



241-379

12/26/2001

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

DEC 26 2001

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mark W. Galley
BASF Corporation
P.O. Box 400
Princeton, NJ 08543-0400

Dear Mr. Galley:

Subject: New Uses
Raptor Herbicide
EPA Registration No 241-379
Your Submission Dated December 4, 2001

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- a. On page 8 of the Master Label specify Clearfield winter wheat.
- b. On page 8 of the Master Label clarify the liquid fertilizer directions so they read similar to the following:

Do not apply Raptor in liquid fertilizer concentrate except Raptor may be applied to Clearfield winter wheat in a water/liquid fertilizer solution with at least 50% water.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment. A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

James A. Tompkins

Product Manager (25)
Herbicide Branch
Registration Division (7505C)

Enclosure

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RAPTOR® herbicide

FOR USE ON ALFALFA, CLEARFIELD* CANOLA, CLEARFIELD WHEAT,
EDIBLE LEGUMES AND SOYBEANS

Apply Only on Imidazolinone Tolerant Canola and Wheat Varieties

ACTIVE INGREDIENT:

Ammonium salt of imazamox 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid[†] 12.1%

INERT INGREDIENTS 87.9%

TOTAL 100.0%

[†]Equivalent to 11.4% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid

(1 gallon contains 1.0 pound of active ingredient as the free acid)

U.S. Patent No. 5,334,576

EPA Reg. No. 241-379

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

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

FIRST AID

IF ON SKIN OR CLOTHING:

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 IN EYES:

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

IF INHALED:

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

Have the product container or label with you when calling a poison control center or doctor or going for treatment

ACCEPTED
with COMMENTS
In EPA Letter Dated:
DEC 26 2001

In case of an emergency endangering life or property involving this product,
call 800-832-HELP.

See Next Page for Additional Precautionary Statements

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
241-379

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

Net Contents: 1 Gallon (3.785 liters)

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION!

Harmful if absorbed through skin or inhaled. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical resistant gloves, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils.
- shoes plus socks

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

<p>User Safety Recommendations:</p> <p>Users Should:</p> <ul style="list-style-type: none"> - Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. - Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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ENVIRONMENTAL HAZARDS

This pesticide may be hazardous to plants outside the treated area. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Offsite movement from spray drift, volatilization, and runoff may be hazardous to neighboring crops and vegetative habitat utilized for food and cover by wildlife and aquatic organisms. DO NOT contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at the time of pesticide application.

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 4 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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:

- coveralls
- chemical resistant gloves, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils.
- shoes plus socks

Ensure spray drift to non-target species does not occur.

DO NOT apply RAPTOR in any manner not specifically described in this label.

DO NOT apply this product through any type of irrigation system.

When applied by either land or air, RAPTOR spray drift or other indirect contact may injure sensitive crops, including non-imidazolinone tolerant wheat or canola, sugarbeets, and leafy vegetables.

Spray equipment used for RAPTOR application must be drained and thoroughly cleaned with water before being used to apply other products.

Observe all cautions and limitations on this label and on the labels of products used in combination with RAPTOR herbicide. Do not use RAPTOR other than in accordance with the instructions set forth on this label. The use of RAPTOR not consistent with this label may result in injury to crops. Keep containers closed to avoid spills and contamination.

STORAGE AND DISPOSAL

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PROHIBITIONS:

KEEP FROM FREEZING

DO NOT store below 32°F.

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

In Case of Emergency:

In case of large-scale spillage regarding this product call:

CHEMTREC 800-424-9300

BASF Corporation 800-832-HELP

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment.
- Your local poison control center (hospital).
- BASF Corporation (800-832-HELP)

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, herbicide resistant weed populations, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of BASF Corporation. All such risks shall be assumed by the user.

THIS PRODUCT WHEN USED ON EDIBLE LEGUMES MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT IN ORDER TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE. BASF MAKES THIS PRODUCT AVAILABLE TO THE USER AND/OR GROWER SOLELY TO THE EXTENT THAT THE BENEFIT AND UTILITY, IN THE SOLE OPINION OF THE USER AND/OR GROWER, OUTWEIGH THE EXTENT OF POTENTIAL INJURY ASSOCIATED WITH THE USE OF THIS PRODUCT. THE DECISION TO USE OR NOT TO USE THIS HERBICIDE MUST BE MADE BY EACH INDIVIDUAL RAPTOR USER AND/OR GROWER ON THE BASIS OF POSSIBLE CROP INJURY FROM RAPTOR, THE SEVERITY OF WEED INFESTATION, THE COST OF ALTERNATIVE WEED CONTROLS, AND OTHER FACTORS. BASF INTENDS THAT BECAUSE OF THE RISK OF FAILURE TO PERFORM OR CROP DAMAGE THAT ALL SUCH USE IS AT THE USER'S AND/OR GROWER'S RISK. BASF DISCLAIMS ANY LIABILITY FOR CLAIMS, CAUSES OF ACTION, FINES, PENALTIES, DAMAGES, INCLUDING CONSEQUENTIAL INCIDENTS AND DAMAGES, LOSSES, LIABILITIES, JUDGEMENTS, AND EXPENSES ARISING OUT OF OR RELATING TO INJURY TO PERSONS, CROPS, OR PROPERTY RESULTING FROM THE USE OF RAPTOR HERBICIDE ON EDIBLE LEGUMES CONTRARY TO THE LABEL INSTRUCTIONS.

