



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 19, 2022

Matthew Graneto
Senior Regulatory Manager
Bayer CropScience
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for Bromoxynil, Fenoxaprop-p-ethyl, and Pyrasulfotole and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Bromoxynil on Pacific Salmonids
Product Name: WOLVERINE ADVANCED HERBICIDE
EPA Registration Number: 264-1168
Application Dates: 4/17/2020, 8/26/2021, 12/1/2021, and 6/20/2022
Decision Numbers: 561928, 580460, 585993, and 588737

Dear Matthew Graneto:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Bromoxynil, Fenoxaprop-p-ethyl, and Pyrasulfotole Interim Decisions. The Agency has concluded that your submission is acceptable.

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of Bromoxynil on Pacific salmonids. The Agency has concluded that your submission is also acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Quinn Gavin at gavin.quinn@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

FENOXAPROP-P-ETHYL	GROUP	1	HERBICIDE
PYRASULFOTOLE	GROUP	27	HERBICIDE
BROMOXYNIL	GROUP	6	HERBICIDE

Wolverine[®] Advanced Herbicide

For Selective Postemergence Control of Most Annual Grassy Weeds (Including Wild Oat and Foxtail Species) and Broadleaf Weeds in Wheat and Barley

ACTIVE INGREDIENTS:

Fenoxaprop-p-Ethyl	4.56%
Pyrasulfotole	1.50%
Bromoxynil Octanoate	6.13%
Bromoxynil Heptanoate	5.93%
OTHER INGREDIENTS	81.88%
TOTAL:	100.00%

Contains petroleum distillates.

Contains 0.40 pound Fenoxaprop-p-Ethyl, 0.13 pound Pyrasulfotole, 0.53 pound, Bromoxynil Octanoate, and 0.52 pound Bromoxynil Heptanoate per 1 gallon.

EPA Reg. No. 264-1168

EPA Est.

KEEP OUT OF REACH OF CHILDREN

DANGER

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

For MEDICAL and TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

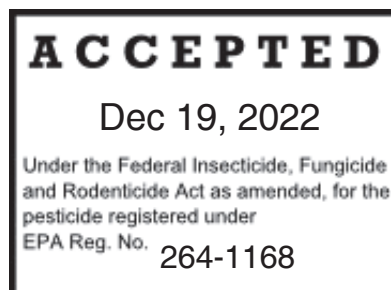
Please refer to [back panel] [booklet] for additional precautionary statements and directions for use. [Note to reviewer: Location of additional precautionary statements and directions for use will vary between those listed, depending on container type/size.]

Net Contents:

PRODUCED FOR



Bayer CropScience LP
800 N. Lindbergh Blvd.
St. Louis, MO 63167
1-866-99BAYER (1-866-992-2937)



FIRST AID

IF IN EYES:	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • Do not give anything by mouth to an unconscious person.
For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
NOTE TO PHYSICIAN: No specific antidote is available. Possible mucosal damage may contraindicate the use of gastric lavage. Vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes, avoid contact with skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, socks, shoes, chemical resistant gloves made of barrier laminate, butyl rubber \geq 14 mils, nitrile rubber \geq 14 mils, or neoprene rubber \geq 14 mils, and protective eyewear (safety glasses).

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENT

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240(d)(4-6))], the handler PPE requirements may be reduced or modified as specified in the WPS. Handlers must use closed mixing/loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate any body of water and do not apply when/where conditions could favor runoff. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters or rinsate. Do not allow sprays to drift onto desirable plants. Drift or runoff may adversely affect non-target plants.

Ground Water Advisory

Pyrasulfotole is known to leach through soil into ground water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Users are advised not to apply pyrasulfotole where soils have a rapid to very rapid permeability (such as loamy sand to sand) and the water table of an underlying aquifer is shallow or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Surface Water Advisories

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of pyrasulfotole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Reporting Ecological Incidents

To report ecological incidents, including mortality, injury, or harm to plants and animals, call [1-866-99BAYER (1-866-992-2937)].

Non-Target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read the entire label before using this product.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do not apply this product to golf course turf.

