

Container Label

GROUP	14	HERBICIDE
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HEAT® WG

Water soluble granular herbicide for pre-seed, pre-emergent and chemfallow application for control of broadleaf weeds, for pre-harvest weed management in wheat, barley and triticale, and for harvest aid in canola, dry common beans, chickpeas, dry field peas, faba beans, flax, red lentil varieties, mustard, soybeans and sunflowers

COMMERCIAL (AGRICULTURAL)

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND
INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER REGION) ONLY

ACTIVE INGREDIENT: Saflufenacil..... 70%

Warning: Contains the allergen sulfites

REGISTRATION NO. 29368

PEST CONTROL PRODUCTS ACT

CAUTION – SKIN IRRITANT

READ THE LABEL AND BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN

**IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY
INVOLVING THIS PRODUCT, CALL DAY OR NIGHT
1-800-454-2673**

NET CONTENTS: 844 g

BASF Canada Inc.
100 Milverton Drive, 5th Floor
Mississauga, ON L5R 4H1
1-877-371-2273

HEAT is a registered trademark of BASF SE, used with permission by BASF Canada Inc.

PRECAUTIONS

1. **KEEP OUT OF REACH OF CHILDREN.**
2. **DO NOT** take internally. Harmful if swallowed.
3. **DO NOT** get in eyes or on skin. Causes eye and skin irritation. Avoid inhalation of vapor or spray.
4. Wash exposed areas of skin thoroughly after handling and before eating, drinking or smoking or going to the washroom. Take a shower immediately after work.
5. Wear a long-sleeved shirt, long pants, coveralls, chemical resistant gloves and shoes plus socks during mixing, loading, clean-up and repair. In addition, wear goggles or face shield during mixing/loading. Applicators must wear long-sleeved shirt, long pants, coveralls and shoes plus socks.

Applicators treating corn fields must wear chemical resistant coveralls over long-sleeved shirt, long pants and chemical resistant gloves during mixing, loading, application, clean-up and repair, and additionally, goggles or a face shield during mixing and loading. Applicators performing mixing, loading, and application must use a closed mixing/loading system.

6. If clothing becomes contaminated, remove immediately and wash. Store and wash all protective clothing separately from household laundry. Wash in detergent and hot water before reuse. Wear freshly laundered clothes daily.
7. 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.

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.

ENVIRONMENTAL PRECAUTIONS

TOXIC to non-target terrestrial plants.

STORAGE

1. Store the product in original, tightly-closed container and do not allow water to be introduced into this container.
2. **DO NOT** ship or store the product near food, feed, seed or fertilizers.
3. Store the product in a cool, dry, locked, well-ventilated area without floor drain.
4. Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination.

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.

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.

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.

Booklet

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NET CONTENTS: 0.25 kg – 100 kg, Bulk

BASF Canada Inc.
100 Milverton Drive, 5th Floor
Mississauga, ON L5R 4H1
1-877-371-2273

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1.0 GENERAL INFORMATION

HEAT WG is a water soluble granular herbicide for broadleaf weed control.

HEAT WG is rapidly absorbed by root and foliar uptake; once absorbed it exhibits mobility in plants. **HEAT WG** is a potent inhibitor of protoporphyrinogen oxidase (PPO). Cell membrane damage induced by inhibition of PPO leads to plant death. Susceptible weeds develop injury symptoms within hours of application under active growing conditions; plant death occurs within 3 to 5 days depending upon growing conditions.

HEAT WG is recommended for pre-seed and pre-emergent applications. **HEAT WG** may also be applied in fallow crop lands and post-harvest, and as a pre-harvest weed management treatment and harvest aid in registered crops.

HEAT WG does not control grass weeds. **HEAT WG should always be tank mixed with glyphosate** for broad spectrum weed control.

HEAT WG is a broad spectrum weed resistance management tool for activity on a range of broadleaf weeds.

