaf stage in the fall or from the time growth commences to the early flag leaf stage in the spring.

**APPLICATION RATE: 1.25 L/ha** 

### WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed

Lady's-thumb Seedlings up to 8-leaf stage

Cow cockle\* Wild buckwheat
Redroot pigweed Tartary buckwheat
Flixweed Common buckwheat

Bluebur Stinkweed
Shepherd's-purse Wild mustard
Kochia\*\* Wormseed mustard
Russian thistle\*\* Lamb's-quarters
Scentless chamomile\*\*\* Common ragweed
Volunteer sunflower Common groundsel

Volunteer rapeseed (including Canola)

Night flowering catchfly

## **Perennials: Top-growth checked**

Cocklebur Canada thistle
Velvetleaf\*\*\*\* Perennial sow-thistle

Ball mustard

American nightshade

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.

## BADGE® + FLUROXYPYR 180 EC

## (Spring Wheat and Durum Wheat - not underseeded to legumes)

Follow all precautions, limitations and timing recommendations on the FLUROXYPYR 180 EC label.

DO NOT apply this tank mix using aerial application equipment.

**SPRAY VOLUME & PRESSURE**: For ground application apply 50 to 100 litres of water per hectare at a low pressure (200 to 275 kPa). For best results when there is a heavy crop canopy, or when the majority of the weeds are at advanced stage of growth, a volume rate of 100 L/ha is recommended.

**TIMING:** Wheat (spring and durum) may be treated from the 2-leaf stage until the early flag leaf stage. Application before the 2-leaf stage may injure the crop.

Apply when weeds are actively growing. Best results are obtained from applications made to seedling weeds. Only weeds emerged at the time of treatment will be controlled. Extreme growing conditions such as drought or near freezing temperature prior to, at and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Foliage that is wet at the time of application may decrease control.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with FLUROXYPYR 180 EC at 600 mL/ha.

## WEEDS CONTROLLED:

As listed for BADGE® label alone plus Cleavers (1-4 whorls) and Volunteer flax (1-12 cm).

**NOTE:** The tank mixture BADGE® + FLUROXYPYR 180 EC activity is influenced by weather conditions. Optimum activity requires active crop and weed growth. The temperature range for optimum activity is 12°C to 24°C. Reduced activity will occur when temperatures are below 8°C or above 27°C. Frost before application (3 days) or shortly after (3 days) may reduce weed control and crop tolerance. Weed control may be reduced during stress conditions, e.g. drought, heat or cold stress, or if weeds have initiated flowering, or if heavy infestations exist.

### BADGE® + MCPA

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Spring and durum wheat may be treated from the 2-leaf until the early flag leaf stage.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with 275 g active ingredient MCPA per hectare.

**NOTE:** MCPA is preferred for hempnettle although other formulations may be used. Refer to the MCPA label for precautions and limitations. Add MCPA to the spray tank first, agitate, then add BADGE<sup>®</sup>.

#### WEEDS CONTROLLED:

As listed for BADGE® alone plus these additional weeds.

Seedlings up to 4-leaf stage Seedlings up to 8-leaf stage

Hempnettle\* Volunteer rapeseed (including Canola)

\*Hempnettle is unlikely to be controlled beyond the 4-leaf stage. Plants emerging after application, which is often the case on peat-type soils, will not be controlled.

# **BADGE® + ACHIEVE® LIQUID HERBICIDE**

### (Spring Wheat and Durum Wheat)

Follow all mixing and spraying precautions, limitations and timing recommendations on the Achieve<sup>®</sup> Liquid Herbicide label. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE:** Apply in 100 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Applications of BADGE® + Achieve® Liquid Herbicide tank mixtures should be made to spring wheat from the 2-leaf until the early flag leaf stage of growth (total leaves including tillers) (Zadoks or BBCN growth stage of 11,20 to 14,21) and when wild oats are at the 1 - 6 leaf stage of growth (total leaves including tillers) (Zadoks or BBCN growth stage of 11,20 to 14,22) and when green foxtail (wild millet) is at the 1-5 leaf stage of growth (Zadoks or BBCN growth stage of 11,20 to 14,21). Refer to the illustration on the Achieve® Liquid Herbicide label.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with Achieve<sup>®</sup> Liquid Herbicide at 0.5 L/ha. When using this tank mixture, add Turbocharge<sup>®</sup> to the spray tank at a concentration of 0.5% v/v (i.e. 0.5 L of Turbocharge<sup>®</sup> per 100 L of spray solution).