Endangered Species Protection Requirements: It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval **(REI) of 24 hours**. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 2 days for grass.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water), is the following:

- Coveralls over long-sleeved shirt and long pants
- Socks and chemical resistant footwear
- Goggles or face shield
- Chemical resistant gloves made of barrier laminate, butyl rubber \geq 14 mils, nitrile rubber \geq 14 mils, or neoprene rubber \geq 14 mils

PRODUCT INFORMATION

Wolverine® Advanced Herbicide is designed for broad spectrum postemergence control of important grass and broadleaf weed species in wheat (including durum wheat) and barley.

ENVIRONMENTAL AND BIOLOGICAL ACTIVITY

Wolverine Advanced Herbicide is a postemergence herbicide and best results are obtained when applications are made to young actively growing weeds. Wolverine Advanced Herbicide is primarily absorbed through the foliage and thorough spray coverage is important.

CROPS

Wolverine Advanced Herbicide may be used in wheat, including durum and barley.

APPLICATION TIMING

Wheat: Apply Wolverine Advanced Herbicide to the crop from emergence up to 60 days prior to harvest in the states of Minnesota, Montana, North Dakota, and South Dakota, 70 days prior to harvest in other states.

Barley: Apply Wolverine Advanced Herbicide to the crop from emergence up to the 5-leaf stage.

Weed Application Timing

Grass Weeds: Wolverine Advanced Herbicide has no effect via the soil on grass weeds and will only control emerged grass weeds. Wolverine Advanced Herbicide when applied as directed will control the annual grass weeds listed in **GRASS WEED CHART**.

Wolverine Advanced Herbicide will control susceptible grass weeds in the 1-leaf (fully expanded) to 2-tiller stage of growth. Blackgrass can be controlled over a wide range of growth stages, from the 1-leaf (fully expanded) through the advanced tillering stage. Windgrass will be controlled from emergence to a height of 3 inches.

Broadleaf Weeds: See **BROADLEAF WEED CHART** for a list of susceptible weed species and maximum stage of growth at application for best results.

APPLICATION DOSAGE and METHODS

Dosage

One case will treat 20 acres at 1.7 pt/A. Do not use less than the 1.7 pt/A unless directed by a Bayer CropScience representative.

Ground Application

Properly calibrated ground application equipment may be used to apply Wolverine Advanced Herbicide postemergence as a foliar spray. Select spray nozzles that provide best spray distribution and weed coverage at the appropriate spray pressure. Ground speed for application should not exceed 10 mph. Avoid uneven spray distribution, skips, overlaps, and spray drift.

Apply the appropriate dosage broadcast in 10 or more gallons of water per acre. Under conditions where large grass weeds or dense weed populations are present or adverse environmental conditions exist, a greater spray volume of 15 – 20 gallons of spray solution per acre is required for best weed control. DO NOT apply with hollow cone type nozzles or other nozzles that produce a fine droplet spray. Use nozzles and spray pressure for ground application that deliver medium to coarse spray droplets as indicated in the nozzle manufacturer's catalogs such as 80-degree or 110-degree flat-fan nozzles for optimum spray coverage and canopy penetration. Use screens that are 50 mesh or larger.

Do not use flood-jet nozzles or cone nozzles. Nozzle types, nozzle spacings, and lower spray pressures that produce very coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control.

Aerial Application

Calibrate aerial (fixed wing or helicopter) spray equipment prior to use. Wolverine Advanced Herbicide should be applied in a minimum spray volume of 5 gallons per acre if crop canopy and weed density allow adequate spray coverage.

Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Restrictions

- Handlers must use closed mixing loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops.
- Aerial Application to fallow land is restricted within 25 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc).

SPRY DRIFT MANAGEMENT

Mandatory Spray Drift Management

Aerial Applications

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S641).
- Do not apply when wind speeds exceed 10 mph at the application site.
- The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

Ground Boom Applications

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Do not apply when wind speeds exceed 10 mph at the application site.
- Do not apply during temperature inversions.
- Applicators are required to use a medium or coarser droplet size (ASABE S572).