BASF shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

BASF warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **BASF DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF RAPTOR HERBICIDE. In no case shall BASF or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

USES WITH OTHER PRODUCTS (TANK-MIXES)

If this product is used in combination with any other product except as specifically recommended in writing by BASF, then BASF shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically recommended. If used in combination recommended by BASF, the liability of BASF shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the BASF product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the BASF product.

GENERAL INFORMATION

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The mode of weed killing activity involves uptake of RAPTOR herbicide by foliage and/or weed roots and rapid translocation to the growing points. After RAPTOR application, susceptible weeds may show yellowing and weed growth will stop. Susceptible weeds stop growing and either die or are not competitive with the crop. Adequate soil moisture is important for optimum RAPTOR activity. When adequate soil moisture is present, RAPTOR will provide residual activity of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil. A timely cultivation after a RAPTOR application may improve general weed control.

An adjuvant (either a surfactant or a crop oil concentrate) and a liquid fertilizer solution must be added to the spray solution for optimum weed control activity. See the ADJUVANTS section under MIXING INSTRUCTIONS for specific instructions.

Use of RAPTOR herbicide is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following RAPTOR applications. These effects can be more pronounced if crops are growing under stressful environmental or hot and humid conditions. These effects occur infrequently and are temporary. Normal growth and appearance should resume within 1-2 weeks.

Replanting: If replanting is necessary in a field previously treated with RAPTOR, the field may be replanted to CLEARFIELD™ Canola, CLEARFIELD Wheat, edible legumes, or soybeans. Rework the soil no deeper than 2 inches. DO NOT apply a second treatment of RAPTOR.

Naturally occurring biotypes* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonylureas (e.g., Amber®, Express®, Glean®, Peak®, Rave®, Accent®, Ally®, Basis®, Classic®, Exceed®, Harmony® Extra, Permit®, Pinnacle®, etc.), imidazolinones (e.g., Pursuit®, Scepter®, Cadre® and Lightning®), the sulfonamides (e.g., Broadstrike®, etc.) and the pyrimidyl benzoates (e.g., Staple®, etc.). If naturally occurring ALS/AHAS resistant biotypes are present in a field, RAPTOR and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide should be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

*A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

MIXING INSTRUCTIONS

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POSTEMERGENCE APPLICATIONS OF RAPTOR REQUIRE THE ADDITION OF AN ADJUVANT AND A NITROGEN FERTILIZER SOLUTION.

I. ADJUVANTS

CROP OIL CONCENTRATE: A petroleum or vegetable seed based crop oil concentrate may be used. A methylated seed oil is recommended when weeds are under moisture or temperature stress. Use methylated seed oils, or crop oil concentrate at a rate of 1-2 gallons per 100 gallons of spray solution.

OR

SURFACTANTS: Use a nonionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 1-2 quarts per 100 gallons of spray solution. An organo-silicone surfactant may be used in place of a non-ionic surfactant.

AND

II. NITROGEN FERTILIZER

Recommended nitrogen based fertilizers include liquid fertilizers (such as 28%N, 32%N or 10-34-0) at the rate of 2.5 gallons per 100 gallons of spray solution. Instead of a liquid fertilizer, spray grade ammonium sulfate may be used at the rate of 12-15 pounds per 100 gallons of spray solution.

Fill the spray tank one-half to three-quarters full with clean water. Use a calibrated measuring device to measure the required amount of RAPTOR herbicide. Add RAPTOR to the spray tank while agitating. Add adjuvants and fill the remainder of the tank with water.

NOTE: Nitrogen fertilizer is not required when applied in use areas south of Interstate Highway 40.

NOTE: Do not apply RAPTOR in liquid fertilizer as the carrier (except to winter wheat).
clear field

LIQUID FERTILIZER AS A CARRIER (winter wheat only)

DO NOT apply BEYOND in liquid fertilizer concentrate. BEYOND may be applied to winter wheat in a water/liquid fertilizer solution with at least 50% water. Add a non-ionic surfactant at the rate of 1 pint - 1 quart per acre (0.125 - 0.25%). Some crop leaf burn from the fertilizer in the solution may occur from the fertilizer application.

