| GROUP | 1 | HERBICIDE |
|-------|---|-----------|
|-------|---|-----------|

## **Container label**

## BISON® 400 L

## **Suspension**

## COMMERCIAL (AGRICULTURAL)

A SUSPENSION CONCENTRATE HERBICIDE FOR POST EMERGENCE CONTROL OF ANNUAL GRASSES IN SMALL GRAIN CEREALS AND IN SELECTED FORAGE GRASSES GROWN FOR SEED ONLY.

ACTIVE INGREDIENT:

Contains 1,2-benzisothiazolin-3-one at 0.041 % as a preservative.

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

REGISTRATION NO. 29256 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 4 - 1 050 litres, Bulk

For emergency medical help and health/safety inquiries call ProPharma Group 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)

ADAMA Agricultural Solutions Canada Ltd. 300 – 191 Lombard Avenue Winnipeg, Manitoba R3B 0X1

#### **PRECAUTIONS**

#### KEEP OUT OF REACH OF CHILDREN.

Do not wear contact lenses when using chemicals. Do not smoke, eat, or drink while using this product. Workers must wear coveralls over long-sleeved shirt, long pants, safety goggles, boots, and chemical resistant gloves when mixing, loading, and during clean up or when adjusting or repairing sprayer. Applicators must wear long-sleeved shirt, long pants. Wash gloves thoroughly with water before removing them during any operation. Wash hands thoroughly with soap and water after using the product and before eating, drinking or smoking. Do not contaminate food, water supplies or animal feed.

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

## FIRST AID

**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 on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

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

#### TOXICOLOGICAL INFORMATION

Treat symptomatically for ingestion and/or skin and eye contact. Symptoms are likely to be those of Central Nervous System (CNS) depression. Avoid respiratory depressants unless otherwise indicated.

#### **ENVIRONMENTAL PRECAUTIONS:**

TOXIC to 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 this product away from food or feed. Store in a cool, dry place, away from children, animals or fertilizers. Keep unused product in resealed original container. Store above -5°C. Shake well before use.

#### SPILL CLEANUP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the

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container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag.

<u>For spills and leaks</u> - contain the liquid with dikes of inert material (soil, clay, kitty litter etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

<u>On hard surfaces</u> - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

#### DISPOSAL

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.

## **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/territorial 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 reuse this container for any other purpose.

## **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.

GROUP 1 HERBICIDE

#### BISON® 400 L

## Suspension

## COMMERCIAL (AGRICULTURAL)

A SUSPENSION CONCENTRATE HERBICIDE FOR POST EMERGENCE CONTROL OF ANNUAL GRASSES IN SMALL GRAIN CEREALS AND IN SELECTED FORAGE GRASSES GROWN FOR SEED ONLY.

ACTIVE INGREDIENT:
Tralkoxydim......400 g/L

Contains 1,2-benzisothiazolin-3-one at 0.041 % as a preservative.

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

REGISTRATION NO. 29256 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 4 - 1 050 litres, Bulk

For emergency medical help and health/safety inquiries call ProPharma Group 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)

ADAMA Agricultural Solutions Canada Ltd. 300 – 191 Lombard Avenue Winnipeg, Manitoba R3B 0X1

#### **PRECAUTIONS**

#### KEEP OUT OF REACH OF CHILDREN.

Do not wear contact lenses when using chemicals. Do not smoke, eat, or drink while using this product. Workers must wear coveralls over long-sleeved shirt, long pants, safety goggles, boots and chemical resistant gloves when mixing, loading, and during clean up or when adjusting or repairing sprayer. Applicators must wear long-sleeved shirt, long pants. Wash gloves thoroughly with water before removing them during any operation. Wash hands thoroughly with soap and water after using the product and before eating, drinking or smoking. Do not contaminate food, water supplies or animal feed.

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

## FIRST AID

**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 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.

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

#### TOXICOLOGICAL INFORMATION

Treat symptomatically for ingestion and/or skin and eye contact. Symptoms are likely to be those of Central Nervous System (CNS) depression. Avoid respiratory depressants unless otherwise indicated.

