



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 25, 2023

Gaganpreet Kaur  
Senior Regulatory Affairs Manager  
Bayer CropScience  
800 N. Lindbergh Blvd.  
St. Louis, MO 63167

Subject: Registration Review Label Mitigation for Propoxycarbazone-sodium  
Product Name: OLYMPUS RANGELAND HERBICIDE  
EPA Registration Number: 432-1584  
Application Date: July 6, 2022  
Decision Number: 585648

Dear Gaganpreet Kaur:

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 Propoxycarbazone-sodium Interim Decision, and has concluded that your submission is 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 Assurance.

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

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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 Caleb Carr via email at [carr.caleb@epa.gov](mailto:carr.caleb@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a long horizontal flourish extending to the right.

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

Enclosure

# OLYMPUS™ Rangeland Herbicide

ABN: LAMBIENT™ Herbicide

Water Dispersible Granule

For post-emergence control of certain grasses and broadleaf weeds in Rangeland, Pastures and Conservation Reserve Program

Editorial Note – [Bracketed text] is optional language

**ACTIVE INGREDIENT:**

Propoxycarbazone-sodium\* .....70%

**OTHER INGREDIENTS** .....30%

**TOTAL:** .....100%

CAS Number 181274-15-7

**EPA Reg. No. 432-1584**

**EPA Est.**

**STOP - Read the label before use  
Keep out of reach of children**

## CAUTION

See [Back] [Side] Panel for First Aid Instructions and [Leaflet][Booklet] for Complete Precautionary Statements and Directions for Use. (Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.)

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

**For PRODUCT USE Information Call 1-800-331-2867**

### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577.</b></p> <p><b>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</b></p>	
<p><b>NOTE TO PHYSICIAN:</b> No specific antidote is available. Treat the patient symptomatically.</p>	

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if swallowed. Avoid contact with skin, eyes, or clothing.

**ACCEPTED**

Sep 25, 2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under

EPA Reg. No. 432-1584

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

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

### User Safety Recommendations

#### User 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

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 apply when weather conditions favor drift from treatment areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product is toxic to terrestrial plants. Minimize exposure to non-target plants and do not apply when weather conditions favor drift from target areas.

### Ground Water Advisory

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

### Surface Water Advisory

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 high potential for reaching surface water 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 propoxycarbazone-sodium from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

## DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.**

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.

### 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, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), 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 12 hours.

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 long-sleeved shirt and long pants, socks, shoes, waterproof gloves, and protective eye wear.

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS does not pertain to non-agricultural use on sites, such as, rangeland, permanent grass pastures, or non-cropland. See the Agricultural Use Requirements section of this label for information where the WPS applies.

**Entry Restrictions for Non-WPS Uses:** For applications on rangeland and permanent grass pastures and non-cropland areas, do not enter or allow worker entry into treated areas until sprays have dried.

### GUIDELINES FOR USE ON RANGELAND, GRASS PASTURES AND CONSERVATION RESERVE PROGRAM (CRP) ACRES

#### PRODUCT INFORMATION

OLYMPUS™ Rangeland Herbicide is a water dispersible granule which controls susceptible grasses and broadleaf weeds on rangeland, permanent grass pastures, and Federal Conservation Reserve Program (CRP) acres.

OLYMPUS Rangeland Herbicide may be applied for the control of undesirable vegetation in order to achieve one or more of the following vegetation management objectives:

1. The control of undesirable (non-native, invasive and noxious) plant species.
2. The release of existing desirable plant communities from the competitive pressure of undesirable plant species.
3. The management of undesirable vegetation in order to aid in the re-establishment of desirable vegetation.
4. The control of undesirable vegetation for purposes of wildfire fuel reduction.
5. The control of undesirable vegetation for purposes of wildlife habitat improvement.

#### CROPS

Native rangeland, grass pastures and Federal Conservation Reserve Program (CRP) acres. See **TOLERANCE OF DESIRABLE GRASS SPECIES** section for suitability for treatment of specific grass species.

#### APPLICATION INFORMATION

##### Weed Application Timing

For the control of annual weed species such as cheat and downy brome, a single application of OLYMPUS Rangeland Herbicide that coincides with the successful establishment and/or release of desirable vegetation is recommended.