NOTE: Additional MIXING INSTRUCTIONS for EDIBLE LEGUMES.

RAPTOR applications may be made to dry edible legumes either with, or without the addition of a fertilizer. The addition of nitrogen-based fertilizer such as ammonium sulfate or liquid fertilizers (such as 28-0-0) may improve weed control, but also increases the likelihood of dry bean response. When nitrogen is added to the mixture, add Basagran® as a tank mixture partner at a rate of 6 to 16 oz./A to minimize crop response. For applications to dry peas, always add Basagran to the spray mixture. For enhanced grass activity, add a crop oil (or methylated seed oil) instead of surfactant. Always add Basagran at the rates indicated above when crop oils and/or fertilizer are used in the spray mixture. Basagran applications at rates higher than 16 oz./A may reduce grass control.

TANK MIX COMBINATIONS WITH OTHER HERBICIDES

If other herbicides or other spray tank components are tank-mixed with RAPTOR, while agitating, add components in the following order and thoroughly mix after adding each component:

- 1) Fill spray tank 1/2 to 3/4 full with clean water.
- 2) Add soluble packet products and thoroughly mix.
- 3) Add WP (wettable powder), DG (dispersible granule), DF (dry flowable) or liquid flowable formulations not in soluble packets.
- 4) Add RAPTOR and thoroughly mix.
- 5) Add other aqueous solution products.
- 6) Add EC (emulsifiable concentrate) products.
- 7) Add surfactant or crop oil to the spray tank.
- 8) Add nitrogen fertilizer solution.
- 9) While agitating, fill the remainder of the tank with water.

To avoid injury to sensitive crops, spray equipment used for RAPTOR applications must be drained and thoroughly cleaned with water before being used to apply other products.

When RAPTOR is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. No label dosages should be exceeded. RAPTOR cannot be mixed with any product containing a label prohibiting such mixtures.

SPRAYING INSTRUCTIONS

DO NOT apply when wind conditions may result in drift, when temperature inversion conditions exist, or when spray may be carried to sensitive crops. Sensitive crops include but are not limited to leafy vegetables and sugar beet.

GROUND APPLICATION

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

To ensure thorough coverage, use a minimum of 20 gallons of water per acre when applying RAPTOR herbicide to minimum or no-till crops. Use higher gallonage for fields with dense vegetation or heavy crop residues.

Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's recommendation). Use flat-fan nozzle tips or similar appropriate nozzle tips to ensure adequate coverage.

Avoid overlaps when spraying.

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GROUND APPLICATION WITH A LOW VOLUME SPRAYER

RAPTOR may be applied with a low volume (Spra-Coupe™-type) sprayer. When applying RAPTOR with a low volume sprayer, spray the weeds before they reach the maximum size listed in this label. Adequate control of weeds is dependent upon good spray coverage of the weeds. The sprayer must be calibrated to deliver the recommended spray volume and pressure to ensure adequate spray coverage of the weeds.

When applying RAPTOR with a low volume sprayer, apply a minimum of 10 gallons per acre of spray solution with a nozzle pressure between 40-60 psi for optimum coverage.

AERIAL APPLICATION

RAPTOR herbicide may be applied by air to all crops listed on this label.

Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control. Apply a non-ionic surfactant at the rate of 1 quart per 100 gallons of spray solution OR a crop oil concentrate at the rate of 1.25 gallons per 100 gallons of spray solution AND a nitrogen fertilizer solution at the rate of 2.5 gallons per 100 gallons of spray solution. (See instructions under MIXING INSTRUCTIONS).

To avoid injury to sensitive crops from drift, aerial applicators must adhere to the following SPECIAL AERIAL USE DIRECTIONS AND PRECAUTIONS.

- Nozzle height above ground must be a maximum of 10 feet.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle should not be greater than 20 degrees.
- To minimize wing-tip vortex roll, nozzles or spray boom must not be located any closer to end of wing or rotor than three-fourths the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- A buffer zone must be established between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is greater than 10 mph (greater than 5 mph in California).
- Coarse sprays (larger droplets) are less likely to drift.

Applicator is responsible for any loss or damage which results from spraying RAPTOR in a manner other than recommended in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regard to spraying.

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APPLICATION INFORMATION

Apply RAPTOR herbicide as a postemergence treatment when weeds are actively growing and before they exceed the maximum recommended size (see weed control tables following each crop). Delay application until the majority of the weeds are at the recommended growth stage. Application timing should be based on weed size and not crop growth stage. In general, RAPTOR should be applied when weeds are small and actively growing, however, delay application in seedling alfalfa and dry beans until minimum growth stages have occurred (refer to seedling alfalfa and dry bean sections).