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

Importance Of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Boom Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

Release Height - Aircraft

Higher release heights increase the potential for spray drift.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

Temperature And Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

WEED RESISTANCE-MANAGEMENT

For resistance management, please note that Wolverine Advanced Herbicide contains Group 1, Group 27, and Group 6 herbicides. Any weed population may contain plants naturally resistant to Group 1, Group 27, and Group 6 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Wolverine Advanced Herbicide or other Group 1, Group 27, and Group 6 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for 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 Bayer CropScience at 1-866-99BAYER (1-866-992-2937). You can also contact your pesticide distributor or university extension specialist to report resistance.

WEED CONTROL DIRECTIONS

Wolverine Advanced Herbicide is a postemergence herbicide and best results are obtained when applications are made to young actively growing weeds. Treat heavy weed infestations before they become competitive with the crop. Thorough coverage of weeds is necessary to obtain good weed control.

Postemergence application of Wolverine Advanced Herbicide will control the following grass and broadleaf weeds.

Grass Weed Chart

Wolverine Advanced Herbicide will control susceptible grass weeds in the 1-leaf (fully expanded) to 2-tiller stage of growth. Blackgrass can be controlled over a wide range of growth stages, from the 1-leaf (fully expanded) through the advanced tillering stage. Windgrass will be controlled from emergence to a height of 3 inches. Applications should be made to young, vigorously growing weeds.

Grass Weed Species, Common Name	Grass Weed Species, Scientific Name
Green foxtail	<i>Setaria viridis</i>
Foxtail millets (volunteer), common, Siberian, Hungarian, German millet	<i>Setaria italica</i>
Volunteer corn	<i>Zea mays</i>
Yellow foxtail	<i>Setaria pumila</i>
Proso millet (volunteer, wild)	<i>Panicum iliaceum</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Blackgrass	<i>Alopecurus myosuroides</i>
Hood canarygrass	<i>Phalaris paradoxa</i>
Littleseed canarygrass	<i>Phalaris minor</i>
Windgrass	<i>Apera interrupta</i>
Wild oat	<i>Avena fatua</i>
Field sandbur	<i>Cenchrus incertus</i>
Woolly cupgrass	<i>Erichloa villosa</i>

MOISTURE EFFECTS ON ANNUAL GRASS WEED CONTROL

The following conditions will result in optimum wild oat control:

1. Adequate soil moisture which occurs under normal rainfall in wheat or barley following a fallow year.
2. Temperatures lower than 85° F for several days prior to application.

Low soil moisture levels, low humidity, and high temperatures prior, during or following application may reduce wild oat and foxtail control provided by Wolverine Advanced Herbicide.

Foxtail under drought stress will exhibit rolled leaves ("onion leaf") and should not be sprayed as poor control may result. Apply Wolverine Advanced Herbicide when conditions improve.