2.0 PRECAUTIONS

1. **KEEP OUT OF REACH OF CHILDREN.**
2. **DO NOT** take internally. Harmful if swallowed.
3. **DO NOT** get in eyes or on skin. Causes eye and skin irritation. Avoid inhalation of vapor or spray.
4. Wash exposed areas of skin thoroughly after handling and before eating, drinking or smoking or going to the washroom. Take a shower immediately after work.
5. Wear a long-sleeved shirt, long pants, coveralls, chemical resistant gloves and shoes plus socks during mixing, loading, clean-up and repair. In addition, wear goggles or face shield during mixing/loading. Applicators must wear long-sleeved shirt, long pants, coveralls and shoes plus socks.

Applicators treating corn fields must wear chemical resistant coveralls over long-sleeved shirt, long pants and chemical resistant gloves during mixing, loading, application, clean-up and repair, and additionally, goggles or a face shield during mixing and loading. Applicators performing mixing, loading, and application must use a closed mixing/loading system.

6. If clothing becomes contaminated, remove immediately and wash. Store and wash all protective clothing separately from household laundry. Wash in detergent and hot water before reuse. Wear freshly laundered clothes daily.
7. 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.

3.0 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.

4.0 ENVIRONMENTAL PRECAUTIONS

TOXIC to non-target terrestrial plants. Observe buffer zones specified under Section 17 (Restrictions and Limitations).

5.0 STORAGE

1. Store the product in original, tightly-closed container and do not allow water to be introduced into this container.
2. **DO NOT** ship or store the product near food, feed, seed or fertilizers.
3. Store the product in a cool, dry, locked, well-ventilated area without floor drain.
4. Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination.

6.0 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 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.

7.0 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.

8.0 REGISTERED CROPS

8.1 PRE-SEED OR PRE-EMERGENT

HEAT WG is registered for use prior to the following crops as a pre-seed or pre-emergent application.

• Barley
• Bromegrass, seedling (seed production, hay and forage)
• Creeping red fescue and timothy, seedling (seed production and forage)
• Canary seed
• Chickpeas
• Faba beans
• Lentils*
• Oats
• Peas (dried field)
• Wheat (spring, winter and durum)
• Corn
• Soybeans*

* Rate restrictions apply. Refer to crop specific section for details.

8.2 CHEMFALLOW

8.3 HARVEST AID

HEAT WG is registered for use as a desiccant in the following crops:

• Canola (all types)
• Chickpeas
• Dry common beans
• Faba beans
• Flax
• Lentils (red lentil varieties only) ¹
• Mustard ²
• Peas (dried field)
• Soybeans
• Sunflower

¹ Always tank mix **HEAT WG** with glyphosate when applying as a desiccant to red lentils.

² All classes, including brown, oriental, canola quality *Brassica juncea*, *Brassica juncea* varieties with the **Clearfield®** trait, and yellow mustard.

8.4 PRE-HARVEST WEED MANAGEMENT

HEAT WG is registered for use as a pre-harvest treatment to improve dry down of volunteer canola (all types including Roundup Ready), common ragweed, Canada fleabane, redroot pigweed and wild buckwheat in the following crops:

• Barley (including feed varieties)
• Triticale
• Wheat (including durum, spring and winter wheat)

9.0 DIRECTIONS FOR USE

9.1 CROP USE RATES – HEAT WG

For all **HEAT WG** solo applications applied pre-seed, pre-emergent or as a chemfallow treatment, apply with MERGE® Adjuvant or MSO Concentrate with Leci-Tech at a rate of 0.5 – 1 L/ha.

9.1.1 PRE-SEED OR PRE-EMERGENT

Crop	Use Rate (g/ha)
Lentils*	26
Soybean**	26 – 36
Barley	26 – 71
Bromegrass, seedling (seed production, hay and forage) ***	26 – 71
Creeping red fescue and timothy, seedling***	26 – 71
Canary seed	26 – 71
Chickpea Kabuli	26 – 71
Corn (field, sweet****)	26 – 71
Faba beans	26 – 71
Oats	26 – 71
Peas (dried field)	26 – 71
Wheat (spring, durum, winter)	26 – 71
Chemfallow	26 – 71
* Rate restrictions apply. Do not use rates higher than 26 g/ha or injury could result. See crop specific section for additional details.	
** Rate restrictions apply. Do not use rates higher than 36 g/ha or injury could result. See crop specific section for additional details. Some soybeans cultivars may be more sensitive to saflufenacil and injury might occur.	
*** For seed production, forage and hay. HEAT WG should not come into contact with the seed. Ensure adequate soil coverage for pre-emergent applications to forage grasses and grass grown for seed.	
**** Some sweet corn hybrids may be more sensitive to saflufenacil and injury might occur.	