#### **ENVIRONMENTAL PRECAUTIONS:**

TOXIC to 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 this product away from food or feed. Store in a cool, dry place, away from children, animals or fertilizers. Keep unused product in resealed original container. Store above -5°C. Shake well before use.

#### SPILL CLEANUP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the

container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag.

<u>For spills and leaks</u> - contain the liquid with dikes of inert material (soil, clay, kitty litter etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

#### DISPOSAL

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.

## **CONTAINER DISPOSAL:**

## For recyclable containers:

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- 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/territorial 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 reuse this container for any other purpose.

## PRODUCT INFORMATION

BISON® 400 L is a systemic, postemergence herbicide for the selective control of wild oats, volunteer tame oats, green foxtail, yellow foxtail, barnyard grass and Persian Darnel in spring wheat, durum wheat, winter wheat, barley, triticale, spring rye, winter rye, and selected forage grasses (except timothy) grown for seed only.

#### **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.

**RATE OF USE:** Apply BISON® 400 L at 0.5 L/ha in 50-100 L/ha of water.

Note: Always add ADDIT® ADJUVANT, CARRIER, NUP 09025 ADJUVANT, MSO SPRAY ADJUVANT, DESTINATION® MSO or IPCO MSO ADJUVANT to the spray solution at a rate of  $0.5 \, \text{L}$  per  $100 \, \text{L}$  of water  $(0.5\% \, \text{v/v})$ . The incorrect adjuvant rate can result in unacceptable weed control or crop injury. See MIXING and SPRAYING INSTRUCTION sections.

Only one application per season is permitted.

Apply only to agricultural crops when the potential for drift to areas of human habitation and 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.

## BISON® 400 L can be used on the following crops:

**CEREAL CROPS:** (Spring Wheat, Durum Wheat, Winter Wheat, Barley, Triticale, Spring Rye and Winter Rye) BISON® 400 L can be used in all varieties of spring wheat (including Canada Western red spring, amber durum, soft white spring, extra strong and Canada prairie spring), red winter wheat, all 2 or 6 row varieties of barley (malting and feed varieties), all varieties of triticale, spring rye and winter rye.

**Note:** Tillered cereal crops may incur injury if applications are made within 48 hours of freezing temperatures. Non-tillering cereal crops which are exposed to temperatures of 4°C or less up to 48 hours before or after application may incur injury. Tank mixing BISON® 400 L with a broadleaf weed herbicide under adverse conditions may increase severity of crop injury. Crops under stress from foliar diseases or low fertility are more susceptible to injury from BISON® 400 L.

Early crop injury may be observed, but yield should not be reduced. Do not use in tame oat crops. Avoid drift onto tame oat and corn crops. Do not replant treated areas to tame oats or corn for at least 4 weeks after application.

**In Eastern Canada** BISON® 400 L is to be used only for the control of wild oats in spring wheat, winter wheat, durum wheat, barley and all varieties of triticale and spring and winter rye.

**MINIMUM INTERVAL TO HARVEST:** Immature cereal crops may be grazed or cut for hay 16 days after treatment. Grain may be harvested 60 days after treatment. Mature straw may be fed to livestock. Do not feed or graze underseeded forage crops in the year of treatment, sufficient data are not available to support this use.

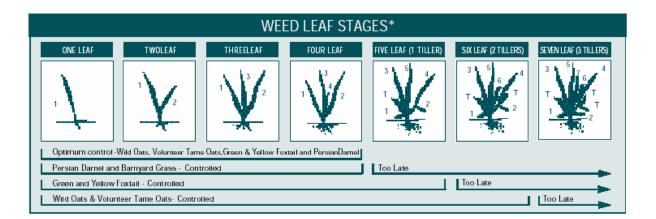
**CEREAL CROPS UNDERSEEDED TO FORAGE LEGUMES:** alfalfa, birdsfoot trefoil, sainfoin and clovers.

**Note:** Do not tank-mix BISON® 400 L with any broadleaf herbicides when applying to cereal crops underseeded to forage legumes, as the forages may be injured or killed.