Broadleaf Weed Chart

Weed species controlled by Wolverine Advanced Herbicide

Weed Species	Scientific name	Weed Size
Bedstraw, catchweed/cleavers *	<i>Galium aparine</i>	1 - 4 whorls
Bittercress, small-flowered	<i>Cardamine parviflora</i>	1 - 4 leaf
Buckwheat, wild	<i>Polygonum convolvulus</i>	1- 6 leaf
Catchfly, nightflowering	<i>Silene noctiflora</i>	1 - 4 leaf
Chickweed, common ^{1*}	<i>Stellaria media</i>	1 - 6 leaf
Cocklebur, common	<i>Xanthium strumarium</i>	1 - 4 leaf
Cockle, white	<i>Melandrium noctiflorum</i>	1 - 6 leaf
Cowcockle	<i>Vaccaria pyramidata</i>	1 - 6 leaf
Dandelion (seedling)	<i>Taraxacum officinale</i>	3 inch rosette
Fiddleneck, coast *	<i>Amsinckia intermedia</i>	1 - 4 leaf
Fiddleneck, tarweed *	<i>Amsinckia lycopsoides</i>	1 - 4 leaf
Field pennycress	<i>Thlaspi arvense</i>	1 - 8 leaf or 4 inch diameter
Flixweed	<i>Descurainia sophia</i>	4 inch diameter
Gromwell, corn *	<i>Lithospermum arvense</i>	1 - 6 leaf
Hawksbeard, narrowleaf	<i>Crepis tectorum</i>	1 - 4 leaf
Hempnettle, common	<i>Galeopsis tetrahit</i>	1 - 6 leaf
Henbit *	<i>Lamium amplexicaule</i>	1 - 6 leaf
Horseweed/Marestail ¹	<i>Conyza canadensis</i>	1 - 4 leaf
Jacobs ladder sp.	<i>Polemoniaceae</i>	1 - 4 leaf
Kochia ^{1*}	<i>Kochia scoparia</i>	1- 4 inch
Lambsquarters, common	<i>Chenopodium album</i>	1 - 6 leaf
London rocket	<i>Sisymbrium irio</i>	1 - 6 leaf
Mallow, common	<i>Malva neglecta</i>	1 - 4 leaf
Marshelder	<i>Iva xanthifolia</i>	1 - 4 leaf
Mayweed chamomile/dogfennel ^{1*}	<i>Anthemis cotula</i>	2 inch
Mustard, birdsrape/wild turnip	<i>Brassica rapa</i>	1- 6 leaf or 4 inch diameter
Mustard, black	<i>Brassica nigra</i>	1- 6 leaf or 4 inch diameter
Mustard, blue	<i>Chorispora tenella</i>	1- 6 leaf or 4 inch diameter
Mustard, tumble/Jim Hill mustard	<i>Sisymbrium altissimum</i>	1- 6 leaf or 4 inch diameter
Mustard, wild	<i>Sinapis arvensis</i>	1- 6 leaf or 4 inch diameter
Nightshade, Cutleaf	<i>Solanum triflorum</i>	1 - 4 leaf
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	1 - 4 leaf
Nightshade, hairy	<i>Solanum sarrachoides</i>	1 - 4 leaf
Palmer pigweed/Palmer amaranth	<i>Amaranthus palmeri</i>	1 - 6 leaf
Pennsylvania smartweed	<i>Polygonum pensylvanicum</i>	1 - 6 leaf
Pigweed, prostrate	<i>Amaranthus blitoides</i>	1 - 6 leaf
Pigweed, redroot	<i>Amaranthus retroflexus</i>	1 - 6 leaf
Prickly lettuce/China Lettuce	<i>Lactuca serriola</i>	1 - 6 leaf
Radish, wild	<i>Raphanus raphanistrum</i>	1- 6 leaf or 4 inch diameter
Ragweed, common	<i>Ambrosia elatior</i>	1 - 4 leaf
Ragweed, giant	<i>Ambrosia trifida</i>	1 - 4 leaf
Russian thistle ^{1*}	<i>Salsola kali</i>	2 inch

Weed Species	Scientific name	Weed Size
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	1- 6 leaf or 4 inch diameter
Smartweed, pale	<i>Polygonum lapathifolium</i>	1 - 4 leaf
Sowthistle ¹ , annual	<i>Sonchus oleraceus</i>	1 - 6 leaf
Sowthistle ¹ , perennial	<i>Sonchus arvensis</i>	1 - 6 leaf
Sowthistle, ¹ spiny	<i>Sonchus asper</i>	1 - 6 leaf
Sunflower ¹ , annual	<i>Helianthus annuus</i>	1 - 6 leaf
Tansymustard	<i>Descurainia pinnata</i>	4 inch diameter
Velvetleaf	<i>Abutilon theophrasti</i>	1 - 4 leaf
Vol. canola	<i>Brassica napus</i>	1- 6 leaf or 4 inch diameter
Vol. soybean	<i>Glycine max</i>	1 - 4 trifoliate
Wallflower, bushy	<i>Erysimum repandum</i>	4 inch rosette
Waterhemp, tall	<i>Amaranthus tuberculatos</i>	1 - 6 leaf
Western salsify	<i>Tragopogon dubius</i>	1 - 4 leaf
Wormwood, biennial (seedling)	<i>Artemisia biennis</i>	2 inch

* In winter cereals, only partial control can be expected.