### **WEEDS CONTROLLED:**

As listed on the BADGE<sup>®</sup> alone plus wild oats and green foxtail (wild millet).

**NOTE:** BADGE<sup>®</sup> + Achieve<sup>®</sup> Liquid Herbicide tank mixtures can be used in all varieties of spring wheat (including hard red spring, Canada prairie spring, soft white spring, and utility) and durum.

Only apply this mixture to spring wheat that is NOT UNDERSEEDED TO LEGUMES.

BADGE® + ALLY®

**NOTE:** Refer to the Ally<sup>®</sup> label for all precautions, including limitations on soil pH, crop rotations and sprayer cleanup.

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 100 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Spring wheat and durum wheat (not underseeded with other crops) may be treated from the 2-leaf to early flag leaf stage.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with Ally<sup>®</sup> at 7.5 g/ha plus a surfactant as required on the Ally<sup>®</sup> label. Add Ally<sup>®</sup> to the required water volume in the tank first, agitate, then add BADGE<sup>®</sup>, agitate, then add the surfactant. On repeat tank loads, prepare an Ally<sup>®</sup>/water slurry and add it to the required water volume in the tank prior to adding the BADGE<sup>®</sup>.

### **WEEDS CONTROLLED:**

As listed for BADGE<sup>®</sup> alone at the recommended rate, plus hempnettle up to the 8 leaf stage (4 pairs of leaves), and chickweed up to 7 cm high. For best results, apply to the first main flush of young, actively growing weeds.

DO NOT APPLY THIS TANK MIX USING AERIAL APPLICATION EQUIPMENT.

BADGE® + EVEREST® 70 DF + Surfactant

(Spring Wheat)

For Use Only in Manitoba, Saskatchewan, Alberta and Peace River Region of British Columbia

Follow all mixing and spraying precautions, limitations and timing recommendations on the Everest® 70 DF label. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE:** Apply in a spray volume of 100 litres of water per hectare at a pressure of 275 kPa.

### **WEEDS CONTROLLED:**

As listed for BADGE® alone at the recommended rate, plus wild oats and green foxtail (wild millet)

**TIMING (Crop):** Do not apply the BADGE® + Everest® 70 DF tank mixture before crop emergence is complete. Applications of the BADGE® + Everest® 70 DF tank mixture should be made to spring wheat that has a minimum of one leaf to a maximum of four leaves on the main stem, plus two tillers (1 leaf to 6 total leaves). Application beyond this stage may result in yield losses due to weed competition.

## TIMING (Weeds):

*Wild Oats:* 1 to 4 leaves on the main stem, plus 2 tillers (1 leaf to 6 total leaves). No larger than 4-leaf, 2 tillers.

*Green Foxtail (Wild Millet):* 1 to 4 leaves on the main stem, plus 2 tillers (1 leaf to 6 total leaves). No larger than 4-leaf, 2 tillers.

### **APPLICATION RATE:**

*For Green Foxtail (Wild Millet) control:* BADGE® at 1.25 L/ha tank-mixed with 21.5 g/ha of Everest® 70 DF and 0.25% v/v or 0.25 L/100 L of Agral® 90 or Ag- Surf®.

*For Green Foxtail (Wild Millet) and Wild Oat control:* BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with 43 g/ha of Everest<sup>®</sup> 70 DF and 0.25% v/v or 0.25 L/100 L of Agral<sup>®</sup> 90 or Ag-Surf.

**MIXING INSTRUCTIONS:** Fill spray tank ½ to ½ full with water, followed by Everest® 70 DF then BADGE®, and surfactant, and remainder of the water.

**NOTE:** The BADGE® + Everest® 70 DF tank mixture can be used in all varieties of spring wheat (including hard red spring, Canada prairie spring, soft white spring).

Only apply this mixture to spring wheat that is NOT UNDERSEEDED TO LEGUMES. The following crops may be planted 11 months after application of BADGE® + Everest® 70 DF depending on soil zone. *In the Black, Dark Brown and Gray-Wooded Soil Zones:* Spring wheat, barley, canola, field peas. Field peas may be grown the year following in fields where annual precipitation has been normal or above normal (10 year average) during the growing season, and where organic matter content is above 4%, and pH below 7.5. *In the Brown Soil Zone:* only Spring Wheat.