**WEEDS CONTROLLED:** Apply BISON® 400 L to actively growing weeds for best results. Weeds emerging after application of BISON® 400 L will not be controlled.

| CROP        | WEEDS CONTROLLED                 | WEED GROWTH<br>STAGE<br>(ZADOKS or BBCH) |
|-------------|----------------------------------|--|
| TRITICALE - | WILD OATS, VOLUNTEER OATS        | 1-6 leaf<br>(11,20 to 14,22)             |
|             | GREEN FOXTAIL, YELLOW FOXTAIL    | 1-5 leaf<br>(11,20 to 14,21)             |
|             | BARNYARD GRASS<br>PERSIAN DARNEL | 1-4 leaf<br>(11 to 14)                   |

Optimum weed control and crop yield response occurs when grassy weeds are removed before they begin to tiller. Refer to the illustration.



## **Weed Control Notes:**

- Perennial grasses such as quack grass will not be controlled.
- Susceptible grassy weeds treated with BISON® 400 L cease growth soon after application, however, complete die-back of the weeds could take up to 2 weeks.
- When grass weeds are stressed due to drought, heat, lack of fertility, flooding or prolonged cool temperatures, control can be reduced or delayed since the grasses are not actively growing. Grass escapes or re-tillering may occur when application is made under prolonged stress conditions. Optimum weed control will be obtained if application of BISON® 400 L is delayed until the stress conditions have ended and weeds are once again actively growing.
- The herbicidal activity of BISON® 400 L can be negatively affected if water containing high concentrations (>400 ppm) of bicarbonate ions is used as a diluent. Water from deep wells is more likely to contain high concentrations of bicarbonate ions. Ammonium sulfate at 9 to 18 kg per 1000 litres of spray solution, can be used to counteract this antagonistic effect. Use only granular or liquid ammonium sulfate formulations which do not contain additional wetters or surfactants.
- BISON® 400 L is not affected by rain falling one hour or more after application.

#### 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.

## TANK MIXES OF BISON® 400 L WITH BROADLEAF WEED HERBICIDES:

BISON® 400 L alone will not control broadleaf weeds. For broad spectrum control of both annual grasses

and broadleaf weeds, BISON® 400 L can be tank mixed with a variety of broadleaf weed herbicides. Refer to the following table for details and additional guidance. Read the appropriate broadleaf herbicide label for information on broadleaf weeds controlled.

## **Tank Mixing Notes:**

- 1. With reduced water volumes, tank mixes with Badge®, Logic® M, Buctril® M, Mextrol® 450, Thrasher®, Thumper®, Leader®, Bromotril® 240 EC, Brotex® or Pardner® may result in some initial injury in the form of "tip burn". This injury, however, will not have any adverse effect on crop maturity or yield.
- 2. Do not tank mix BISON® 400 L with broadleaf herbicides when applying to cereal crops underseeded to forage legumes as the forages may be injured or killed.
- 3. Tank mixes with ATTAIN®† or PRESTIGE® XC† may cause temporary crop injury if applied before the 4-leaf stage, however, yield will not normally be affected. These tank mixes may provide a lower level of wild oat control than BISON® 400 L alone.
- 4. Temporary crop injury may occur with registered tank mixes, in particular 2,4-D Ester/dichlorprop products, under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels, or extreme temperatures. Barley may be injured with tank mixes of 2,4-D Ester/dichlorprop and Badge plus MCPA.
- 5. Herbicides not listed on this label for tank mixing with BISON® 400 L may be applied separately in sequence. Always apply BISON® 400 L first and allow at least 7 days after the application of BISON® 400 L before applying the other herbicide. Herbicides labelled for tank mixing with BISON® 400 L may also be applied sequentially, either before or after application of BISON® 400 L.

