BOUNDARY® LQD

HERBICIDE

AGRICULTURAL

EMULSIFIABLE CONCENTRATE

FOR SALE FOR USE IN EASTERN CANADA ONLY
FOR USE IN SOILS WITH AN ORGANIC MATTER CONTENT OF 1-10%
BOUNDARY® LQD Herbicide provides Annual Grass and Broadleaf Weed control

GUARANTEE:
S-Metolachlor* ........................................................ 628 g/L
*and R-enantiomer
Metribuzin .............................................................. 149 g/L

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

CAUTION
POISON

EYE AND SKIN IRRITANT

REGISTRATION NO.: 30812
PEST CONTROL PRODUCTS ACT

STORE IN A COOL, DRY PLACE

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario
N1G 4Z3
Telephone: 1-877-964-3682

LABEL
NOTICE TO USER

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

FIRST AID

IN CASE OF POISONING, contact a physician or a poison control centre IMMEDIATELY. Take 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

If swallowed, there is no specific antidote. Treat symptomatically. One of the active ingredients in this product, metribuzin, may cause breathing difficulties and sedation. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

Harmful if swallowed. May cause eye and skin irritation. Avoid contact with eyes and skin.

Do not contaminate food, feed, domestic or irrigation water supplies, lakes, streams and ponds.

Wear a long-sleeved shirt, long pants, a hat, and enclosed boots during all activities. During mixing/loading, clean-up and repair activities wear the previously mentioned clothing, plus chemical resistant gloves and goggles or a face shield. Avoid breathing vapours, spray mist or dust. If ventilation is not adequate, wear an appropriate pesticide respirator. Do not eat, drink, smoke or apply cosmetics in areas where there is potential for exposure to this product. Wash hands and face with soap and warm water before eating, drinking, chewing gum, using tobacco or
using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wear freshly laundered clothes daily. Store and wash all protective clothing separately from household laundry. Wash clothing in detergent and hot water before reuse.

It is recommended that this product not be applied in a way that will contact workers or other persons, either directly or through drift. Only handlers wearing personal protective equipment may be in the area during application.

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

DO NOT enter or re-enter treated areas within 12 hours of treatment.

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

CAUTION: Do not graze treated immature crops or cut for hay. Sufficient data are not available to support such uses. Make only one application per season.

DO NOT APPLY BY AIR.

Do not exceed rates recommended on this label.

ENVIRONMENTAL HAZARDS

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

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

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

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.
DECONTAMINATION AND DISPOSAL

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 clean-up of spills.

CONTAINER DISPOSAL:

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

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

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

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

IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)

PRODUCT INFORMATION

BOUNDARY LQD Herbicide is specially designed for soybean, tomato and potato growers in Eastern Canada in soils with an organic matter content of 1-10%. BOUNDARY LQD Herbicide provides early season residual control of troublesome weeds. BOUNDARY LQD Herbicide should not be used in soybeans or potatoes growing on coarse soils with organic matter content of less than 1% or greater than 10%. BOUNDARY LQD Herbicide cannot be used on tomatoes growing in coarse soils.

WEEDS CONTROLLED:

GRASS WEEDS
- Barnyard grass
- Crabgrass (smooth, hairy)
- Witch grass
- Fall panicum
- Foxtail (green, yellow, giant)

BROADLEAF WEEDS
- American nightshade
- Redroot pigweed
- Eastern black nightshade
- Yellow nutsedge

1. Pre-emergent treatments sometimes give better control than pre-plant surface, pre-plant incorporated or post-emergent treatments.
2. Some naturally occurring triazine tolerant biotypes of these weeds may not be controlled by BOUNDARY LQD Herbicide.
3. Pre-plant incorporated treatment only. Extended periods of dry hot weather following application
DIRECTIONS FOR USE

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 during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.

**DO NOT** apply by air.

**Buffer zones:**

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.

<table>
<thead>
<tr>
<th>Method of Application</th>
<th>Crop</th>
<th>Aquatic Habitat</th>
<th>Terrestrial Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field sprayer*</td>
<td>All field crops</td>
<td>29</td>
<td>10</td>
</tr>
</tbody>
</table>

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) 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.