Apply OLYMPUS Rangeland Herbicide as a foliar broadcast postemergence spray in the fall or spring to actively growing weeds. Best weed control can be expected when applications are made before grass weeds tiller and broadleaf weeds are smaller than 2 inches in diameter.

In challenging weed control situations or management of difficult to control perennial weed species, best results are achieved by a sequential application program. Apply OLYMPUS Rangeland Herbicide in the fall followed by a spring OLYMPUS Rangeland Herbicide application. Applications in following years may be required to maintain control.

##### Application Methods

Most consistent weed control is obtained via ground application however ground or aerial (fixed wing or helicopter) application equipment may be used to apply OLYMPUS Rangeland Herbicide as a foliar postemergence spray.

Calibrate spray equipment before use to ensure optimum plant coverage and canopy penetration as thorough coverage achieves the best weed control results. Consult the spray drift and advisory sections of this label for spray drift reduction guidance.

**Ground application:** Apply OLYMPUS Rangeland Herbicide broadcast in an equivalent volume of 5 or more gallons of water per acre. For dense weed infestations, use an equivalent volume of 15 or more gallons of water per acre. Weed infestations should be treated before they become competitive with the desirable vegetation.

**Note:** In some areas, a dense layer of plant residue can accumulate where brome species are a problem. This residue can make it difficult for OLYMPUS Rangeland Herbicide to reach small weeds. To ensure best results, use at least 20 GPA in heavy trash situations. Mowing or burning of plant residue several weeks prior to application can also enhance control.

**Aerial application:** Apply OLYMPUS Rangeland Herbicide in a minimum equivalent volume of 3 gallons of water per acre (GPA). In heavy weed infestations, dense crop canopy or in stress conditions, 5 GPA carrier volume is strongly recommended.

**Spot Applications:** If needed, spot treatments with OLYMPUS Rangeland Herbicide may be used to control any remnant plants or new seedlings that may emerge. Use rates equivalent to broadcast-applied rates of up to a maximum of 1.2 oz/acre (0.052 lb a.i./acre) per annual growing season.

To prevent misapplication, spot treatments should be applied with a calibrated boom, boomless spray system, hand-held, or backpack sprayers.

Spray volume should be sufficient to thoroughly and uniformly wet weed foliage. When applying spot treatments, broadcast-applied equivalent application parameters (volume, adjuvants, etc.) are to be followed as directed in the Application Rate table.

Mix the amount of OLYMPUS Rangeland Herbicide (oz or grams) corresponding to the desired broadcast rate in 0.5 to 2.5 gallons of water, depending upon the spray volume required to treat 1,000 sq ft. A delivery volume of 0.5 to 2.5 gallons per 1,000 sq ft is equivalent to 22 to 109 gallons per acre.

**Application rate table:**

Amount of OLYMPUS Rangeland Herbicide Per 1,000 Sq Ft To Equal Broadcast Rate		
Broadcast Rate (oz/A)	Amount of OLYMPUS Rangeland Herbicide per 1,000 sq ft	
	Ounces	Grams
0.9 (0.039 lb a.i./acre)	0.021	0.597
1.2 (0.052 lb a.i./acre)	0.027	0.797

**MANDATORY SPRAY DRIFT MANAGEMENT**

Aerial Applications

- When applying aurally to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a coarse droplet size (ASABE S572.1).
- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor blade vortices. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- When applying to crops via aerial application equipment, applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications

- When using ground application equipment, apply with nozzle height no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**SPRAY DRIFT ADVISORIES**

**POLLINATOR ADVISORY STATEMENT:** This product may adversely impact the forage and habitat of local pollinators, including the monarch butterfly (and its larvae), birds, or bats if reaches non-target areas. Protect pollinators by following label directions to minimize spray drift.

**Spray Drift Management:**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

**IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

## **CONTROLLING DROPLET SIZE - GROUND BOOM**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

## **CONTROLLING DROPLET SIZE – AIRCRAFT**

- Number of Nozzles - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations. **AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**
- Nozzle Type - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length - Longer booms increase drift potential. Therefore a shorter boom length is recommended.
- Application Height - Application more than 10 ft. above the canopy increases the potential for spray drift.

## **BOOM HEIGHT**

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

## **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.** Note: Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.