9.1.2 CHEMFALLOW

Crop	Use Rate (g/ha)	Application Timing
Chemfallow	26 – 71	Post-emergence in fallow croplands and post-harvest.

9.1.3 HARVEST AID

HEAT WG may be used as a harvest aid to accelerate the rate of crop dry down and improve crop uniformity to facilitate direct combining. Early application may result in yield and/or seed quality loss.

The dry down of crops will be best under favorable environmental conditions like warm temperatures, good moisture conditions and low humidity.

Harvesting of crops can be done when plant material is dry and seed moisture level allows efficient harvesting. Under ideal conditions, harvest can normally commence within 7-14 days after desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the

plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the **HEAT WG** application. Consult your BASF representative for further information on the timing of harvest after a pre-harvest application.

Crop	Use Rate (g/ha)	Application Timing
Canola (all types), chickpeas, dry common beans, faba beans, flax, lentils ² , mustard ¹ , peas (dried field), soybeans, sunflower	52	Harvest aid

¹ All classes, including brown; oriental; canola quality *Brassica juncea*; *Brassica juncea* varieties with the **Clearfield** trait; and yellow mustard.

² Apply only to red lentil varieties.

Aerial Application

HEAT WG can be used for aerial application when used as a harvest aid or a pre-harvest weed management (see Section 9.1.4) in the registered crops.

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) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Ensure thorough coverage of foliage. Consult nozzle manufacturer's recommendation for spray pressures for specific nozzles.

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.

Do not apply during periods of dead calm.

Observe buffer zones specified under Section 16 (Restrictions and Limitations)

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 Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

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, a long-sleeved shirt, long pants, coveralls, shoes plus socks, and goggles or face shield during mixing/loading, cleanup and repair. Applicators must wear long-sleeved shirt, long pants, and shoes plus socks. 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.

HARVEST AID - CROP SPECIFIC RECOMMENDATIONS STAND-ALONE

See Section 9.1.3, above, for further use instructions.

9.1.3.1 DESICCATION - DRY COMMON BEANS / SOYBEANS

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Apply when stems are green to brown in colour and pods are mature (yellow – brown) and 80 – 90% of the original leaves have dropped.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	Do not graze or feed treated hay or straw to livestock.

9.1.3.2 DESICCATION - CHICKPEAS

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.

Application Timing	For Desi type, apply at the time swathing would normally commence, when the majority of plants are yellow and most pods are mature and seeds have turned from green to yellow or brown. Upper part of plant may still be green. For Kabuli type, apply when the majority of plants and pods are ripe and dry with seeds turned from green to white or tan, and detached from the pods. Dry down is less complete in Kabuli type due to its thick pod wall.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	Do not graze or feed treated hay or straw to livestock.

9.1.3.3 DESICCATION – FIELD PEAS

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Apply when the majority of pods are brown (70 – 80%).
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	Desiccation treated pea vines may be grazed or fed to livestock.

9.1.3.4 DESICCATION – SUNFLOWER

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Apply when the backs of the heads and bracts are turning yellow, and seed moisture is 20 – 30%.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.

9.1.3.5 DESICCATION – CANOLA (ALL TYPES) AND MUSTARD¹

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Apply when 65 – 80% of seeds have changed colour.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	<p>It is recommended that the application of HEAT WG as a desiccant in canola and mustard be made to shatter resistant varieties.</p> <p>Under ideal conditions, harvest can normally commence within 14-21 days after desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the HEAT WG application.</p>

¹ All classes, including brown; oriental; canola quality *Brassica juncea*; *Brassica juncea* varieties with the **Clearfield** trait; and yellow mustard.

9.1.3.6 DESICCATION – FLAX

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Apply when 75% of bolls have turned colour.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.

9.1.3.7 DESICCATION – FABA BEANS

Rate	52 g/ha of HEAT WG + adjuvant
Water Volume	200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.