### SOYBEAN

<table>
<thead>
<tr>
<th>TIMING</th>
<th>Surface pre-plant¹, or pre-emergent</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEDS CONTROLLED</td>
<td>Labelled weeds</td>
</tr>
<tr>
<td><strong>BOUNDARY LQD HERBICIDE RATE¹</strong></td>
<td>1.85 - 2.5 L/ha</td>
</tr>
<tr>
<td>RATE OF TANK MIX PARTNER²</td>
<td></td>
</tr>
<tr>
<td>COMMENTS</td>
<td>Injury to soybeans or reduced weed control may occur when BOUNDARY LQD Herbicide is applied to soils with a pH of 7.5 or higher. Soybean seeds must be planted at least 4 cm below the soil surface or crop injury may result. Do not apply if soybeans have emerged. VARIETIES: Consult your chemical dealer, or your seed supplier for information on the metribuzin tolerance of soybean varieties, prior to BOUNDARY LQD Herbicide use. One application per year.</td>
</tr>
<tr>
<td>TIMING</td>
<td>Surface pre-plant¹, or pre-emergent</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>WEEDS CONTROLLED</td>
<td>Labelled weeds plus emerged annual and perennial weeds</td>
</tr>
<tr>
<td>BOUNDARY LQD HERBICIDE RATE¹</td>
<td>1.85 - 2.5 L/ha</td>
</tr>
<tr>
<td>RATE OF TANK MIX PARTNER²</td>
<td>1.7 – 1.8 L TOUCHDOWN TOTAL⁴ or 1.7 – 1.8 L TRAXION® or 900 g ae/ha glyphosate (present as potassium salt, isopropylamine salt, or di-ammonium salt)</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

¹ Use the higher rate of BOUNDARY LQD Herbicide for heavier weed populations. Consult the label of the product(s) to be tank mixed with BOUNDARY LQD Herbicide for specific instructions regarding broadleaf weeds, soil-type variations and rotational crop, grazing and other restrictions.

² Apply pre-plant surface applications of BOUNDARY LQD Herbicide only when emerged annual weeds are less than 4 cm tall. If emerged annual weeds are taller than 4 cm, apply TOUCHDOWN TOTAL or TRAXION, Roundup®, Glyphos®, Credit®, Vantage®, Vantage Plus or Renegade herbicides prior to the application of BOUNDARY LQD Herbicide or make an application of BOUNDARY LQD Herbicide plus TOUCHDOWN. Consult the tank mix partner label for specific instructions regarding precautions, restrictions, recommended rates and additives. Follow the most restrictive PPE and precautionary statements of the products involved in the tank mix.

³ Some perennial weeds may not be controlled with these rates of TOUCHDOWN TOTAL or TRAXION. Consult the TOUCHDOWN TOTAL or TRAXION Herbicide labels regarding perennial weeds controlled.
## POTATO

<table>
<thead>
<tr>
<th>TIMING</th>
<th>Pre-emergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEDS CONTROLLED</td>
<td>Labelled Weeds</td>
</tr>
<tr>
<td>BOUNDARY LQD HERBICIDE RATE</td>
<td>1.85 – 2.5 L/ha</td>
</tr>
</tbody>
</table>

**COMMENTS**
- Do not use on the varieties Belleisle, Tobique or Superior as crop injury may result.
- Potato varieties may vary in their response to BOUNDARY LQD HERBICIDE.
- When using BOUNDARY LQD HERBICIDE for the first time on a particular variety, always confirm crop tolerance before using on a field scale.
- Do not apply at ground crack or if potatoes have emerged.
- Do not harvest within 60 days of application.
- Apply after hilling. Hilling operations made after application of BOUNDARY LQD Herbicide will reduce weed control.
- One application per year.

1 Use the higher rate of BOUNDARY LQD Herbicide for heavier weed populations.

## TRANSPLANTED TOMATOES GROWN FOR PROCESSING

<table>
<thead>
<tr>
<th>TIMING</th>
<th>Pre-Plant Incorporated</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEDS CONTROLLED</td>
<td>Labelled Weeds</td>
</tr>
<tr>
<td>BOUNDARY LQD HERBICIDE RATE</td>
<td>1.85 – 2.5 L/ha</td>
</tr>
</tbody>
</table>

**COMMENTS**
- Do not apply to direct seeded tomatoes.
- Avoid application under stress conditions.
- Do not use on coarse soils.
- Varieties differ in tolerance to BOUNDARY LQD Herbicide. Newly introduced varieties with unknown tolerance to BOUNDARY LQD Herbicide should only be treated in a small test area to determine tolerance.
- BOUNDARY LQD HERBICIDE MAY DAMAGE TRANSPLANTS THAT HAVE BEEN WEAKENED BY ANY CAUSE RESULTING IN REDUCED CROP YIELD. TO PREVENT DAMAGE, PLANT ONLY HEALTHY TRANSPLANTS. DO NOT PLANT WHEN WET, COOL OR UNFAVOURABLE GROWING CONDITIONS EXIST. FOLLOW ALL APPLICATION AND INCORPORATION DIRECTIONS EXACTLY.
- Do not harvest within 60 days of application.
- One application per year.