BADGE® + REFINE EXTRA® 75 DF HERBICIDE + Surfactant

BADGE® + REFINE EXTRA® HERBICIDE TOSS-N-GO BAGS + Surfactant

(Winter Wheat, Spring Wheat and Durum wheat)

Follow all mixing and spraying precautions, limitations and timing recommendations on the Refine Extra® 75 DF Herbicide and Refine Extra® Herbicide Toss-N-Go Bags labels. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 100 litres of water per hectare at a pressure of 275 kPa.

#### WEEDS CONTROLLED:

As listed for BADGE<sup>®</sup> alone at the recommended rate, plus hemp-nettle up to the 6-leaf stage (3 pairs of leaves), and chickweed up to the 6 leaf stage (3 pairs of leaves).

### TIMING (Crop):

*Spring Wheat (not underseeded with other crops):* Apply from the 2 leaf to early flag leaf stage.

**TIMING (Weeds):** For best results apply to emerged, young, actively growing weeds that are less than 10 cm tall or across. Thorough coverage of target weeds is essential.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with 6.7 g/ha of Refine Extra<sup>®</sup> 75 DF Herbicide **or** 6.7 g/ha of Refine Extra<sup>®</sup> Herbicide Toss-N-Go Bags plus Agral<sup>®</sup> 90 **or** Ag-Surf<sup>®</sup> **or** Citowett Plus at a rate of 2 litres per 1000 litres of spray solution.

**MIXING INSTRUCTIONS:** Add Refine Extra® 75 DF Herbicide or Refine Extra® Herbicide Toss-N-Go Bags to the required water volume in the tank first, agitate, then add BADGE®, agitate, then add the surfactant. On repeat tank loads, prepare a Refine Extra® water slurry and add it to the required water volume in the tank prior to adding BADGE®.

### BADGE® + AXIAL® 100 EC HERBICIDE

### (SPRING WHEAT ONLY)

For use in the Prairie Provinces and Peace River, Okanagan and Creston Flats Regions of British Columbia only.

Follow all mixing and spraying precautions, limitations and timing recommendations on the Axial® 100 EC Herbicide label. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE**: Apply in 50-100 litres of water per hectare at a pressure of 275 kPa.

**TIMING**: Spring wheat may be treated at 1 leaf to flag leaf stage, and when annual grasses are at the 1 to 6-leaf stage, prior to 4<sub>th</sub> tiller.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with Axial® 100 EC Herbicide at 600 mL/ha plus Adigor® adjuvant at 700 mL/ha.

### **WEEDS CONTROLLED:**

As listed for Badge label alone plus wild oats, green foxtail, yellow foxtail, volunteer oats, volunteer canary seed (*Phalaris canariensis*) and proso millet.

**NOTE**: BADGE® + Axial® 100 EC

HERBICIDE can be used in all varieties of spring wheat. One application per year is permitted. Observe a minimum interval to harvest of 60 days after treatment for grain and straw and of 30 days after treatment for hay and minimum of 7 days before grazing livestock on treated crops. Do not apply if rain is expected within 1 hour after spraying.

### WHEAT (Winter) (Underseeded to Red Clover)

For use in Ontario, Quebec and the Maritime Provinces only

#### BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 200 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Apply in the spring when the red clover is in the 1st to 3rd trifoliate leaf stage and when the winter wheat provides a protective canopy over the red clover. The winter wheat may be treated from the 2-leaf until the early flag leaf stage.

#### **APPLICATION RATE:** 1.25 L/ha

**NOTE:** Use of this product may cause temporary leaf scorch or foliar burn in adverse growing conditions, especially if applied before or during periods of hot and humid weather conditions.

Do not apply if the red clover is under stress. Avoid overlapping as severe crop injury may occur.

## **WEEDS CONTROLLED:**

As listed under BADGE® used alone. Rainfall within 1 hour of application may reduce effectiveness of tank-mix.

## **BARLEY** (not underseeded to legumes)

## BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** The crop may be treated from the 2-leaf until the early flag leaf stage.