Application Timing	Apply when 80% of lower pods have turned black, middle pods have turned yellow/tan, and top green pods have firm seed.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	Do not graze or feed treated hay or straw to livestock.

9.1.4 PRE-HARVEST WEED MANAGEMENT

HEAT WG may be used as a pre-harvest treatment in wheat (including durum, spring, and winter wheat), barley (including feed varieties) and triticale to improve dry down of volunteer canola (all types including Roundup Ready), common ragweed, Canada fleabane, redroot pigweed and wild buckwheat and to facilitate direct combining.

Early application may result in yield loss. **HEAT WG** when used alone as a pre-harvest treatment will not affect the seed germination if applied according to label recommendations.

WHEAT, BARLEY AND TRITICALE

Rate	36 – 52 g/ha of HEAT WG + adjuvant
Water Volume	100 – 200 L/ha ground; 50 L/ha aerial
Surfactant/Adjuvant	Add MERGE Adjuvant at a rate of 0.5 – 1 L/ha or MSO Concentrate at a rate of 1 L/ha.
Application Timing	Hard dough stage; a thumbnail impression remains on seed; less than 30% moisture.
Weeds Controlled	Improved dry down of volunteer canola (all types including Roundup Ready), common ragweed, Canada fleabane, redroot pigweed and wild buckwheat.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Directions for Use – Aerial	For aerial application use a minimum water volume of 50 L/ha. Please see above for aerial application use and operator precautions.
Remarks	Treated barley, wheat and triticale straw may be grazed or fed to livestock. Use higher water volume for dense crop stands and higher weed pressure.

9.2 WEEDS CONTROLLED

HEAT WG can be applied pre-seed or pre-emergence to the crop to control weeds listed below.

HEAT WG should always be applied in combination with glyphosate for broad spectrum weed control including grassy weeds.

Weeds Controlled For Rapid Burn down (Pre-seed or Pre-emergent)

Use Rate: 26 g/ha

Weed	Maximum Weed Stage
Kochia	15 cm
Canada fleabane	8 leaf
Cleavers	4-whorl stage
Lamb's-quarters	8 leaf
Narrow-leaved hawk's beard	8 cm
Redroot pigweed	8 leaf
Round-leaved mallow	8 leaf
Stinkweed	8 leaf
Volunteer canola (all types including Roundup Ready®)	8 leaf
Wild buckwheat	8 leaf
Wild mustard	8 leaf

Use Rate: 36 g/ha

HEAT WG applied pre-seed or pre-emergence at 36 g/ha will provide rapid burndown control of the following weeds in addition to those listed above:

Weed	Maximum Weed Stage
Common ragweed	8 leaf
Giant ragweed	8 leaf
Lady's-thumb	6 leaf
Perennial sow-thistle (top growth burndown control)	8 leaf
Prickly lettuce (top growth only)	9 leaf
Shepherd's-purse	Full flower

For Rapid Burndown and Suppression of Secondary Weed Flushes (Pre-seed or Pre-emergent)

Use Rate: 52 - 71 g/ha

Weed	Maximum Weed Stage
Cleavers	4-whorl stage
Redroot pigweed	8 leaf
Stinkweed	8 leaf

Volunteer canola (all types including Roundup Ready)	8 leaf
Wild buckwheat	8 leaf
Wild mustard	8 leaf

9.3 TANK MIXES – PRE-SEED, PRE-EMERGENT AND CHEMFALLOW

9.3.1 HEAT WG + GLYPHOSATE

For broad spectrum weed control, **HEAT WG** should always be tank mixed with glyphosate present as isopropylamine salt, di-ammonium salt or potassium salt. **HEAT WG** is compatible with all liquid glyphosate formulations, in which glyphosate is present as isopropylamine salt, di-ammonium salt or potassium salt, as a tank-mix partner.

Tank mixing **HEAT WG** with glyphosate will provide control of all weeds controlled by glyphosate in addition to the broadleaf weeds listed on **HEAT WG** label. Consult the glyphosate label for a complete list of weeds controlled by glyphosate.

Tank mixing is a recognized strategy to delay herbicide resistance as well as improve the weed spectrum controlled. See Section 17.