¹ Includes ALS, phenoxy or glyphosate resistant biotypes

Partial Control	
Bindweed, field	<i>Convolvulus arvensis</i>
Canada thistle	<i>Cirsium arvense</i>
Catchfly, cone	<i>Silene conoidea</i>
Catchfly, conical	<i>Silene colorata</i>
Chamomile, false	<i>Matricaria maritima</i>
Dandelion (established)	<i>Taraxacum officinale</i>
Dock, curly	<i>Rumex crispus</i>
Jersalem artichoke	<i>Helianthus tuberosus</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Lanceleaf sage	<i>Salvia reflexa</i>
Pepperweed, Virginia	<i>Lepidium virginicum</i>
Pineappleweed	<i>Matricaria matricarioides</i>
Redstem filaree / Storksbill	<i>Erodium cirutarium</i>
Swinecress	<i>Coronopus sp.</i>
Vol. flax	<i>Linum usitatissimum</i>
Vol. lentils	<i>Lens culinaris</i>
Wormwood, absinth	<i>Artemesia absinthium</i>

Partially controlled weeds will be stunted in growth and/or be reduced in number as compared to non-treated areas and performance may not be commercially acceptable. Best results are obtained when weeds are treated with Wolverine Advanced Herbicide before they reach 4 inches in height. The degree of weed control will vary with weed size, density, coverage and growing conditions.

COMPATIBILITY TESTING AND TANK MIX PARTNERS

Compatibility

If Wolverine Advanced Herbicide is to be tank mixed with other pesticides, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5-15 minutes after mixing. Read and follow the label of each tank-mix product used for precautionary statements, directions for use, geographic and other restrictions.

Tank mixtures For Insect Control

Wolverine Advanced Herbicide may be tank mixed with Baythroid® XL, Mustang Max™, or Warrior® insecticides providing proper timing for insect and weed control are the same.

Tank mixtures For Disease Control

Fungicides such as Stratego®, Tilt®, Headline®, mancozeb (Dithane F-45®; Manzate® 75DF; Penncozeb® 75DF), or Topsin® M may be tank mixed with Wolverine Advanced Herbicide when timing for application of each tank mix partner is the same for the use site. Do not apply Wolverine Advanced Herbicide in tank mixture with tebuconazole.

Tank mix applications of herbicides with fungicides may cause temporary yellowing, leaf burn and or height reduction of the crop. Refer to the specific fungicide label for use directions, application rates, restrictions and a list of diseases controlled.

Order of Mixing

Wolverine Advanced Herbicide must be applied with clean and properly calibrated equipment. Prior to adding Wolverine Advanced Herbicide to the spray tank, ensure that the spray tank, filters and nozzles have been thoroughly cleaned. In-line strainers and nozzle screens should be 50 mesh or coarser.

1. Fill the spray tank 1/4 to 1/2 full with clean water then add AMS or UAN and begin agitation or bypass.
2. Add the appropriate rate of Wolverine Advanced Herbicide directly to the spray tank. Maintain sufficient agitation during both mixing and application.
3. Add a listed tank mix partner, if desired.
4. Add surfactant if desired.
5. Fill the spray tank with balance of water needed.
6. Continue agitation during Wolverine Advanced Herbicide application to ensure uniform spray coverage.

Equipment Cleanup Procedures

1. Drain the tank completely, and then wash out tank, boom and hoses with clean water. Drain again.
2. Half fill the tank with clean water and add ammonia (i.e., 3% domestic ammonia solution) at a dilution rate of 1% (i.e., 1 gallon of domestic ammonia for every 100 gallons of rinsate). Complete filling of the tank with water. Agitate/recirculate and flush through boom and hoses. Leave agitation on for 10 minutes. Drain tank completely.
3. Repeat step 2.
4. Remove nozzles and screens and soak them in a 1% ammonia solution. Inspect nozzles and screens and remove visible residues.
5. Flush tank, boom, and hoses with clean water.
6. Inspect tank for visible residues. If present, repeat step 2.