**APPLICATION RATE:** 1.25 L/ha

WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed

Lady's-thumb Seedlings up to 8-leaf stage

Cow Cockle\* Wild buckwheat
Redroot pigweed Tartary buckwheat
Flixweed Common buckwheat

Bluebur Stinkweed
Shepherd's-purse Wild mustard
Kochia \*\* Wormseed mustard
Russian thistle\*\* Lamb's-quarters
Scentless chamomile\*\*\* Common ragweed
Volunteer sunflower Common groundsel

Volunteer rapeseed (including Canola)

Night flowering catchfly

### **Perennials: Top-growth checked**

Cocklebur Canada thistle

Velvetleaf\*\*\*\* Perennial sow-thistle

Ball mustard

American nightshade

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.

## BADGE® + FLUROXYPYR 180 EC

(Spring barley - not underseeded to legumes)

Follow all precautions, limitations and timing recommendations on the FLUROXYPYR 180 EC label.

**DO NOT** apply the tank mixture BADGE® + FLUROXYPYR 180 EC using aerial application equipment.

**SPRAY VOLUME & PRESSURE**: For ground application apply 50 to 100 litres of water per hectare at a low pressure (200 to 275 kPa). For best results when there is a heavy crop canopy, or when the majority of the weeds are at advanced stage of growth, a volume rate of 100 L/ha is recommended.

**TIMING:** Barley may be treated from the 2-leaf stage until the early flag leaf stage. Application before the 2-leaf stage may injure the crop.

Apply when weeds are actively growing. Best results are obtained from applications made to seedling weeds. Only weeds emerged at the time of treatment will be controlled. Extreme growing conditions such as drought or near freezing temperature prior to, at and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Foliage that is wet at the time of application may decrease control.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with FLUROXYPYR 180 EC at 600 mL/ha.

### WEEDS CONTROLLED:

As listed for BADGE® label alone plus Cleavers (1-4 whorls) and Volunteer flax (1-12 cm).

♦Including biotypes resistant to Group 2 herbicides that inhibit the ALS enzyme.

**NOTE:** The tank mixture BADGE® + FLUROXYPYR 180 EC activity is influenced by weather conditions. Optimum activity requires active crop and weed growth. The temperature range for optimum activity is 12°C to 24°C. Reduced activity will occur when temperatures are below 8°C or above 27°C. Frost before application (3 days) or shortly after (3 days) may reduce weed control and crop tolerance. Weed control may be reduced during stress conditions, e.g. drought, heat or cold stress, or if weeds have initiated flowering, or if heavy infestations exist.

### BADGE® + MCPA

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** The crop may be treated from the 2-leaf until the early flag leaf stage.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with 275 g active ingredient MCPA per hectare.

**NOTE:** MCPA is preferred for hempnettle although other formulations may be used. Refer to the MCPA label for precautions and limitations. Add MCPA to the spray tank first, agitate, then add BADGE<sup>®</sup>.

## WEEDS CONTROLLED:

As listed for BADGE<sup>®</sup> alone plus these additional weeds.

## Seedlings up to 4-leaf stage Seedlings up to 8-leaf stage

Hempnettle\* Volunteer rapeseed (including Canola)

\*Hempnettle is unlikely to be controlled beyond the 4-leaf stage. Plants emerging after application, which is often the case on peat-type soils, will not be controlled.

# **BADGE® + ACHIEVE® LIQUID HERBICIDE**

(Spring Barley only)

For use in Manitoba, Saskatchewan, Alberta plus the Peace River Region of British Columbia.

Follow all mixing and spraying precautions, limitations and timing recommendations on the Achieve® Liquid Herbicide label. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE:** Apply in 100 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Applications of BADGE® + Achieve® Liquid Herbicide tank mixtures should be made to spring barley from the 2-leaf until the early flag leaf stage of growth (total leaves including tillers) (Zadoks or BBCN growth stage of 11,20 to 14,21) and when wild oats are at the 1 - 6 leaf stage of growth (total leaves including tillers) (Zadoks or BBCN growth stage of 11,20 to 14,22) and when green foxtail (wild millet) is at the 1-5 leaf stage of growth (Zadoks or BBCN growth stage of 11,20 to 14,21). Refer to the illustration on the Achieve® Liquid Herbicide label.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with Achieve<sup>®</sup> Liquid Herbicide at 0.5 L/ha. When using this tank mixture, add Turbocharge<sup>®</sup> to the spray tank at a concentration of 0.5% v/v (i.e. 0.5 L of Turbocharge<sup>®</sup> per 100 L of spray solution).