An adjuvant (either a surfactant or a crop oil concentrate) and a nitrogen fertilizer must be added to the spray solution for optimum weed control activity. See the ADJUVANT section under MIXING INSTRUCTIONS for specific instructions.

When RAPTOR is applied postemergence, absorption will occur through both the roots and foliage. Susceptible weeds stop growing and either die or are not competitive with the crop. RAPTOR not only controls many existing broadleaf and grass weeds when applied postemergence, it also provides activity on susceptible weeds that may emerge shortly after application.

Weeds are most easily controlled when actively growing. Under conditions of cold temperatures (less than 40°F, maximum daytime temperatures), weed control may be less than optimal.

For maximum weed control, cultivate (where possible) 7 - 10 days following a postemergence RAPTOR application. This timely cultivation will enhance residual weed activity, especially under dry conditions.

RAPTOR should be applied a minimum of one hour before rainfall or overhead irrigation.

Apply RAPTOR herbicide as an early postemergence treatment when weeds are actively growing and before they exceed a height of 3 inches, unless otherwise indicated. Delay application until the majority of the weeds are at the recommended growth stage. Apply RAPTOR to crop and weeds that are actively growing.

USE RATE

Apply RAPTOR postemergence only at a broadcast rate of 4 to 6 ounces per acre to seedling or established alfalfa grown for forage, hay or seed. At the recommended application rate, 1 gallon of RAPTOR will treat 21-32 acres.

SEEDLING ALFALFA

Apply RAPTOR when the seedling alfalfa is in the second (2nd) trifoliate stage or larger and when the majority of the weeds are 1-3 inches. When applied to alfalfa grown for seed, apply RAPTOR before bud formation. For prostrate growing weeds (such as mustards) apply RAPTOR before the rosette exceeds 3 inches. When RAPTOR is applied to seedling alfalfa, there may be a temporary reduction in growth. Alfalfa soon outgrows any effects of the herbicide.

ESTABLISHED ALFALFA

RAPTOR can be applied to established alfalfa in the fall, winter, or in the spring to dormant, or semi-dormant alfalfa, or between cuttings. Any application should be made before significant alfalfa growth or re-growth (3 inches) to allow RAPTOR to reach the target weeds.

Crop-Specific Restrictions and Limitation

There should be an interval of at least 20 days between application of RAPTOR and cutting or feeding of alfalfa forage or hay. There should be an interval of 70 days between an application of RAPTOR and harvest of alfalfa seed used for food or feed.

A maximum of 6 ounces of RAPTOR per season may be applied to alfalfa.

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WEEDS CONTROLLED

RAPTOR will control or suppress the weeds listed below when applied postemergence at the recommended rates listed below.

BROADLEAF WEEDS CONTROLLED BY RAPTOR

	Application Rate		
	4 fluid oz./A	5 fluid oz./A	6 fluid oz./A
	Maximum Weed Size (inches)		
Bedstraw	3	3	3
Beet, wild	3	3	3
Buckwheat, wild		3	3
Buttercup		3	3
Canola, volunteer	3	3	3
Chickweed, common	3	3	3
Cocklebur, common	3	3	3
Filaree,			
Redstem			3
Whitestem			3
Henbit			2
Knotweed, postrate		3	3
Kochia*		3	3
Lambsquarters, common	3**	3	3
Lettuce, miners		3	3
Jimsonweed	3	3	3
Mallow,			
Common	3	3	3
Venice		1	1
Morningglory,			
Entireleaf		3	3
Ivyleaf		3	3
Smallflower		3	3
Tall		3	3
Mustard,			
tumble	3	3	3
wild	3	3	4
black	3	3	4
Nightshade,			
black	3	5	5
Eastern black	3	5	5
Hairy	3	4	5
Pennycress, field	3	3	3

*RAPTOR controls non-ALS resistant kochia only.

**RAPTOR controls common lambsquarters at 4 oz./A East of the Rocky Mountains.

BROADLEAF WEEDS CONTROLLED BY RAPTOR (Continued)

	Application Rate		
	4 fluid oz/A	5 fluid oz/A	6 fluid oz/A
Maximum Weed Size (inches)			
Pigweed,			
Redroot	3	4	5
Smooth	3	4	4
Spiny	3	3	3
Purslane, common			3
Radish, wild	3	3	3
Rocket, London		4	5
Shepherdspurse	3	4	5
Smartweed,			
Ladysthumb	3	3	3
Pennsylvania	3	3	3
Swamp		3	3
Spurge, prostate		3	3
Tansymustard, green	3	3	4
Thistle, Russian		3	3
Velvetleaf	3	4	5

BROADLEAF WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Dandelion		3
Dodder*		3
Fiddleneck		3
Ragweed,		
Common		3
Giant		3
Thistle, Canada		3
Sowthistle	3	3

*For suppression of dodder, apply RAPTOR after the dodder has emerged until soon after dodder attaches to the alfalfa.