## TANK MIXES OF BISON® 400 L WITH INSECTICIDES:

BISON® 400 L alone or in combination with LOGIC® M, BADGE®, BUCTRIL® M, MEXTROL® 450, BROTEX® 240, BROMOTRIL®, PARDNER® or KORIL® can be tank mixed with SILENCER® 120 EC Emulsifiable Concentrate Insecticide, ZIVATA®, MATADOR® 120EC Emulsifiable Concentrate Insecticide or DECIS®† Flowable for one pass weed and insect control. Always add SILENCER® 120 EC Emulsifiable Concentrate Insecticide, ZIVATA®, MATADOR® 120EC Emulsifiable Concentrate Insecticide or DECIS® Flowable to the spray tank after the herbicides but before adding ADDIT® ADJUVANT, CARRIER, NUP 09025 ADJUVANT, MSO SPRAY ADJUVANT, DESTINATION® MSO or IPCO MSO ADJUVANT.

| FOR ALL TANK MIXES, USE 0.5 litres BISON® 400 L per hectare PLUS THE FOLLOWING: |   |  |
|---|---|--|
| MIXING<br>PARTNER   | REMARKS   |  |
| Badge®, Mextrol®<br>450, Logic® M,<br>Buctril® M                                | Additional MCPA Ester may be added to these tank mixes to improve control of certain broadleaf weeds (i.e. hemp nettle, volunteer canola). A reduction in control of green foxtail may occur with the tank mixes of Bromoxynil and additional MCPA Ester. Maximum rate of Buctril® M is 1 L/ha. Maximum rate of Logic M/Badge®/Mextrol® 450 is 1.25 L/ha. |  |
| ATTAIN®   | Do not apply prior to the 4 leaf stage of the crop as temporary crop injury could occur, particularly in spray overlaps. Attain® A 0.6 L/ha + Attain® B 1.0 L/ha rates.   |  |

| D 110 240 FG            | 16 1  |
|-------------------------|---|
| Bromotril® 240 EC,      |   |
| Brotex®, Pardner®,      | Maximum rate of Pardner is 1 L/ha.  |
| Koril®                  |   |
| Thrasher®,              | Maximum rate of Leader®/Thrasher®/Approve® is 1.25 L/ha.  |
| Leader®,                | Maximum rate of Thumper® is 1 L/ha.   |
| Thumper®,               | ^   |
| Approve®                |   |
| Dichlorprop/            | Maximum rate of 1.75 L/ha (assuming 600 g/L dichlorprop/2,4-D Ester). To ensure   |
| 2,4-D Ester             | optimum crop safety, do not apply prior to the 4 leaf stage of the crop as per the  |
| 2.4 D.E.4               | dichlorprop/2,4-D Ester label timing.   |
| 2,4-D Ester             | Maximum rate of 0.9 L/ha (assuming 600 g/L 2,4-D). Do not apply prior to the 4 leaf stage of the crop as temporary crop injury could occur, particularly in spray overlaps. |
| MCPA Ester              | Maximum rate of 1.12 L/ha (assuming 500 g/L MCPA).  |
| $LONTREL^{\dagger}$ +   | Maximum rate of 0.28 L/ha + 1.12 L/ha (assuming 500 g/L MCPA). Apply between  |
| MCPA Ester              | 3 leaf expanded to before flag leaf of the crop. DO NOT apply after 6 leaf stage of the crop.   |
| CURTAIL® M <sup>†</sup> | Apply between 3 leaf expanded to before flag leaf of the crop. DO NOT apply after   |
|                         | 6 leaf stage of the crop. Maximum rate of 2 L/ha.   |
| PRESTIGE® XC            | For use on spring barley, durum wheat and spring wheat only. Apply postemergence  |
|                         | when weeds are in the seedling stage (2- to 4-leaf) and when spring wheat and spring  |
|                         | barley are in the 3-leaf to just before the flag-leaf emergence stage. Do not apply later   |
|                         | than the flag-leaf emergence stage. Prestige® XC A 0.8 L/ha + Prestige® XC B 2.0  |
|                         | L/ha rates. DO NOT APPLY BY AIR.  |
| Badge®, Logic®          | 1.25 L/ha for use on spring wheat, durum and barley only.   |
|                         | 1.23 L/ha for use on spring wheat, durum and bariey only.   |
| M, Mextrol® 450         |   |
| Buctril® M              | 1.0 L/ha for use on spring wheat, durum and barley only.  |
| DECIS® Flowable         | Maximum rate of 120 mL/ha.  |
| Insecticide             |   |
| MEXTROL® 400M           | 1.4 L/ha for use on spring wheat, durum and barley only   |
| Liquid Herbicide        |   |
| SILENCER® 120           | Apply 63-83 mL/ha for control of grasshoppers.  |
| EC Emulsifiable         |   |
| Concentrate             |   |
| Insecticide             |   |
|                         |   |
| ZIVATA®                 |   |
| MATADOR®                |   |
|                         |   |
| 120EC                   |   |
| Emulsifiable            |   |
| Concentrate             |   |
| Insecticide             |   |
| STARANE® <sup>†</sup>   | Apply 0.4 L/ha for control of cleavers (1-4 whorls). Apply 0.6 L/ha for control of  |
| Herbicide               | cleavers (1-4 whorls), kochia (2-8 leaf), volunteer flax (1-12 cm) and suppression of   |
|                         | stork's bill (1-8 leaf). Apply 0.8 L/ha for control/suppression of aforementioned   |
|                         | weeds plus control of round-leaved mallow (1-6 leaf), and suppression of chickweed  |
|                         | (up to 8 cm), hempnettle (2-6 leaf) and wild buckwheat (1-4 leaf).  |
|                         | (up to 6 cm), nemphetic (2-6 lear) and who buckwheat (1-4 lear).  |

# READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS

#### NOTE TO USER:

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

| DIRECTIONS FOR USE   |  |  |
|----------------------|--|--|
| Pest(s)              | Wild Oats, volunteer oats, green foxtail, yellow foxtail, Persian Darnel.  |  |
| Rate of application  | 0.5 L BISON® 400 L / ha in 50 - 100 L of water/ ha. Add ADDIT® ADJUVANT, CARRIER, NUP 09025 ADJUVANT, MSO SPRAY ADJUVANT, DESTINATION® MSO or IPCO MSO ADJUVANT at a rate of 0.5 L/100L water (0.5% v/v).  |  |
| Site (Crop)          | <ul> <li>For the following forage grasses grown for seed only:</li> <li>Seedling and established intermediate and crested wheatgrass, creeping red fescue, meadow and smooth bromegrass either underseeded to cereals or grown alone.</li> <li>For establishment of northern wheatgrass, western wheatgrass and slender wheatgrass.</li> </ul> |  |
| Application Timing   | Prior to tillering of the weeds (< 4 leaf stage)   |  |
| Pre-Harvest Interval | NA   |  |
| OTHER                | DO NOT APPLY BY AIR Do not feed or graze forage crops, sufficient data are not available to support this use. One application per season.  |  |

#### **CAUTIONS:**

Apply BISON® 400 L prior to tillering of the weeds. Applications made after the weeds have tillered may result in unacceptable weed control due to poor crop competition compared to cereal crops.

Crop injury or slight yield reductions may be expected following treatment in the year of establishment, however, the injury is transient and the crop will recover the following year.

#### **MIXING INSTRUCTIONS:**

Follow the mixing instructions below for adding BISON® 400 L to the spray tank.

1. Only use sprayers in good running condition with high agitation. Ensure the sprayer and pre-mix

- tank is cleaned according to instructions on label of the product used prior to BISON® 400 L. Use only clean water for the spray solution. **Ensure that** all inline **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
- 2. Begin to fill sprayer tank or premix tank with clean water, and engage agitator. **Agitation must be continued throughout the entire mixing and spraying procedure.**
- 3. When the sprayer or premix tank is three quarters full of water, add BISON® 400 L. If more than 1 case of BISON® 400 L is to be used, add the BISON® 400 L from all cases prior to adding tank mixed products or ADDIT® ADJUVANT, CARRIER, NUP 09025 ADJUVANT, MSO SPRAY ADJUVANT, DESTINATION® MSO or IPCO MSO ADJUVANT.
- 4. If tank mixing, add the recommended product(s) next.
- 5. Lastly, add ADDIT® ADJUVANT, CARRIER, NUP 09025 ADJUVANT, MSO SPRAY ADJUVANT, DESTINATION® MSO or IPCO MSO ADJUVANT and then continue to fill tank to desired level with water.

## **Sprayer Clean-Out Instructions**

To avoid injury to desirable plants, thoroughly clean equipment used to apply this product before re-use or using it to apply other chemicals.