## **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

## **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## **WEED RESISTANCE MANAGEMENT**

For resistance management, Olympus Rangeland Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Olympus Rangeland Herbicide and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

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

- Rotate the use of Olympus Rangeland Herbicide or other Group 2 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 your Bayer representative or distributor at 1-800-331-2867.

## USE RATES

OLYMPUS Rangeland Herbicide at 1.2 ounces per acre (0.052 lb a.i. per acre) will provide control or partial control of many annual grass and broadleaf weeds. For a single application, apply OLYMPUS Rangeland Herbicide at 1.2 ounces per acre in the fall or spring to actively growing weeds. Two applications may be applied in a year, limited to a cumulative total of 1.2 ounces of OLYMPUS Rangeland Herbicide per acre per year (0.052 lb a.i. per acre per year).

For further information on selecting the proper OLYMPUS Rangeland Herbicide rate and timing, see the **Weed Management in Existing Grass Stands** and the **Forage Grass Re-Establishment** sections of this label. Unless otherwise recommended by Bayer CropScience, do not apply less than 0.9 ounce of OLYMPUS Rangeland Herbicide per year (0.039 lb a.i. per acre per year).

## SURFACTANTS AND FERTILIZER ADDITIVES

OLYMPUS Rangeland Herbicide is a water dispersible granule that does not include an adjuvant. A non-ionic surfactant (NIS) is required in the spray solution. Use only NIS surfactants which contain at least 80 percent active ingredient.

NIS surfactants should be used at 0.25% - 0.5% v/v in spray solution. Mix according to the guidelines as described in the Mixing Instructions section.

### RESTRICTION:

Do not use an organosilicone-based surfactant. Additives that lower the pH of the spray solution below pH 5 are not recommended.

Urea ammonium nitrogen (UAN) fertilizer may be added to enhance weed control. Use only spray grade quality UAN fertilizer (e.g. 28-0-0 or 32-0-0 at 1 – 2 quart/acre) or ammonium sulfate fertilizer (21-0-0-24 at 1.0 – 3.0 pounds per acre).

## APPLICATION IN FLUID FERTILIZER

Excluding applications to newly emerged seedling grasses, OLYMPUS Rangeland Herbicide may be applied using a UAN as the spray carrier. For fall applications, the fertilizer solution should not exceed 50% and not exceed more than an equivalent rate of 30 pounds of actual nitrogen per acre. A NIS surfactant at a maximum of 0.25% v/v is required in spray solutions containing liquid nitrogen.

Due to the activity of fertilizer on the foliage of desired grasses, temporary injury may result when UAN is used as a spray carrier. Crop response symptoms due to the use of UAN as a spray carrier may include discoloration and leaf burn.

The addition of liquid fertilizer may negatively impact seedling grass tolerance and is not recommended when treating newly emerged seedling grasses.

To ensure the protection of the threatened and endangered plants when applying OLYMPUS Rangeland Herbicide to rangeland:

- a. Federal agencies must follow NEPA regulations to ensure protection of threatened and endangered plants.
- b. State agencies must work with the Fish and Wildlife Services or the Service's designated state conservation agency to ensure protection of threatened and endangered plants.
- c. Other organizations or individuals must operate under Habitat Conservation Plan if threatened or endangered plants are known to be present on the land to be treated.



## TANKMIXES

For broad-spectrum control of both annual grasses and broadleaf weeds, OLYMPUS Rangeland Herbicide may be mixed with the following broadleaf herbicides. With all tank-mix partners use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. OLYMPUS Rangeland Herbicide cannot be mixed with any product containing a label prohibition against such mixing. A non-ionic surfactant is always required with OLYMPUS Rangeland Herbicide (see “**SURFACTANTS**” section).

Broadleaf tankmix partners:

2,4-D Amine or Ester *	MCP Amine or Ester	Sencor®
Ally XP	Milestone	Stinger*
Cimarron Max/Plus/Extra	Redeem R&P	Starane
Curtail*	Remedy/Remedy Ultra	Transline*
Dicamba*		Tordon
Escort		

\* Applications with herbicides containing dicamba, clopyralid or 2,4-D may result in reduced downy brome (*Bromus tectorum*) control.