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GRASS WEEDS CONTROLLED BY RAPTOR

	Application Rate		
	4 fluid oz/A	5 fluid oz/A	6 fluid oz/A
	Maximum Weed Size (inches)		
Barnyardgrass		3	3
Blackgrass	3	3	3
Brome,			
California	3	3	3
downy	3	3	3
cheat	3	3	3
Japanese			
Canarygrass, littleseed		3	3
Cereals, volunteer			
Barley	3	3	3
Oat	3	3	3
Wheat (non-CLEARFIELD)	3	3	3
Corn, volunteer	4	5	8
Crabgrass, large		3	3
Darnel, Persian	3	3	3
Foxtail,			
Giant	3	4	5
Green	3	3	4
Yellow	3	3	4
Johnsongrass, seedling		3	3
Jointed goatgrass	3	3	3
Oats, wild	3	3	3
Ryegrass, Italian	3	3	3
Rye, feral or cereal		3	3
Shattercane	3	4	5

GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Bluegrass, annual	3
Johnsongrass, rhizome	3
Sedges	
Purple	3
Yellow	3
Quackgrass	3

TANK MIX COMBINATIONS WITH OTHER HERBICIDES

To control weeds not listed on the RAPTOR label, herbicides such as Buctril® (seedling alfalfa only), 2,4-DB, Poast® or Poast® Plus or Prism®/Select® may be tank mixed with RAPTOR. When RAPTOR is used in combination with another herbicide, refer to the respective label for rates, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. No label dosages should be exceeded.

CLEARFIELD CANOLA - DIRECTIONS FOR USE

RAPTOR herbicide is effective in controlling weeds in conservation tillage and conventional production systems. RAPTOR can be applied early postemergence in CLEARFIELD CANOLA but before the bloom stage. Refer to the specific treatment under the "SPRAYING INSTRUCTIONS" section of the label.

USE RATE

Apply RAPTOR postemergence only at a rate of 4 oz. per acre. At this rate one gallon of RAPTOR will treat 32 acres of CLEARFIELD Canola. It is recommended that a registered soil applied grass herbicide be used prior to use of RAPTOR.

Crop-Specific Restrictions and Limitations

DO NOT apply more than 4 ounces of RAPTOR during the growing season.

WEEDS CONTROLLED

BROADLEAF WEEDS CONTROLLED BY RAPTOR

	Maximum Weed Size (inches)
Beet, wild	3
Canola, volunteer (non-CLEARFIELD)	3
Chickweed, common	3
Cocklebur, common	3
Jimsonweed	3
Flixweed	3
Lambsquarters	3
Mustard,	
tumble	3
wild	3
black	3
Nightshade,	
black	3
Eastern black	3
Hairy	3
Pennycress, field	3
Pigweed,	
Redroot	3
Smooth	3
Spiny	3
Radish, wild	3
Shepherdspurse	3
Smartweed,	
Ladysthumb	3
Pennsylvania	3
Tansymustard, green	3
Velvetleaf	3

BROADLEAF WEEDS SUPPRESSED BY RAPTOR

	Maximum Weed Size (inches)
Flax	2
Knotweed, prostrate	3
Lettuce, miners	3
Morningglory	
Entireleaf	3
Ivyleaf	3
Smallflower	3
Tall	3
Rocket, London	3
Spurge, prostrate	3
Thistle, Russian (non-ALS resistant)	3

GRASS WEEDS CONTROLLED BY RAPTOR

	Weed Size
	Number of Leaves (maximum tillers)
Blackgrass	1-4 (1)
Brome,	
downy	1-5 (2)
cheat	1-5 (2)
Japanese	1-5 (2)
Canarygrass, littleseed	1-5 (2)
Cereals, volunteer	
Barley	1-5 (1)
Oat	1-5 (1)
Wheat (non-CLEARFIELD)	1-4 (1)
Darnel, Persian	1-5 (2)
Foxtail,	
Giant	1-6 (2)
Green	1-4 (1)
Yellow	1-4 (1)
Jointed goatgrass	1-6 (2)
Oats, wild	1-5 (2)
Ryegrass, Italian	1-4 (1)
Rye, feral or cereal	1-4 (1)
Shattercane	1-6 (2)

GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Barnyardgrass	1-4 (1)
Corn, volunteer	1-4 (1)
Crabgrass, large	1-4 (1)

CLEARFIELD WHEAT - DIRECTIONS FOR USE

RAPTOR can be applied postemergence on CLEARFIELD WHEAT (imidazolinone tolerant wheat) varieties. Apply only on selected winter wheat varieties labeled as "CLEARFIELD" and warranted by the seed supplier to possess tolerance to direct application of certain imidazolinone herbicides. DO NOT apply RAPTOR to wheat varieties which lack resistance/tolerance to imidazolinone herbicides. Contact your seed supplier, chemical dealer or BASF to obtain information regarding imidazolinone tolerant wheat varieties.