### WEEDS CONTROLLED:

As listed on the BADGE<sup>®</sup> alone plus wild oats and green foxtail (wild millet).

**NOTE:** BADGE® + Achieve® Liquid Herbicide tank mixtures can be used in all 2 or 6 row varieties of barley (malting and general purpose varieties including semi-dwarf and hulless).

Only apply this mixture to spring barley that is NOT UNDERSEEDED TO LEGUMES.

## BADGE® + ALLY®

**NOTE:** Refer to the Ally<sup>®</sup> label for all precautions, including limitations on soil pH, crop rotations and sprayer cleanup.

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 100 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Barley (not underseeded with other crops) may be treated from the 2-leaf to early flag leaf stage.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with Ally<sup>®</sup> at 7.5 g/ha plus a surfactant as required on the Ally<sup>®</sup> label. Add Ally<sup>®</sup> to the required water volume in the tank first, agitate, then add BADGE<sup>®</sup>, agitate, then add the surfactant. On repeat tank loads, prepare an Ally<sup>®</sup> water slurry and add it to the required water volume in the tank prior to adding the BADGE<sup>®</sup>.

#### WEEDS CONTROLLED:

As listed for BADGE<sup>®</sup> alone at the recommended rate, plus hempnettle up to the 8 leaf stage (4 pairs of leaves), and chickweed up to 7 cm high. For best results, apply to the first main flush of young, actively growing weeds. Do not apply this tank mix using aerial application equipment.

BADGE® + REFINE EXTRA® 75 DF HERBICIDE + Surfactant

BADGE® + REFINE EXTRA® HERBICIDE TOSS-N-GO BAGS + Surfactant

### (Spring Barley)

Follow all mixing and spraying precautions, limitations and timing recommendations on the Refine Extra® 75 DF Herbicide and Refine Extra® Herbicide Toss-N-Go Bags labels. DO NOT apply using aerial application equipment.

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 100 litres of water per hectare at a pressure of 275 kPa.

#### **WEEDS CONTROLLED:**

As listed for BADGE<sup>®</sup> alone at the recommended rate, plus hemp-nettle up to the 6-leaf stage (3 pairs of leaves), and chickweed up to the 6 leaf stage (3 pairs of leaves).

**TIMING** (Crop): *Spring Barley:* Apply from the 2 leaf to early flag leaf stage. **TIMING** (Weeds): For best results apply to emerged, young, actively growing weeds that are less than 10 cm tall or across. Thorough coverage of target weeds is essential.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with 6.7 g/ha of Refine Extra® 75 DF Herbicide **or** 6.7 g/ha of Refine Extra® Herbicide Toss-N-Go Bags plus Agral® 90 or Ag-

Surf® or Citowett Plus at a rate of 2 litres per 1000 litres of spray solution.

**MIXING INSTRUCTIONS:** Add Refine Extra® 75 DF Herbicide or Refine Extra® Herbicide Toss-N-Go Bags to the required water volume in the tank first, agitate, then add BADGE®, agitate, then add the surfactant. On repeat tank loads, prepare a Refine Extra® water slurry and add it to the required water volume in the tank prior to adding BADGE®.

**NOTE:** Only apply this mixture to spring barley that is NOT UNDERSEEDED TO LEGUMES.

## **OATS** (not underseeded to legumes)

## BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** The crop may be treated from the 2-leaf until the early flag leaf stage.

**APPLICATION RATE: 1.25 L/ha** 

#### WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed

Lady's-thumb Seedlings up to 8-leaf stage

Cow Cockle\* Wild buckwheat
Redroot pigweed Tartary buckwheat
Flixweed Common buckwheat

Bluebur Stinkweed
Shepherd's-purse Wild mustard
Kochia\*\* Wormseed mustard
Russian thistle\*\* Lamb's-quarters
Scentless chamomile\*\*\* Common ragweed
Volunteer sunflower Common groundsel

Volunteer rapeseed (including Canola)

Night flowering catchfly **Perennials: Top-growth checked** 

Cocklebur Canada thistle

Velvetleaf\*\*\*\* Perennial sow-thistle Ball mustard

American nightshade

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.

## BADGE® + MCPA

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** The crop may be treated from the 2-leaf until the early flag leaf stage.