1 Use the higher rate of BOUNDARY LQD Herbicide for heavier weed populations.

## APPLICATION INFORMATION

- Applications of BOUNDARY LQD Herbicide made at rates above those recommended may result in burning, yellowing or stunting of the crop. If heavy rains occur soon after application, plant injury may result, especially in poorly drained areas where water may stand for several days. Soybean seeds must be planted at least 4 cm below the soil surface.
- VARIETIES: Consult your chemical dealer, or your seed supplier for information on the metribuzin tolerance of soybean varieties, prior to BOUNDARY LQD Herbicide use.
- DO NOT USE BOUNDARY LQD HERBICIDE ON SOILS WITH AN ORGANIC MATTER CONTENT OF LESS THAN 1% OR GREATER THAN 10%.
- If drought conditions persist after either a pre-plant surface, or pre-emergent application, annual weed control may not be adequate.
- Do not apply more than once per season regardless of method of application.
• Uneven application such as swath overlapping, variable tractor speed, spraying on turns, etc., may result in crop injury and increase chances of injury to succeeding crops. After harvest, tillage practices that provide thorough mixing of the soil may be helpful in reducing the chance of injury to succeeding crops.
• Apply specified dosage as pre-emergence broadcast spray in 150 to 300 L of water per hectare and as pre-plant incorporated in at least 100 L of water per hectare.

**DO NOT APPLY BY AIR.**

**PRE-PLANT SURFACE APPLICATION:**
- For minimum tillage (reduced tillage), and no-till (zero-till) systems.
- Applications may be made up to 30 days before planting.
- To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.
- Rainfall is necessary to move BOUNDARY LQD Herbicide into the upper soil surface where weed seeds germinate.

**PRE-EMERGENT APPLICATION:**
- Apply evenly to a firm, lump-free seed bed.
- Rain is required within 10 days or a shallow cultivation or use of a rotary hoe is necessary.
- Pre-emergent applications may also be made in reduced tillage, ridge tillage, and no-till systems.
- Minimize exposure of untreated soil when cultivating or fertilizing.
- Dry weather conditions as well as excessive rainfall or irrigation following application may reduce weed control.

**Notes for Pre-plant Surface and Pre-emergent Applications ONLY:**
For improved burn down of small emerged annual weeds, the following additives may be used:
- Crop oil, 28-0-0, or 10-34-0 at 5% v/v
- Crop oil concentrate at 1% v/v
- Non-ionic surfactant at 0.1% v/v
If annual weeds are larger or perennial weeds are present use TOUCHDOWN TOTAL or TRAXION herbicides in the tank mix (See preceding table).

**MIXING AND SPRAYING INSTRUCTIONS**
- Spray Pressure - 200 - 300 kPa
- Spray Volume - minimum 150 litres per hectare for pre-emergence application. The use of higher water volumes and larger spray tip sizes will generally increase spray deposition and reduce drift.
- minimum 100 litres per hectare for pre-plant incorporated application.
- Keep bypass line at bottom of tank to minimize foaming.
- Use screens no finer than 0.3 mm (50 mesh) in nozzle and in-line strainers (felt filters, or smaller screens will become clogged). A 16 mesh screen is recommended for the filter on the inlet side of the pump.
- Nozzle tips should be no finer than 6502, 8002 or TK 2.
- Do not use airblast or other high pressure spray equipment to apply BOUNDARY LQD Herbicide.
- VIGOROUS, CONTINUOUS AGITATION IS ESSENTIAL FOR PROPER MIXING THROUGHOUT FILLING AND SPRAYING OPERATIONS. RETURN LINE AGITATION IS NOT SUFFICIENT. SPARGE TUBE, JET OR MECHANICAL AGITATION IS
REQUIRED. AGITATION SHOULD BE SUFFICIENT TO CREATE A RIPPLING OR ROLLING ACTION ON THE SURFACE. A PUMP MUST BE OF SUFFICIENT CAPACITY TO PROVIDE ADEQUATE VOLUME THROUGH THE BY-PASS AND/OR JET AGITATION SYSTEM TO PROVIDE SUFFICIENT AGITATION EVEN WHILE THE BOOMS ARE OPERATING.