- 1. Immediately after spraying, completely drain the sprayer tank. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
- First rinse:
  - Spray the inside of tank with clean water and fill the sprayer with at least one tenth of the spray tank volume.
  - Agitate and circulate for 15 minutes, and flush through booms and hoses.
  - Remove end caps or open ball valves on the ends of each boom section, and flush solution
    through the boom ends to ensure there is no spray solution trapped between the boom end and
    the nozzles.
  - Drain tank completely.
- 3. Second rinse:
  - Fill the tank with clean water.
  - Add All Clear Spray Tank Decontaminator, or Clean-Out Spray Tank Cleaner, or 1 L of household ammonia (containing a minimum of 3 % ammonia) per 100 L of water, or similar tank cleaning agent as per manufacturer's recommendations while filling the tank with clean water
  - Agitate and then flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full. Allow to stand for 15 minutes with agitation. Flush the solution out of the spray tank through the spray booms. Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
  - If possible, let the solution stand in the sprayer tank and booms for an extended period of time, overnight if possible.
  - After flushing the boom and hoses, drain tank completely.
  - Remove nozzles and screens and clean separately with a cleaning agent or an ammonia solution (100 mL in 10 L water).
- 4. Third rinse:
  - Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume.
  - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.

• Drain tank completely.

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

#### **GROUND SPRAYING INSTRUCTIONS:**

- 1. Apply in a spray volume of 50-100 L/ha at a pressure of 275 kPa to ensure proper dispersion, spraying characteristics and performance of BISON® 400 L.
- 2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. Screens of 80 mesh or finer should not be used.
- 3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. Do not begin spraying until fully resuspended. BISON® 400 L must be sprayed within the same day of mixing.
- 4. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining BISON® 400 L residues. Using a pressure washer and the addition of a detergent or AGRAL® 90 to the rinse water will enhance removal of residues.

#### FIELD SPRAYER APPLICATION:

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) 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 Engineers (ASAE S572.1) medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

#### Generic Aerial Application Label Instructions - Directions for Use

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 non-target areas. Specified spray buffer zones should be observed.

## **Operator Precautions**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

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

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls over long-sleeved shirt, long pants and goggles or face shield during mixing/loading, cleanup and repair. 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 the manufacturer 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. Apply in a spray volume of 30 to 45 L/ha at a pressure of 140-275 kPa to ensure proper dispersion, spraying characteristics and performance of BISON® 400 L.
- 2. Flat fan nozzles of 80° or 110° are recommended for optimum coverage. Do not use floodjet nozzles or controlled droplet application equipment. **Ensure that** all in-line **strainer** and **nozzle** screens in the sprayer are **50 mesh or coarser**. Screens of 80 mesh size or finer should not be used.
- 3. Always ensure that agitation is continued until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying. BISON® 400 L <u>must</u> be sprayed within the same day of mixing.
- 4. Do not apply BISON® 400 L if the wind is more than 13 km/h. This will avoid spray drift onto non-target areas.
- 5. **Do not** spray BISON® 400 L if tame oats are present in adjacent, downwind fields.
- 6. When spraying is completed and prior to using other products, ensure the sprayer tank is thoroughly rinsed with clean water to remove any remaining BISON® 400 L residues. Using a pressure washer and the addition of a detergent or AGRAL 90 to the rinse water will enhance removal of residues.
- 7. **DO NOT APPLY within 50 m of non-crop areas**. This includes fish-bearing waters, wetlands (potholes, sloughs etc.) and wildlife habitat (hedgerows, rights of way, etc.).

## **SPRAY BUFFER ZONES**

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),

| Method of Application | Spray Buffer Zones (metres) Required for the Protection of: |  |
|-----------------------|---|--|
|                       | Terrestrial Habitat   |  |
| Field Sprayer         | 3   |  |
| Aerial (fixed wing)   | 100   |  |
| Aerial (rotary wing)  | 80  |  |

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

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

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, BISON® 400 L is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to BISON® 400 L and other Group 1 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field.

Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

## To delay herbicide resistance:

- Where possible, rotate the use of BISON® 400 L or other Group 1 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance prone partner should control the target weed(s) as effectively as the more resistance prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and

identify alternative herbicide options.

- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262.

# 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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