CROP ROTATION GUIDELINES

Wolverine Advanced Herbicide breakdown in the soil is due mainly to microbial action. Under adverse conditions such as cold and drought, degradation may be slowed.

- 1 Month: Wheat, Barley, Oats, Rye and Triticale
- 4 Months: Alfalfa*, Millet, Sorghum (grain) and Soybeans
- 9 Months: Canola, Canaryseed, Chickpeas, Corn, Drybeans, Flax, Field peas**, Lentils***, Mustards, Potatoes, Safflower, Sunflowers, and Sugarbeets.

* Thorough tillage prior to planting alfalfa and a minimum of 12 inches of rainfall, overhead, furrow or flood irrigation or any combination of these water sources totaling 12 inches is required between the time following a Wolverine Advanced Herbicide application and the time of alfalfa seeding.

** Field peas: 9 months for all states except 18 months in MT.

*** Lentils: 9 months for all states except 18 months in MN, MT, ND and SD.

Where a crop is not specified, conduct a field bioassay as described in "FIELD BIOASSAY" section of this label.

FIELD/SMALL SCALE BIOASSAY

A field bioassay must be conducted for crops not listed on this label. To conduct a field bioassay, plant strips of the crop you want to grow the season following Wolverine Advanced Herbicide application. Monitor the crop for response to Wolverine Advanced Herbicide to determine if the crop can be grown safely in previously treated Wolverine Advanced Herbicide areas. Do not plant any rotational crops within 30 days following Wolverine Advanced Herbicide application.

USE PRECAUTIONS

- Do not apply to crops undersown with legume species.
- Rainfall within 1 hour may result in reduced weed control.
- Apply to actively growing weeds. Weed control may be reduced when weeds are under stress due to severe weather conditions, drought, very cold temperatures, etc. Weed control may be reduced if the herbicide applications are made under dry, dusty conditions – especially in the wheel track areas. Ground speed for application should not exceed 10 mph.
- Tank mix applications of herbicides with fungicides may cause temporary yellowing, leaf burn and or height reduction of the crop.

RESTRICTIONS FOR USE

- Do not apply more than 1.7 pt/A (0.425 pounds of Bromoxynil) per year.
- Do not make more than one application of Wolverine Advanced Herbicide per year.
- Do not apply Wolverine Advanced Herbicide in tank mixture with tebuconazole.
- Do not graze or harvest barley forage within 25 days, harvest barley grain and straw within 57 days after application.
- Do not graze or harvest wheat forage within 25 days, harvest wheat grain and straw within 60 days after application in the states of Minnesota, Montana, North Dakota, and South Dakota, within 70 days after application in other states.

STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state and local regulations and procedures

CONTAINER HANDLING AND DISPOSAL:

[Container Handling and Disposal for Nonrefillable Containers]

Nonrefillable container.

For nonrefillable containers of 5-gallon capacity or less

Do not reuse the container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.

Triple rinse or pressure rinse (or equivalent) the container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix-tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For nonrefillable containers of greater than 5-gallon capacity

Do not reuse or refill this container.

Triple rinse or pressure rinse (or equivalent) the container promptly after emptying.

Triple rinse large nonrefillable containers NOT equipped with pumping systems as follows: Empty the remaining contents into application equipment or mix-tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth for 30 seconds, ensuring at least one complete revolution. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or mix-tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Triple rinse large nonrefillable containers equipped with pumping systems as follows: Empty the remaining contents into application equipment or mix-tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Pressure rinse large containers as follows: Empty the remaining contents into application equipment or mix-tank. Place container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle through the opening of the container or directly into the side of the container and rinse at about 40 PSI for at least 30 seconds or until rinsate runs clear. Continue to drain for 10 seconds after the flow begins to drip.