TANK MIX CROP USE RATES

HEAT WG + Glyphosate Use Rate (360 g/L equivalent) 1.25 – 2.5 L/ha

Crop	HEAT WG Use Rate (g/ha)
Lentils*	26
Soybean**	26 – 36
Barley	26 – 71
Creeping red fescue, timothy and bromegrass, seedling***	26 – 71
Creeping red fescue and timothy, seedling***	26 – 71
Canary seed	26 – 71
Chickpea Kabuli	26 – 71
Corn (field, sweet****)	26 – 71
Faba beans	26 – 71
Oats	26 – 71
Peas (dried field)	26 – 71
Wheat (spring, durum, winter)	26 – 71
Chemfallow	26 – 71

* Rate restrictions apply. Do not use rates higher than 26 g/ha or injury could result. See crop specific section for additional details.

**	Rate restrictions apply. Do not use rates higher than 36 g/ha or injury could result. See crop specific section for additional details. Some soybeans cultivars may be more sensitive to saflufenacil and injury might occur.
***	For seed production, forage and hay. HEAT WG should not come into contact with the seed. Ensure adequate soil coverage for pre-emergent applications to forage grasses and grass grown for seed.
****	Some sweet corn hybrids may be more sensitive to saflufenacil and injury might occur.

For tank mix applications of **HEAT WG** with glyphosate, apply with either MERGE Adjuvant, MSO Concentrate with Leci-Tech or Amigo® at a rate of 0.5 – 1 L/ha.

Always refer to the tank mix partner herbicide label for precautions, use instructions and crop rotation restrictions. Do not apply tank mix combinations by air.

When a tank mix is used, 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 coarse spray (ASAE) category indicated on the labels for those tank mix partners.

TANK MIX WEEDS CONTROLLED

Rapid Burn Down (Pre-seed or Pre-emergent)

HEAT WG when tank mixed with glyphosate will provide rapid burn down of the following weeds in addition to weeds listed for treatment of **HEAT WG**.

Use Rate: 26 g/ha

Weed	Maximum Weed Stage
Dandelion (top growth burndown control only)	15 cm
Flixweed	8 leaf

9.4 CROP SPECIFIC RECOMMENDATIONS

9.4.1 CHICKPEAS, FAB BEANS AND PEAS (dried field)

Timing	Pre-seed or Pre-emergent
Rate	26 – 71 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .

**9.4.2 CEREALS – BARLEY, CANARY SEED, OATS AND WHEAT
(spring, durum, winter)**

Timing	Pre-seed or Pre-emergent
Rate	26 – 71 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .

9.4.3 SEEDLING FORAGE GRASSES AND GRASS GROWN FOR SEED (seedling creeping red fescue, timothy, bromegrass)

HEAT WG may be applied for weed control in seedling creeping red fescue, timothy and bromegrass grown for seed production, forage and hay.

Timing	Pre-seed or Pre-emergent
Rate	26 – 71 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .
Remarks	HEAT WG should not come into contact with the seed. Ensure adequate soil coverage for pre-emergent applications to forage grasses and grass grown for seed.

9.4.4 SOYBEANS

Timing	Pre-seed or Pre-emergent
Rate	26 – 36 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .

Remarks	<p>Some soybean cultivars may be more sensitive to saflufenacil and injury might occur.</p> <p>When applying 36 g/ha pre-emergent to soybeans, DO NOT apply to coarse textured soils with less than 2% organic matter.</p> <p>When applying pre-emergent to soybeans, apply prior to when the soybeans cause the ground to crack and no more than 3 days after planting.</p>
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9.4.5 LENTILS (including Clearfield® Lentils)

Timing	Pre-seed or Pre-emergent
Rate	26 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .
Remarks	Rainfall shortly after product application can result in slight injury to the crop. Lentils will be more susceptible to injury on coarse texture and low organic matter soils. Injury will usually appear as leaf tissue necrosis on the outer edges of the leaves. Lentils will grow out of injury symptoms, and yield will not be impacted at recommended rates. The user should contact BASF before applying any other soil applied herbicide with, before, or after applications of HEAT WG + glyphosate. The addition of other soil applied herbicides may increase the sensitivity of lentils to HEAT WG and injury may result.