**APPLICATION RATE:** BADGE® at 1.25 L/ha tank-mixed with 275 g active ingredient MCPA per hectare.

**NOTE:** MCPA is preferred for hempnettle although other formulations may be used. Refer to the MCPA label for precautions and limitations. Add MCPA to the spray tank first, agitate, then add BADGE<sup>®</sup>.

## **WEEDS CONTROLLED:**

As listed for BADGE® alone plus these additional weeds.

Seedlings up to 4-leaf stage Seedlings up to 8-leaf stage

Hempnettle\* Volunteer rapeseed (including Canola)

### **CORN** (Field & Sweet)

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry intervals (REIs) specified in the following table:

CROP	POST-APPLICATION ACTIVITY	REI
	Irrigation, handset	5 days
Sweet Corn	Harvest, hand	20 days
	All other activities	24 hours

**SPRAY VOLUME & PRESSURE:** Apply in 200 – 300 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Corn should be treated with a broadcast post-emergence application at the recommended rate FROM THE 4 to 6-LEAF STAGE. Damage to corn will result if sprayed beyond the 6-leaf stage.

**APPLICATION RATE: 1.25 L/ha** 

**NOTE:** Temporary crop injury in the form of leaf scorching may occur in adverse growing conditions (especially if applied during or after periods of cool and wet, or hot and humid weather conditions). Cultivation after application is not recommended. DO NOT ADD OIL OR

<sup>\*</sup>Hempnettle is unlikely to be controlled beyond the 4-leaf stage. Plants emerging after application, which is often the case on peat-type soils, will not be controlled.

## SURFACTANT. Do not spray corn by aircraft.

### **WEEDS CONTROLLED:**

### Seedlings up to 4-leaf stage

Green smartweed Pale smartweed Lady's-thumb Cow Cockle\* Redroot pigweed

Flixweed Bluebur

Shepherd's-purse

Kochia\*\*

Russian thistle\*\*

Scentless chamomile\*\*\*
Volunteer sunflower

Volunteer rapeseed (including Canola)

Night flowering catchfly

Cocklebur Velvetleaf\*\*\*\*

American nightshade

## Seedlings up to 6-leaf stage

Wild tomato

## Seedlings up to 8-leaf stage

Wild buckwheat
Tartary buckwheat
Common buckwheat

Stinkweed Wild mustard Wormseed mustard Lamb's-quarters Common ragweed Common groundsel

## Perennials: Top-growth checked

Canada thistle

Perennial sow-thistle Ball mustard

## BADGE® + Aatrex Liquid 480 Herbicide or Converge 480 Herbicide

**SPRAY VOLUME & PRESSURE:** Apply in 200 – 300 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Corn should be treated FROM THE 4 to 6-LEAF STAGE. Damage to corn will result if sprayed beyond the 6-leaf stage.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with 1.1 - 2.25 kg active ingredient per hectare. Add Aatrex Liquid 480 Herbicide or Converge 480 Herbicide to the spray tank first, mix well, then add BADGE<sup>®</sup>.

**NOTE:** Temporary crop injury in the form of leaf scorching may occur in adverse growing conditions (especially if applied during or after periods of cool and wet, or hot and humid weather conditions). Cultivation after application is not recommended. DO NOT ADD OIL OR SURFACTANT. Refer to the Aatrex Liquid 480 Herbicide or Converge 480 Herbicide label for instructions, precautions and limitations, especially on crop restrictions the following year. DO

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.

#### NOT SPRAY CORN BY AIRCRAFT.

### **WEEDS CONTROLLED:**

As listed for BADGE<sup>®</sup> used alone *plus* weeds as indicated on the Aatrex Liquid 480 Herbicide or Converge 480 Herbicide label.

### **FALL RYE** (not underseeded to legumes)

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Fall rye may be treated from the time growth commences to the early flag leaf stage in the spring.

**APPLICATION RATE:** 1.25 L/ha

### WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed

Lady's-thumb Seedlings up to 8-leaf stage

Cow Cockle\* Wild buckwheat
Redroot pigweed Tartary buckwheat
Flixweed Common buckwheat

Bluebur Stinkweed
Shepherd's-purse Wild mustard
Kochia\*\* Wormseed mustard
Russian thistle\*\* Lamb's-quarters
Scentless chamomile\*\*\* Common ragweed
Volunteer sunflower Common groundsel

Volunteer rapeseed (including Canola)

Night flowering catchfly Perennials: Top-growth checked

Cocklebur Canada thistle

Velvetleaf\*\*\*

Perennial sow-thistle Ball mustard

American nightshade

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high

## FLAX (including low linolenic acid varieties)

### BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Flax may be treated from the time it is 5 cm high up to the early flower bud stage but for *best results apply* BADGE® *when flax is 5 to 10 cm high*. Some leaf burn and check to growth may follow spraying.