Apply RAPTOR herbicide as an early postemergence treatment when weeds are actively growing and before broadleaf weeds exceed a height of 3 inches and grasses exceed 4-5 leaves (unless otherwise indicated). Under conditions of cold temperatures (less than 40°F, maximum daytime temperatures), weed control may be less than optimal. A thin stand of wheat may result in unacceptable weed control. RAPTOR herbicide is effective in controlling weeds in conservation tillage and conventional wheat production systems. RAPTOR can be applied in the fall/winter or spring for winter or spring annual weed control, respectively. Delay application until the majority of the weeds are at the recommended growth stage. When a mixture of grasses and broadleaf weeds are present, time the application to the grass weeds for optimum control.

When adequate soil moisture is present, RAPTOR will provide residual activity of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil.

Occasionally, reduction in plant height or temporary yellowing of crop plants may occur following RAPTOR applications. These effects can be more pronounced if crops are growing under stressful environmental conditions. These effects are temporary. Normal growth and appearance should resume within 1 to 2 weeks.

Weed control is optimized when RAPTOR is applied to actively growing wheat. Plant a locally adapted CLEARFIELD variety at the normal seeding rate for your geography. Apply to wheat after the third (3rd) leaf has emerged and prior to the jointing stage of growth (and when the weeds are at the appropriate size – see WEEDS CONTROLLED tables).

RAPTOR Application Timing – Winter Wheat

Apply RAPTOR herbicide at the following crop and weed stages of growth:

CLEARFIELD Wheat	3 rd leaf and prior to joint
Broadleaf weeds	3 inches maximum*
Grass weeds	4-5 leaves maximum*

*refer to weed control tables for specific weed sizes.

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USE RATE

WINTER WHEAT:

APPLY 4-6 FLUID OUNCES OF RAPTOR HERBICIDE PER ACRE (see WEEDS CONTROLLED section for detailed use rate recommendations).

A surfactant **and** nitrogen based fertilizer must be added to the spray solution for optimum weed control activity. See the ADJUVANTS section under MIXING INSTRUCTIONS for specific instructions.

Crop Specific Restrictions and Limitations

DO NOT apply more than 8 ounces of RAPTOR during the growing season.

There should be an interval of at least 30 days between an application of RAPTOR and feeding or grazing of wheat forage and hay. There should be at least 60 days from an application of RAPTOR and wheat harvested for grain.

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WEEDS CONTROLLED - WINTER WHEAT

RAPTOR will control or suppress the weeds listed below when applied postemergence at the recommended rates listed below.

BROADLEAF WEEDS CONTROLLED BY RAPTOR

	Application Rate	Weed Size
	Ounces/Acre	Maximum size (inches)
Wild beet	4-6	3
Canola, volunteer	4-6	5
Chickweed, common	4-6	3
Cocklebur, common	4-6	3
Filaree,		
Redstem	5-6	3
Whitestem	5-6	3
Flixweed	4-6	3
Henbit	5-6	3
Knotweed, prostrate	5-6	3
Lambsquarters, common	4-6*	1
Lettuce, miners	5-6	3
Jimsonweed	4-6	3
Mallow,		
Common	5-6	3
Venice	5-6	1
Morningglory,		
Entireleaf	5-6	3
Ivyleaf	5-6	3
Smallflower	5-6	3
Tall	5-6	3
Mustard,		
tumble	4-6	3
wild	4-6	4
black	4-6	4
blue	4-6	4
Nightshade,		
black	4-6	5
Eastern black	4-6	5
Hairy	4-6	5
Pennycress, field	4-6	3
Pigweed,		
Redroot	4-6	5
Smooth	4-6	4
Spiny	4-6	3
Purslane, common	4-6	3
Radish, wild	4-6	3

*RAPTOR controls common lambsquarters at 4 oz./A East of the Rocky Mountains, apply 5-6 oz./A West of the Rocky Mountains.