9.4.6 CORN (field, sweet)

Timing	Pre-seed or Pre-emergent
Rate	26 – 71 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .
Remarks	Some sweet corn hybrids may be more sensitive to saflufenacil and injury might occur.

9.5 CHEMFALLOW

Timing	Chemfallow
Rate	26 – 71 g/ha of HEAT WG + 1.25 – 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	50 – 100 L/ha
Surfactant/Adjuvant	Add MERGE Adjuvant, MSO Concentrate or Amigo at a rate of 0.5 – 1 L/ha.
Weeds Controlled	See Section 9.2 for a complete list of weeds controlled by HEAT WG . Refer to the glyphosate label for weeds controlled in addition to those controlled by HEAT WG .
Remarks	Apply to actively growing weeds less than 15 cm in height. Better coverage of the product results in enhanced control of weeds. For application to larger weeds or dense weed infestations, use minimum water volume of 100 L per hectare.

10.0 HARVEST AID – CROP SPECIFIC RECOMMENDATIONS TANK-MIX

HEAT WG may be used as a harvest aid to accelerate the rate of crop dry down and improve crop uniformity to facilitate direct combining. Early application may result in yield and/or seed quality loss.

The dry down of crops will be best under favorable environmental conditions like warm temperatures, good moisture conditions and low humidity.

Harvesting of crops can be done when plant material is dry and seed moisture level allows efficient harvesting. Under ideal conditions, harvest can normally commence within 7-14 days after desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the **HEAT WG** application. Consult your BASF representative for further information on the timing of harvest after a pre-harvest application.

HEAT WG may be applied in tank mix with glyphosate for additional pre-harvest weed control.

10.1 DESICCATION – DRY COMMON BEANS*/ SOYBEANS

Timing	Desiccation of DRY COMMON BEANS* / SOYBEANS
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Remarks	*Consult glyphosate label or BASF representative for information on the use on specific varieties of dry common beans.
Application Timing	Apply when stems are green to brown in colour and pods are mature (yellow – brown) and 80 – 90% of the original leaves have dropped.

Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	Do not graze or feed treated hay or straw to livestock. See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

10.2 DESICCATION – CHICKPEAS

Timing	Desiccation of CHICKPEAS
Rate	52 g/ha of HEAT WG + 900 g a.e/ha glyphosate (1.67 L/ha of 540 g/L glyphosate formulation) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	For Desi type, apply at the time swathing would normally commence, when the majority of plants are yellow and most pods are mature and seeds have turned from green to yellow or brown. Upper part of plant may still be green. For Kabuli type, apply when the majority of plants and pods are ripe and dry with seeds turned from green to white or tan, and detached from the pods. Dry down is less complete in Kabuli type due to its thick pod wall.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	Do not graze or feed treated hay or straw to livestock. See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

10.3 DESICCATION – RED LENTIL VARIETIES

Timing	Desiccation of RED LENTIL VARIETIES
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Apply when lowermost pods (bottom 15%) are brown and rattle when shaken.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	Apply only to red lentil varieties. Do not graze or feed treated hay or straw to livestock. See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

10.4 DESICCATION – FIELD PEAS

Timing	Desiccation of FIELD PEAS
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Apply when the majority of pods are brown (70-80%).
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

10.5 DESICCATION – CANOLA (ALL TYPES) AND MUSTARD¹

Timing	Desiccation of CANOLA and MUSTARD
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Apply when 60 – 75% of seeds have changed colour.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	It is recommended that the application of HEAT WG as a desiccant in canola and mustard be made to shatter resistant varieties. See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes. Under ideal conditions, harvest can normally commence within 14-21 days after desiccation when applied at the appropriate crop stage recommendation. Adverse weather conditions such as rainfall, cool temperatures, shorter day length and high humidity may slow the plant desiccation and keep seed moisture levels high which can delay commencement of harvest after the HEAT WG application.

¹ All classes, including brown, oriental, canola quality *Brassica juncea*, *Brassica juncea* varieties with the **Clearfield** trait, and yellow mustard.

10.6 DESICCATION – FLAX

Timing	Desiccation of FLAX
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground

Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Apply when 75% of bolls have turned colour.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

10.7 DESICCATION – FABA BEANS

Timing	Desiccation of Faba Beans
Rate	52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground
Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Apply when 80% of lower pods have turned black, middle pods have turned yellow/tan, and top green pods have firm seed.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	Do not graze or feed treated hay or straw to livestock. See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes.