Observe a minimum interval to harvest of 60 days after application of BADGE<sup>®</sup>. Spraying in the evening may reduce risk of flax injury.

**WARNING:** Do not spray unthrifty crops or when plants are under stress. Do not spray in periods of hot, humid weather. Do not spray flax by aircraft.

**APPLICATION RATE: 1.25 L/ha** 

### WEEDS CONTROLLED:

Due to flax's less competitive nature, weeds should be sprayed in as early a leaf stage as possible, up to the recommended leaf stage.

Seedlings up to 4-leaf stage Seedlings up to 6-lea
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Green smartweed Wild tomato

Pale smartweed

Lady's-thumb Seedlings up to 8-leaf stage

Cow Cockle\* Wild buckwheat
Flixweed Tartary buckwheat
Bluebur Common buckwheat

Shepherd's-purse Stinkweed
Kochia\*\* Wild mustard
Russian thistle\*\* Wormseed mustard
Scentless chamomile\*\*\* Lamb's-quarters
Volunteer sunflower Common ragweed

Volunteer rapeseed (including Canola) Common groundsel Night flowering catchfly

Cocklebur Perennials: Top-growth checked

Velvetleaf\*\*\*\* Canada thistle

Ball mustard Perennial sow-thistle

American nightshade

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only. \*\*\*\*Spray before plants are 8 cm high.

# **BADGE**<sup>®</sup> + **SELECT**<sup>®</sup> **EC Post-emergence Herbicide**

## FLAX (including low linolenic acid varieties)

Follow all precautions, limitations and timing recommendations on the Select® EC Post-emergence Herbicide label.

**SPRAY VOLUME & PRESSURE:** Apply in 55 - 110 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Flax may be treated from 5 cm high up to the early bud stage. For best results, apply this tank-mix when flax is 5-10 cm high and weeds are in the seedling stage. Leaf burn and check to crop growth may follow spraying. When using this tank-mix, it is important that application be made at the recommended stage of weed growth, particularly where smartweed is present. If broadleaf weeds and grasses are not within the recommended stage at the same time, then separate applications should be made.

**WARNING:** Do not spray unthrifty crops or when flax is under stress due to drought or excess soil moisture. Do not spray in hot, humid weather conditions. Do not spray flax by aircraft. This treatment may cause leaf burn, retarded growth and delayed maturity of the crop.

**APPLICATION RATE:** BADGE<sup>®</sup> at 1.25 L/ha tank-mixed with 0.19 L/ha Select<sup>®</sup> EC Post-emergence Herbicide. Amigo<sup>®</sup> adjuvant must be added as per the Select<sup>®</sup> EC Post-emergence Herbicide label directions. Add BADGE<sup>®</sup> to the spray tank half filled with water, agitate, add Select<sup>®</sup>, continue agitation, add Amigo<sup>®</sup> and remaining amount of water, continue to agitate.

### **WEEDS CONTROLLED:**

As listed for BADGE<sup>®</sup> alone on flax plus these additional weeds.

Wild oats Yellow & Green foxtail

Barnyard grass Volunteer wheat Volunteer barley Volunteer corn

Volunteer oats

## **BADGE® + POAST® ULTRA HERBICIDE + Surfactant**

(Flax including low linolenic acid varieties)

Follow all mixing and spraying precautions, limitations and timing recommendations on the Poast® Ultra Herbicide label.

**SPRAY VOLUME & PRESSURE:** Thoroughly clean all screens to prevent nozzle clogging, especially when water volumes of 50 to 100 L/ha are used. In general, use water volumes of 50 to 100 L/ha, and a minimum of 240 kPa pressure. For applications to dense weed infestations use 100 to 200 L of water per hectare at pressures of 275 to 425 kPa. For quackgrass control use 100 to 200 L of water per hectare at pressures of 275 to 425 kPa.

**WARNING:** Do not spray unthrifty crops or when flax is under stress due to drought or excess soil moisture. Do not spray in hot, humid weather conditions. Do not spray flax by aircraft. This treatment may cause leaf burn, retarded growth and delayed maturity of the crop.