## MIXING INSTRUCTIONS

Ensure the spray tank is clean. In-line strainers and nozzle screens should be clean and 50 mesh or coarser.

1. Fill the spray tank 1/4 to 1/2 full with clean water then add UAN or AMS if desired and begin agitation or bypass.
2. Add the appropriate rate of OLYMPUS Rangeland Herbicide directly to the spray tank.
3. Add the broadleaf weed herbicide if desired.
4. Add the surfactant.
5. Fill the spray tank with balance of water needed.
6. Maintain sufficient agitation during both mixing and application of OLYMPUS Rangeland Herbicide.

## WEEDS CONTROLLED

OLYMPUS Rangeland Herbicide effectively controls the following weeds when applied at the rates and application timings shown and weeds are actively growing. Best control is achieved when grass weeds are treated at the 2-leaf to 2-tiller stage of growth and before broadleaf weeds are 2 inches in diameter.

Common name	Scientific name	Application Rates	
		0.9 ounce/acre (0.039 lb a.i./acre)	1.2 ounce/acre (0.052 lb a.i./acre)
<b>Grasses</b>			
Cheat (true cheat)	<i>Bromus secalinus</i>	C	C
Dense silky-bent (Windgrass)	<i>Apera spica-venti</i>	C	C
Downy brome	<i>Bromus tectorum</i>	PC	C
Foxtail Barley	<i>Hordeum jubatum</i>	PC	PC
Hood canarygrass	<i>Phalaris paradoxa</i>	C	C
Japanese brome	<i>Bromus japonicus</i>	C	C
Johnsongrass	<i>Sorghum halepense</i>	PC	PC
Jointed Goatgrass*	<i>Aegilops cylindrica</i>	-	PC
Littleseed canarygrass	<i>Phalaris minor</i>	C	C
Quackgrass	<i>Elytrigia repens</i>	PC	PC
Rattail fescue	<i>Vulpia myuros</i>	PC	PC
Rescue grass	<i>Bromus catharticus</i>	-	PC
Ripgut brome	<i>Bromus rigidus</i>	PC	C
Soft Chess	<i>Bromus commutatus</i>	C	C
Wild oat	<i>Avena fatua</i>	PC	C
Windgrass	<i>Apera interrupta</i>	C	C

**NOTE: C means Control PC means Partial Control**

Partially controlled weeds will be stunted in growth and/or be reduced in number as compared to non-treated areas but control will generally not be commercially acceptable.

\* Fall and spring sequential applications required.

**BROADLEAF WEEDS and SEDGES CONTROLLED**

Weeds Controlled <sup>1</sup>		OLYMPUS Rangeland Herbicide
Common Name	Scientific Name	Single Application (0.9 – 1.2 ounces) (0.039 - 0.052 lb a.i./acre)
Black mustard	<i>Brassica nigra</i>	C
Black nightshade	<i>Solanum nigrum</i>	C
Blue mustard	<i>Chorispora tenella</i>	C
Buffalobur	<i>Solanum rostratum</i>	C
Burr buttercup	<i>Ranunculus testiculatus</i>	C
Bushy wallflower	<i>Erysimum repandum</i>	C
Carolina geranium	<i>Geranium carolinianum</i>	PC
Catchweed bedstraw	<i>Galium aparine</i>	PC
Common chickweed	<i>Stellaria media</i>	C
Common cocklebur	<i>Xanthium strumarium</i>	PC
Common groundsel	<i>Senecio vulgaris</i>	C
Common lambsquarters	<i>Chenopodium album</i>	PC
Common purslane	<i>Portulaca oleracea</i>	PC
Common ragweed	<i>Ambrosia artemisiifolia</i>	PC
Cranesbill geranium	<i>Geranium maculatum</i>	PC
Cypressvine morningglory	<i>Ipomoea quamoclit</i>	PC
Entireleaf morningglory	<i>Ipomoea hederacea var. integruscula</i>	PC
False chamomile	<i>Matricaria inodora</i>	PC
Field bindweed	<i>Convolvulus arvensis</i>	PC
Field Forget-Me-Not	<i>Myosotis arvensis</i>	PC
Field pennycress/Fanweed	<i>Thlaspi arvense</i>	C
Field violet	<i>Viola arvensis</i>	PC
Flixweed	<i>Descurania sophia</i>	C
Giant ragweed	<i>Ambrosia trifida</i>	PC
Henbit	<i>Lamium amplexicaule</i>	PC
Ivyleaf morningglory	<i>Ipomoea hederacea</i>	PC
Kochia	<i>Kochia scoparia</i>	PC
London rocket	<i>Sisymbrium irio</i>	C
Marsh bedstraw	<i>Galium spp.</i>	PC
Mouseear chickweed	<i>Cerastium vulgatum</i>	C
Narrowleaf plantain	<i>Plantago lanceolata</i>	PC
Perennial pepperweed	<i>Lepidium latifolium</i>	PC
Persian speedwell	<i>Veronica persica</i>	PC
Pitted morningglory	<i>Ipomoea lacunosa</i>	PC
Prickly sida/Teaweed	<i>Sida spinosa</i>	C
Prostrate knotweed	<i>Polygonum aviculare</i>	PC
Purple deadnettle	<i>Lamium purpureum</i>	PC
Purple nutsedge	<i>Cyperus rotundus</i>	PC
Purslane speedwell	<i>Veronica peregrina</i>	PC
Rape (volunteer)	<i>Brassica rapa</i>	C
Redroot pigweed	<i>Amaranthus retroflexus</i>	C
Russian thistle	<i>Salsola iberica</i>	PC
Shepherdspurse	<i>Capsella bursa-pastoris</i>	C