BROADLEAF WEEDS CONTROLLED BY RAPTOR (Continued)

	Application Rate	Weed Size
	Ounces/Acre	Maximum size (inches)
Rocket, London	5-6	5
Shepherdspurse	4-6	5
Smartweed,		
Ladysthumb	4-6	3
Pennsylvania	4-6	3
Swamp	5-6	3
Spurge, prostate	5-6	3
Tansymustard, green	4-6	4
Thistle, Russian (non-ALS resistant)	5-6	3
Velvetleaf	4-6	3

BROADLEAF WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Bedstraw	5-6	3
Buckwheat, wild*	5-6	3
Dandelion	5-6	3
Fiddleneck	5-6	3
Primrose		
Cutleaf	5-6	3
Evening	5-6	3
Ragweed,	5-6	
Common	5-6	3
Giant	5-6	3
Redstem	5-6	3
Thistle, Canada	5-6	3

*See Specific Weed Problems section for more information.

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GRASS WEEDS CONTROLLED BY RAPTOR - WINTER WHEAT

	Application Rate	Weed Size
	Ounces/Acre	Number of Leaves (maximum tillers)
Barnyardgrass	5-6	1-5 (1)
Brome,		
California	4-6	1-5 (2)
downy	4-6	1-5 (2)
cheat	4-6	1-5 (2)
Japanese	4-6	1-5 (2)
Canarygrass, littleseed	4-6	1-5 (2)
Cereals, volunteer		
Barley	4-6*	1-6 (1)
Oat	4-6*	1-6 (1)
Wheat (non-CLEARFIELD)	4-6*	1-4 (1)
Corn, volunteer (non-CLEARFIELD)	4-6	1-4
Crabgrass, large	5-6	1-4 (1)
Darnel, Persian	4-6	1-5 (2)
Foxtail,		
Giant	4-6	1-6 (2)
Green	4-6	1-4 (1)
Yellow	4-6	1-4 (1)
Johnsongrass, seedling	5-6	1-5 (1)
Jointed goatgrass	4-6	1-5 (2)
Oats, wild	4-6	1-5 (2)
Rescuegrass	4-6	1-4 (1)
Ryegrass, Italian*	4-6	1-4 (1)
Rye, feral or cereal*	4-6	1-4 (1)

GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Johnsongrass, rhizome	6	1-5
Sedges		
Purple	6	1-3
Yellow	6	1-3
Quackgrass	6	1-5

*See Specific Weed Problems section.

Specific Weed Problems

RAPTOR is most effective for grass control when applied in the fall. If summer annual weeds germinate in the spring, (following a fall application of RAPTOR) a broadleaf herbicide may need to be applied. If the RAPTOR application is made in the spring, the broadleaf herbicide may be tank mixed with RAPTOR.

Feral Rye (cereal, volunteer rye): RAPTOR controls emerged feral rye only. Apply to feral rye before the first tiller forms. Once feral rye develops tillers, control is significantly reduced. If feral rye germinates in the fall, an application of RAPTOR in the fall will provide the best control. If feral rye germinates following an application of RAPTOR in the fall, a spring application may be necessary for control of subsequent germination flushes.

Italian Ryegrass: RAPTOR controls emerged Italian Ryegrass only. Under favorable growing conditions, ryegrass may germinate over several weeks (especially in the Southern US). RAPTOR does not provide residual control of Italian ryegrass. Due to the potential for multiple germination flushes, Italian ryegrass control in Oklahoma, Texas and New Mexico may not be satisfactory. Optimum application timing is to ryegrass with 3-4 leaves and before the first tiller. Weed control is reduced when tillers develop. In the Pacific Northwest a spring application of 6 oz/Acre of RAPTOR has provided the most consistent control. If Italian ryegrass germinates following a fall application, a spring application may be necessary. Apply the higher recommended rate when Italian ryegrass is at the maximum recommended size, or to heavy grass populations.

Kochia: Naturally occurring resistant biotypes of kochia are common in wheat fields. In many cases, a tank mixture with RAPTOR will be required for acceptable control. If RAPTOR is applied in the spring, apply RAPTOR in a tank mixture with a herbicide listed below that has activity on kochia (i.e. CLARITY + 2,4-D). Apply to kochia 2 inches in size or smaller.

Wild Buckwheat: For enhanced control of wild buckwheat, add Starane or CLARITY to the tank mixture. Apply to wild buckwheat with no more than 2 true leaves.

TANK MIX HERBICIDE COMBINATIONS WITH RAPTOR HERBICIDE

Recommended Tank Mixes For Postemergence Applications of RAPTOR on Imidazolinone Tolerant Wheat Varieties are:

Banvel®	Clarity®	Sencor®
Bronate®	Curtail®	Starane™
(bromoxynil + MCPA)	MCPA	Stinger™
Buctril®	2,4-D	Weedmaster®

Limit bromoxynil applications (Bronate or Buctril) to 0.5 lb/acre of active ingredient when tankmixed with RAPTOR.

When broadleaf herbicides are tankmixed with RAPTOR, there may be some reduction in weed control, particularly grass weeds.