## **WEEDS CONTROLLED:**

As listed for BADGE<sup>®</sup> alone at the recommended rate, annual and perennial grasses listed on the Poast<sup>®</sup> Ultra Herbicide label.

**TIMING** (Crop): Refer to Poast<sup>®</sup> Ultra Herbicide label.

TIMING (Weeds): Refer to Poast® Ultra Herbicide label.

**APPLICATION RATE:** BADGE® at 1.25 L/ha

tank-mixed with 0.32-0.47 L/ha of Poast® Ultra Herbicide and Merge adjuvant at 0.5-1 L/ha.

**MIXING INSTRUCTIONS:** Fill spray tank ½ full with water and start agitation system. Add Poast® Ultra Herbicide. Then add BADGE®, Merge adjuvant and the balance of the water.

## CANARY SEED (Phalaris canariensis) (For Seed Production)

## BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in NOT LESS than 50 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** The crop may be treated from the 3 to 5-leaf stage.

**APPLICATION RATE:** 1.25 L/ha

#### WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed Seedlings up to 8-leaf stage

Lady's-thumb Wild buckwheat
Cow Cockle\* Tartary buckwheat
Redroot pigweed Common buckwheat

Redroot pigweed Common buckwhea
Flixweed Stinkweed
Bluebur Wild mustard
Shepherd's-purse Wormseed mustard
Kochia\*\* Lamb's-quarters
Russian thistle\*\* Common ragweed

Russian thistle\*\* Common ragweed Scentless chamomile\*\*\* Common groundsel

Volunteer sunflower

Volunteer rapeseed (including Canola) Perennials: Top-growth checked

Night flowering catchfly Cocklebur Velvetleaf\*\*\*\* American nightshade Canada thistle Perennial sow-thistle Ball mustard

## **SEEDLING GRASSES (Not Underseeded to Legumes)**

NOTE: Grasses grown for seed production in the year of establishment only.

**CROPS:** Brome grass, Crested wheat grass, Intermediate wheat grass, Slender wheat grass, Tall wheat grass, Russian wild rye, Timothy, Orchard grass, Creeping red fescue, Meadow fescue, Meadow foxtail, Seedling tall fescue, Seedling meadow bromegrass, Streambank wheatgrass, and Reed canary grass.

**CAUTION:** Do not graze or harvest for green feed until 56 days after treatment.

### BADGE® USED ALONE

**SPRAY VOLUME & PRESSURE:** Apply in 150 litres of water per hectare at a pressure of 275 kPa.

**TIMING:** Seedling grasses may be treated from the 2 to 4-leaf stage. Make only one application per season.

**APPLICATION RATE:** 1.25 L/ha

#### WEEDS CONTROLLED:

Seedlings up to 4-leaf stage Seedlings up to 6-leaf stage

Green smartweed Wild tomato

Pale smartweed
Lady's-thumb
Seedlings up to 8-leaf stage

Cow Cockle\*

Redroot pigweed

Tartary buckwheat

Common byelwikes

Flixweed Common buckwheat
Bluebur Stinkweed

Shepherd's-purse Wild mustard
Kochia\*\* Wormseed mustard
Russian thistle\*\* Lamb's-quarters

Scentless chamomile\*\*\*

Common ragweed

<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.

Volunteer sunflower

Volunteer rapeseed (including Canola)

Night flowering catchfly

Cocklebur

Velvetleaf\*\*\*\*
Ball mustard

Common groundsel

**Perennials: Top-growth checked** 

Canada thistle

Perennial sow-thistle American nightshade

## **ESTABLISHED GRASSES (Not Underseeded to Legumes)**

## **BADGE® USED ALONE**

**CROP:** Established Timothy Grown for Seed

**SPRAY VOLUME:** Apply in 150 litres of water per hectare.

**TIMING:** Apply prior to shot blade in the seed production year. Make only one application per season.

**RATE:** 1.25 L/ha

### WEEDS CONTROLLED:

As listed for BADGE<sup>®</sup> used alone in seedling grasses.

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<sup>\*</sup>In normal conditions cow cockle will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled.

<sup>\*\*</sup>Spray before plants are 5 cm high.

<sup>\*\*\*</sup>Spring annuals only.

<sup>\*\*\*\*</sup>Spray before plants are 8 cm high.