Weeds Controlled <sup>1</sup>		OLYMPUS Rangeland Herbicide
Common Name	Scientific Name	Single Application (0.9 – 1.2 oz) (0.039 - 0.052 lb a.i./acre)
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>	C
Small seeded false flax	<i>Camelina micropora</i>	C
Smallflower morningglory	<i>Jacquemontia tamnifolia</i>	PC
Tall morningglory	<i>Ipomoea purpurea</i>	PC
Tall wormseed wallflower	<i>Erysimum cheiranthoides</i>	C
Tansy mustard	<i>Descurania pinnata</i>	C
Tumble mustard	<i>Sisymbrium altissimum</i>	C
Western ragweed	<i>Ambrosia psilostachya</i>	PC
Wild buckwheat	<i>Polygonum convolvulus</i>	PC
Wild mustard	<i>Brassica kaber</i>	C
Wild turnip	<i>Brassica campestris</i>	C
Yellow nutsedge	<i>Cyperus esculentus</i>	PC
Yellow rocket	<i>Barbarea vulgaris</i>	PC
<p><b>NOTE: C means Control PC means Partial Control</b></p> <p>Partially controlled weeds will be stunted in growth and/or be reduced in number as compared to non-treated areas but control will generally not be commercially acceptable.</p>		

<sup>1</sup> Naturally occurring resistant biotypes of certain weed species are known to occur.

## REVEGETATION WITH RANGEGRASSES AND OTHER FORAGE GRASSES

OLYMPUS Rangeland Herbicide controls many annual and perennial grass and broadleaf weeds. Reducing weed competition during desirable grass establishment is one way to foster optimal grass seedling establishment.

OLYMPUS Rangeland Herbicide can result in stunting or stand thinning of desired grasses. The duration and intensity of effects are also related to weed pressure, chemical residue, soil type and adverse environmental conditions. Additional stressors such as poor seedling vigor, cool temperatures, high elevations, poor soils, planting depth, additional tankmix partners, excessive moisture, disease, insects or very dry weather after emergence can amplify crop injury and may result in mortality. Bayer CropScience can not be held responsible for factors such as these. It is recommended to try OLYMPUS Rangeland Herbicide on a small area if tolerance is not known.

**Seed Production:** Due to highly variable impact on yield from numerous stress factors (rainfall, pests, environmental extremes etc.); Bayer CropScience does not recommend the use of OLYMPUS Rangeland Herbicide on seed crops and such risks associated with this use must be assumed by the user.