11.0 PRE-HARVEST WEED MANAGEMENT – TANK MIX CROP SPECIFIC RECOMMENDATIONS

HEAT WG may be used as a pre-harvest treatment in wheat (including durum, spring and winter wheat), barley (including feed varieties) and triticale to improve dry down of volunteer canola (all types including Roundup Ready), common ragweed, Canada fleabane, redroot pigweed and wild buckwheat. Tank mixing **HEAT WG** with glyphosate will provide additional pre-harvest weed management to the crop dry down provided by glyphosate.

The tank mix with glyphosate may affect the seed germination. Tank mixing with glyphosate is not recommended when harvested grain is to be used for seed.

WHEAT AND BARLEY

Rate	36 – 52 g/ha of HEAT WG + 2.5 L/ha of glyphosate (360 g/L equivalent) + adjuvant
Water Volume	100 – 200 L/ha ground

Surfactant/Adjuvant	Add MERGE Adjuvant or MSO Concentrate at a rate of 0.5 – 1 L/ha.
Application Timing	Hard dough stage; a thumbnail impression remains on seed; less than 30% moisture.
Weeds Controlled	Improved dry down of volunteer canola (all types including Roundup Ready), common ragweed, Canada fleabane, redroot pigweed and wild buckwheat. Consult the glyphosate label regarding additional pre-harvest weed control.
Directions for Use – Ground	Ground application may be done with a standard boom sprayer.
Remarks	See Section 10.0 for detailed use pattern. Consult the label of the tank mix partner product for further use instructions, precautions and restrictions. The most restrictive labeling applies to tank mixes. Use higher water volume for dense crop stands and higher weed pressure. Tank mixing with glyphosate is not recommended when harvested grain is to be used for seed.

12.0 MIXING INSTRUCTIONS

1. When using **HEAT WG**, always start with a clean sprayer. Thoroughly clean the sprayer by flushing the system with water containing detergent. Refer to previously applied product labels for specific cleaning instructions.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Using a calibrated measuring device, add the correct amount of **HEAT WG**. Continue to agitate.
4. **For tank mix with glyphosate**, add **HEAT WG** followed by recommended amount of glyphosate.
5. If recommended, add the correct amount of MERGE Adjuvant, MSO Concentrate with Leci-Tech or Amigo to the tank last.
6. Continue agitation while filling the remainder of the tank with water necessary to fill the spray tank.
7. Continue to agitate or run the by-pass system.
8. After any break in spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to remix the spray materials. Do not allow the mixture to sit overnight.
9. If an oil film starts to build up in the tank, drain it and clean the tank with strong detergent solution.
10. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

Dispose of all rinsings in accordance with provincial regulations.

13.0 PRE-HARVEST INTERVAL (PHI)

The following pre-harvest intervals should be observed for respective crops.

Crop	Pre-Harvest Interval (PHI) in days
Barley	60
Canary seed	60
Chickpea	60
Corn (field, sweet)	60
Faba beans	60
Lentils	60
Oats	60
Peas (dried field)	60
Soybean	60
Wheat (spring, winter, durum)	60

Creeping red fescue, timothy and bromegrass: forage and hay can be used as feed or grazed immediately after application of **HEAT WG**.

14.0 PRE-HARVEST INTERVAL (PHI) – HARVEST AID

The following pre-harvest intervals should be observed for respective crops when **HEAT WG** is used as a harvest aid.

Crop	Pre-Harvest Interval (PHI) in days
• Barley	3
• Canola	3
• Chickpeas	2
• Dry common beans	2
• Faba beans	2
• Flax	3
• Lentils	3
• Mustard	3
• Peas (dried field)	3
• Soybeans	3
• Sunflower	7

Crop	Pre-Harvest Interval (PHI) in days
• Triticale	3
• Wheat	3

15.0 FOLLOW CROPPING

The crops listed can be safely grown after a spring application of **HEAT WG**.