Once the nonrefillable container is properly rinsed, offer for recycling, if available. Some container manufacturers offer container recycling. See additional information regarding manufacturer recycling programs attached to the container, if available. If no recycling information is available on the container, contact your chemical dealer or Bayer CropScience at 1-866-99BAYER (1-866-992-2937), or contact the Ag Container Recycling council (ACRC) at 1-877-952-2272 or at www.acrecycle.org, to find the nearest recycling location. If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Container Handling and Disposal for Refillable Containers]

Refillable container. Refill the container with pesticide only. Do not reuse the container for any other purpose.

Cleaning the container before refilling is the responsibility of the refiller. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Triple rinse or pressure rinse (or equivalent) the container promptly after emptying and before final disposal.

To triple rinse the refillable container before final disposal, empty the remaining contents from the container into application equipment or mix-tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

To pressure rinse the refillable container before final disposal, empty the remaining contents from the container into application equipment or mix-tank. Position the container so that it can drain directly into application equipment or mix-tank while rinsing, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle through the opening of the

container or directly into the side of the container and rinse all interior area at about 40 PSI for at least 30 seconds or until rinsate drains clear.

Once the refillable container is properly rinsed, offer for recycling, if available. Some container manufacturers offer container recycling. See additional information regarding manufacturer recycling programs attached to the container, if available. If no recycling information is available on the container, contact your chemical dealer or Bayer CropScience at 1-866-99BAYER (1-866-992-2937), or contact the Ag Container Recycling Council (ACRC) at 1-877-952-2272 or at www.acrecycle.org, to find the nearest recycling location. If recycling is not available, dispose of in accordance with federal, state and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Optional additional container disposal statement: IBC EMPTY? – FREE CALL – 1-888-SCHUETZ (1- 888-724-8389) www.schuetz.net/ticket; Schuetz ticket service]

[Optional additional container disposal statement: FREE IBC PICKUP] [For continental USA and Canada only.]

[Optional additional container disposal statement: RETURNnet SYSTEM – To return empty IBC's Email or Call – www.returnnetsystem.com – 1-888-758-SHIP – United States and Canada (1-888-758-7447 – IBCNA – Clarkston, Michigan – USA)]

[Optional additional container label statements for the CUBE refillable packaging system only:

CUBE Bayer CropScience Refillable Delivery System

FEATURES INCLUDE:

- Automatic Venting
 - Heavy duty one-way 2-inch camloc ball valve with protective shield door
 - Complete coated steel protective enclosure
 - Durable 4-way plastic pallet
- Lift door to access one-way valve]

[For Transport Vehicle labels only, as defined at 40 CFR § 156.3]

FOR BULK PESTICIDE TRANSPORT ONLY.

STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid waste, empty as much product from this transport vehicle as possible for repackaging or use in accordance with label directions. If wastes cannot be avoided, offer remaining product or rinsate to a waste disposal facility or pesticide disposal program. All disposal must be in accordance with applicable federal, state and local regulations and procedures.

CONTAINER HANDLING AND DISPOSAL: Emptied transport vehicle container retains vapor and product residue. Observe all precautions stated on this label until the container is cleaned, reconditioned or destroyed. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, and worn-out threads and closures. Clean thoroughly before reuse for transportation of a material of different composition or before retiring this transport vehicle container from service.

THIS LABEL FOR USE WITH TRANSPORT VEHICLES ONLY

CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. NO AGENT OF BAYER CROPSCIENCE IS AUTHORIZED TO MAKE ANY WARRANTIES BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE'S ELECTION, THE REPLACEMENT OF PRODUCT.

Warning: This product contains a chemical known to the State of California to cause developmental harm.

Net Contents:

Baythroid, Sevin, Stratego, and Wolverine Advanced are trademarks of Bayer group.

Headline is a trademark of BASF Corporation.

Penncozeb and Topsin are trademarks of Cerexagri, Inc.

Dithane F-45 is a trademark of Dow AgroSciences LLC.

Mustang MAX is a trademark of FMC Corporation.

Manzate 75DF is a trademark of Griffin.

Tilt, and Warrior are trademarks of Syngenta Crop Protection, Inc.

Wolverine Advanced Herbicide (PENDING) 11/12/2021, 1/12/2021, 05/11/2022, 05/24/2022