## Weed Management in Existing Grass Stands

**Postemergence Application Timing:** Apply OLYMPUS Rangeland Herbicide as an early postemergence application to annual grass and broadleaf weeds. For light weed infestations 0.9 ounce OLYMPUS Rangeland Herbicide per acre (0.039 lb a.i. per acre) is recommended but may be inadequate for heavy weed infestations or in challenging environmental conditions. The 1.2 ounce per acre rate (0.052 lb a.i./acre) of OLYMPUS Rangeland Herbicide provides the greatest duration of weed control but can result in foliar and/or seed head or height suppression in established grass stands of sensitive species. Refer to the **TOLERANCE OF DESIRABLE GRASS SPECIES** table for further information.

When treating mixed grass stands that have been overseeded, make OLYMPUS Rangeland Herbicide applications after newly seeded grass seedlings have reached the five leaf stage of development or larger. Newly emerged grasses can be sensitive to postemergence applications of OLYMPUS Rangeland Herbicide and may result in stand thinning due to variability in seedling grass tolerance and other factors.

## Forage Grass Re-Establishment

**New Seeding of Desired Grasses after an OLYMPUS Rangeland Herbicide Application:** Wait at least 90 days after an OLYMPUS Rangeland Herbicide application before seeding desired grasses. Consult **TOLERANCE OF DESIRABLE GRASS SPECIES** table for crop tolerance information.

### TOLERANCE OF DESIRABLE GRASS SPECIES

Rangegrass/Prairie grasses		Response to OLYMPUS Rangeland Herbicide	
Common Name	Scientific Name	New Seeding Establishment Crop Tolerance when planted at least 60 days after OLYMPUS Rangeland Herbicide Application	Established Grass – Crop Tolerance to Post Emergence OLYMPUS Rangeland Herbicide Application
Bermudagrass	<i>Cynodon dactylon</i>	T	T
Big Bluestem	<i>Andropogon gerardii</i>	T	T
Blue Grama	<i>Bouteloua gracilis</i>	T	T
Blue Wildrye	<i>Elymus glaucus</i>	T	T
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>	– <sup>2</sup>	MS
Bottlebrush Squirreltail	<i>Sitanian hystrix</i>	– <sup>2</sup>	– <sup>2</sup>
Broomsedge Bluestem	<i>Andropogon virginicus</i>	– <sup>2</sup>	T
Buffalograss	<i>Buchloe dactyloides</i>	– <sup>2</sup>	T
Bushy Bluestem	<i>Andropogon glomeratus</i>	– <sup>2</sup>	T
Canada Wildrye	<i>Elymus canadensis</i>	T	T
Crested Wheatgrass	<i>Agropyron desertorum</i>	T	MS
Eastern Gamagrass	<i>Tripsacum dactyloides</i>	– <sup>2</sup>	– <sup>2</sup>
Idaho Fescue	<i>Festuca idahoensis</i>	T	T
Indiangrass	<i>Sorghastrum nutans</i>	T	T
Intermediate Wheatgrass	<i>Agropyron intermedium</i>	T	MS
Italian/Annual Ryegrass	<i>Lolium multiflorum</i>	T	T
Kentucky Bluegrass	<i>Poa pratensis</i>	T	T
King Ranch Bluestem	<i>Andropogon ischaemum</i>	– <sup>2</sup>	T
Little Bluestem	<i>Schizachyrium scoparium</i>	– <sup>2</sup>	– <sup>2</sup>
Needle-and-thread	<i>Stipa comata</i>	T	MS
Needlegrass	<i>Stipa spp.</i>	T	MS
Orchardgrass/Cocksfootgrass	<i>Dactylis glomerata</i>	T	T
Perennial Ryegrass	<i>Lolium perenne</i>	T	T
Prairie Junegrass	<i>Koeleria macrantha</i>	T	T
Prairie Sandreed	<i>Calamovilfa longifolia</i>	– <sup>2</sup>	– <sup>2</sup>
Prairie Threeawn	<i>Aristida oligantha</i>	– <sup>2</sup>	T
Russian Wildrye	<i>Elymus junceus</i>	T	T
Sand Dropseed	<i>Sporobolus cryptandrus</i>	T	T
Sand Lovegrass	<i>Eragrostis trichodes</i>	T	T
Sandberg's Bluegrass	<i>Poa sandbergii</i>	T	T
Sheep Fescue	<i>Festuca trachyphylla</i>	– <sup>2</sup>	– <sup>2</sup>
Sideoats Grama	<i>Bouteloua curtipendula</i>	T	T
Silver Beard Bluestem	<i>Andropogon saccharoides</i>	– <sup>2</sup>	T
Smooth brome grass	<i>Bromus inermis</i>	MS	MS
Western Wheatgrass	<i>Agropyron smithii</i>	T	MS

<sup>1</sup> **S** (Sensitive) – An OLYMPUS Rangeland Herbicide application frequently results in stunting or growth suppression. This effect can be severe and may reduce yield or overall thriftiness.