Plant Back Crops In case of crop failure, the following crops can be planted in the same season ¹	Rotational Crops The following crops can be planted anytime in the following season
Barley Canary seed Chickpeas Corn (field and sweet) Lentils* Oats Dry field peas Soybean* Wheat (spring, winter & durum)	Barley (spring, winter, malting) Canary seed Canola Chickpeas Corn (field and sweet) Dry common beans Flax Lentils Mustard Oats Dry field peas Soybean Triticale Wheat (spring, winter & durum)
* Rate restrictions apply. Lentils and soybeans can only be grown as plant back crops provided that a maximum product use rate of 26 and 36 g/ha, respectively, was used in the previous crop.	

¹ A second application of **HEAT WG** cannot be made in the rescue crop.

The crops listed below can be safely grown after a fall application of **HEAT WG**.

Rotational crops that can be planted in the following spring after application	Rotational crops that can be planted in the second spring after application
Barley Canary seed Canola Chickpeas Corn (field and sweet) Flax Lentils Oats Dry field peas Soybeans Wheat (spring, winter, and durum)	All crops

16.0 SPRAYING INSTRUCTIONS

Water volume and spray pressure

Conventional ground application

Use sprayers equipped with standard flat nozzles. The use of 80°-110° stainless steel flat fan nozzle is recommended for optimum spray coverage with nozzles tilted 45° forward to ensure better coverage.

Thoroughly clean all screens to prevent nozzle clogging. Apply in a water volume of 50-100 L/ha and at a pressure of 240 kPa. For applications to dense weed infestations and thick canopies, use a higher water volume at pressures of 275 kPa.

Better coverage of the product results in enhanced control of weeds.

17.0 RESTRICTIONS AND LIMITATIONS

1. Wash sprayer thoroughly after use to avoid damage to the next crop sprayed.
2. DO NOT APPLY USING AERIAL APPLICATION EQUIPMENT, unless specified otherwise.
3. DO NOT enter or allow worker entry into treated areas for 12 hours after application.
4. Field corn – Corn forage and silage can be harvested, used as feed or grazed 60 or more days after application of **HEAT WG**.
5. Legume forage (chickpeas, faba beans, field peas and lentils) may be used as feed or grazed 60 or more days after application of **HEAT WG**. Desiccation treated pea vines may be grazed or fed to livestock.
6. Small grains (wheat, barley and oats) – forage and hay can be used as feed or grazed 30 or more days after application of **HEAT WG**. Pre-harvest treated barley, wheat and triticale straw may be grazed or fed to livestock.
7. Soybeans may be used as feed or grazed 60 or more days after application of **HEAT WG**.

8. Soybeans, chickpeas and dry common beans – Do not graze or feed treated hay or straw to livestock when **HEAT WG** is used as a harvest aid.
9. Grasses (creeping red fescue, timothy and bromegrass) – Forage and hay can be used as feed or grazed immediately after application of **HEAT WG**.
10. DO NOT apply directly to water. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
11. 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.
12. As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
13. In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact BASF at 1-877-371-2273 or www.agsolutions.ca for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

Buffer zones

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. 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) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

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).

Method of application	Crop	Buffer zones (metres) required for the protection of terrestrial habitats	
Field sprayer*	Lentils (pre-seed or pre-emergent)	3	
	Soybean (pre-seed or pre-emergent)	4	
	Barley, canary seed, chickpea, corn, faba beans, oats, dried field peas, forage grasses (seedling creeping red fescue, timothy, bromegrass), wheat (pre-seed or pre-emergent) Chemfallow Canola, faba beans, flax, lentil, chickpea, mustard, soybean, dried field peas, sunflower, dry common beans, wheat, barley, triticale (harvest aid)	10	
Aerial	Canola, faba beans, flax, lentil, chickpea, mustard, soybean, dried field peas, sunflower, dry common bean, wheat, barley, triticale (harvest aid)	Fixed wing	175
		Rotary wing	150

*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 labeled 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 labeled buffer zone can be reduced by 30%.

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 coarse spray (ASAE) category indicated on the labels for those tank mix partners.

18.0 RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **HEAT WG** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **HEAT WG** and other Group 14 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 **HEAT WG** or other Group 14 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 BASF at 1-877-371-2273 or at www.agsolutions.ca.

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