- The sprayer should be checked frequently during application to be sure it is working properly and delivering a uniform spray pattern.
- Avoid over-laps that will increase dosages above those recommended.

Before mixing BOUNDARY LQD Herbicide and its labelled tank-mixtures, examine the spray equipment making sure it is completely clean and free of rust or corrosion. To ensure the equipment is free of any residues from previously used pesticides, flush lines with clean water or recommended detergents. Use an approved method for disposing of rinse water.

Refer to the other product label for pertinent recommendations regarding mixing procedures. The proper mixing sequence for BOUNDARY LQD Herbicide and recommended tank-mixtures is as follows:

1. Fill sprayer 1/4 full of carrier. Start gentle agitation.
2. Add other dry flowable or wettable granule tank-mix partners, if applicable, and agitate thoroughly.
3. Add liquid BOUNDARY LQD Herbicide and continue to agitate thoroughly.
4. Fill tank 9/10 full of carrier and add solution tank-mix partners, if applicable.
5. Top off tank with carrier, maintain agitation and spray.
6. Do not let stand without agitation.
7. At the end of each spray day, rinse out the tank and sprayer lines with water.

BOUNDARY LQD Herbicide and all registered mixtures should be kept agitated once mixed and then sprayed out immediately. Do not allow mixtures to stand for prolonged periods of time. Water quality, pH, temperature and/or other components of the mixture may affect how long the mixture can stand before application.

SPRAYER CLEANUP

Spray equipment must be thoroughly cleaned to remove remaining traces of herbicide that might injure other crops. Drain any remaining spray solution of BOUNDARY LQD Herbicide from the spray tank and discard in non-crop areas away from water supplies. Rinse the spray tank and refill with water, adding a heavy-duty detergent at the rate of 250 mL/100 L of water. Recycle this mixture through the equipment for 5 minutes and spray out. Repeat this procedure twice. Fill the spray tank with clean water, recycle for 5 minutes, and spray out. Clean pump and nozzle screens thoroughly. Wash away any spray mixture from the outside of the spray tank, nozzles or spray rig.

ROTATIONAL CROP INFORMATION

- Rotation crops such as onions, celery, peppers, Cole crops, lettuce and spinach, sugar beets, table beets and turnips, pumpkin and squash, cucumbers and melons, tobacco, and non-triazine tolerant canola (rapeseed) are sensitive to BOUNDARY LQD Herbicide and may be injured if planted in soil treated with BOUNDARY LQD Herbicide during the year of application or the following crop year.
- Fall seeded or cover crops such as wheat, oats, and rye may be injured when seeded within
the same season as the application of BOUNDARY LQD Herbicide.

READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATION

NOTE TO USER:

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Syngenta Canada Inc. or Bayer CropScience Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Syngenta Canada Inc. or Bayer CropScience Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used as listed below.

Accordingly, the User assumes all liability arising, and agrees to hold Syngenta Canada Inc. or Bayer CropScience Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the uses described below.

<table>
<thead>
<tr>
<th>SOYBEAN</th>
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</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION TIMING</td>
<td>Pre-emergent</td>
</tr>
<tr>
<td>PEST</td>
<td>Labelled weeds and suppression of tall waterhemp</td>
</tr>
<tr>
<td>BOUNDARY LQD HERBICIDE RATE</td>
<td>2.5 L/ha</td>
</tr>
<tr>
<td>APPLICATION METHOD</td>
<td>Ground application</td>
</tr>
<tr>
<td>SOIL TYPE</td>
<td>Medium</td>
</tr>
</tbody>
</table>

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that the components in BOUNDARY LQD Herbicide contain both a Group 5 and a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to Group 5 and/or Group 15 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same fields. 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 BOUNDARY LQD Herbicide or other Group 5 and 15 herbicides with different herbicide groups that control the same weeds in a field.

Use tank mixtures with herbicides from a different group when such use is permitted.

Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.

Monitor treated weed populations for resistance development.

Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage
equipment and planting clean seed.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

For further information or to report suspected resistance, contact company representatives at 1-87-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.