**MS** (Moderately Sensitive) – An OLYMPUS Rangeland Herbicide application may result in transient stunting or growth suppression but no long term effects on yield.

**T** (Tolerant) – Applications of OLYMPUS Rangeland Herbicide are well tolerated by species.

<sup>2</sup> Tolerance is not well known, bioassay recommended.

## RE-CROPPING GUIDELINES – CONVENTIONAL CROPS

OLYMPUS Rangeland Herbicide breakdown in the soil is due mainly to microbial activity. It can be affected by soil temperature and moisture. Conditions that accelerate the breakdown of OLYMPUS Rangeland Herbicide include adequate soil moisture and adequate soil temperatures to support microbial activity. Likewise, OLYMPUS Rangeland Herbicide breakdown can be slowed under dry, cold conditions. When considering crop rotations, soil moisture and soil temperature conditions since application should be monitored.

To ensure safety of rotational crops, the following re-cropping guidelines are provided:

### Oklahoma, Kansas, Nebraska, Texas

Crop	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Wheat	0	0
Proso Millet	10	4
Soybean STS™	10	4
Cotton	24	12
Sorghum (grain)	24	12
Sunflower	24	12
Soybean - Conventional	24	12
Corn – Conventional	30	18

### Washington, Oregon, Idaho

Crop	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Wheat	0	0
Field Peas	24	12
Spring Barley	24	18
Lentils	24	18
Canola	24	22
Potato	24	22

### Colorado, Montana, Wyoming, South Dakota

Crop	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Wheat	0	0
Proso Millet	10	4
Corn – Conventional	24	22

**NOTE:** In areas where a crop is not specified or the accumulated precipitation was less than specified above, conduct a field bioassay as described in the “**FIELD BIOASSAY**” section of the label.

In all areas, 24 inch rainfall and 24 month rotation interval are required for buckwheat, onions, oats, sugarbeets, potatoes, dry beans, and alfalfa.

### FIELD BIOASSAY

A field bioassay must be conducted for crops not listed on this label and for crops listed on the label for which a shorter plant-back interval than listed is desired.

In no case may crops not previously listed be planted closer than within 30 days of OLYMPUS Rangeland Herbicide application.

To conduct a field bioassay, plant strips of the crop you want to grow the season following an OLYMPUS Rangeland Herbicide application. Monitor the crop for response to OLYMPUS Rangeland Herbicide to determine if the crop can be grown safely in previously treated OLYMPUS Rangeland Herbicide areas.

## RESTRICTIONS FOR USE

- Do not apply OLYMPUS Rangeland Herbicide to crops undersown with grass and legume species.
- Do not apply more than a total of 1.2 ounces of OLYMPUS Rangeland Herbicide per acre per year (0.052 lb a.i. per acre per year).
- Do not cut treated area for hay within 7 days after treatment.

## PRECAUTIONS FOR USE

- OLYMPUS Rangeland Herbicide is rainfast 4 hours after application to most weed species. Rainfall within 4 hours may necessitate retreatment or may result in reduced weed control.
- Applications should be made 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 application is made under dry, dusty conditions – especially in the wheel track areas.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** Store product in original container only. Store in cool, dry place.

**Pesticide Disposal:** Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" designation.

**Nonrefillable Containers (Equal to or Less Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local authorities.

**Nonrefillable Containers (Greater Than 50 lbs Including Intermediate Bulk Containers (IBC):** Nonrefillable container. Do not reuse or refill this container. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times. Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local authorities

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact BAYER CROPSCIENCE LP at 1-800-334-7577, day or night.

## 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. Ineffectiveness, plant injury, other property damage, as well as other unintended consequences may result because of factors beyond the control of Bayer CropScience LP. Those factors include, but are not limited to, weather conditions, presence of other materials or the manner of use or application. All such risks shall be assumed by the user or buyer.

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