When RAPTOR herbicide is used in combination with another herbicide, refer to the respective label for rates, methods and proper timing of application, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label use directions and precautions.

EDIBLE LEGUMES - DIRECTIONS FOR USE

DO NOT apply RAPTOR to edible legumes in California.

RAPTOR may be applied to the following edible legumes:

Dry Beans	Dry Peas
Anazazi, Black, Black Turtle, Cranberry, Great Northern, Lima (dry), Navy, Pink, Pinto, Red kidney, Small red, Small white	Dry edible peas (field peas) Southern peas (cow peas)

DO NOT apply RAPTOR to snap beans, succulent peas, chickpeas (garbanzo beans), fresh limas, or lentils.

Reduced crop growth, temporary yellowing, quality, yield and/or delayed maturity may result from a RAPTOR application to edible legume crops listed on this label. Since crop maturity may be delayed, timing of harvest may need to be adjusted accordingly. **DO NOT** apply RAPTOR if planting is delayed and chance of frost prior to maturity is likely. Some varieties of edible legumes are more sensitive to RAPTOR than other varieties. Growers should check with the seed company regarding the safety of RAPTOR to their variety.

USE RAPTOR ONLY if proper agronomic practices have been utilized, including good soil fertility, proper crop rotation, disease and insect management and tillage practices that eliminate compaction and hardpans.

RAPTOR herbicide is effective in controlling weeds in conservation tillage and conventional production systems. Apply RAPTOR postemergence to dry beans with at least one fully expanded trifoliolate leaf and to dry peas with at least 3 pairs of leaves and before the bloom stage. Delay application until the majority of the weeds are at the recommended growth stage. Application timing should be based on weed size and crop growth stage. Apply RAPTOR to crop and weeds that are actively growing.

USE RATE

APPLY 4 FLUID OUNCES OF RAPTOR HERBICIDE PER ACRE.

At this application rate, 1 gallon will treat 32 acres of edible legumes.

NOTE: Additional MIXING INSTRUCTIONS for EDIBLE LEGUMES.

RAPTOR applications may be made to edible legumes either with, or without the addition of a fertilizer. The addition of nitrogen-based fertilizer such as ammonium sulfate or liquid fertilizers (such as 28-0-0) may improve weed control, but also increases the likelihood of dry bean response. When nitrogen and/or crop oils are added to the mixture, add Basagran® as a tank mixture partner at a rate of 6 to 16 oz./A to minimize crop response. For applications to dry peas, always add Basagran to the spray mixture, regardless of additives added. Use a non-ionic surfactant (not crop oil) in applications to dry peas. At 16 oz./A, Basagran will enhance control of common lambsquarters and kochia. Basagran applications at rates higher than 16 oz./A may reduce grass control. Rezult herbicide may be substituted for Basagran, refer to the Rezult label for recommended application rates.

Crop-Specific Restrictions and Limitations

There should be an interval of at least 60 days between an application of RAPTOR and harvest of dry edible peas and beans.

Only one application of RAPTOR may be made during the season.

A maximum of 4 ounces of RAPTOR per season may be applied to dry beans.

DO NOT apply to edible legumes grown for livestock feed.

RAPTOR applications must be made before edible legume bloom.

WEEDS CONTROLLED

RAPTOR will control or suppress the weeds listed below when applied postemergence to 1 to 3 inch weeds (unless otherwise indicated) at the recommended rates listed below.

BROADLEAF WEEDS CONTROLLED BY RAPTOR

	Application Rate	
	4 fluid oz/A with a nonionic surfactant	4 fluid oz/A with a nonionic surfactant or a crop oil, nitrogen-based fertilizer and Basagran
	Maximum Weed Size (inches)	
Bedstraw		3
Beet, wild	3	3
Buttercup		3
Chickweed, common		3
Jimsonweed	3	3
Lambsquarters, common*	3	3
Mustard,		
tumble	3	3
wild	3	3
black	3	3
Nightshade,		
black	3	3
Eastern black	3	3
Hairy	3	3
Pennycress, field	3	3
Pigweed,		
Redroot	3	3
Smooth	3	3
Spiny	3	3
Puncturevine	3	3
Radish, wild	3	3
Shepherdspurse	3	3
Tansymustard, green	3	3

*RAPTOR controls common lambsquarters at 4 oz/A East of the Rocky Mountains.

BROADLEAF WEEDS SUPPRESSED BY RAPTOR

	Application Rate	
	4 fluid oz/A with a nonionic surfactant	4 fluid oz/A with a nonionic surfactant or a crop oil, nitrogen- based fertilizer and Basagran
	Maximum Weed Size (inches)	
Buckwheat, wild		3
Chickweed, common	3	
Cocklebur, common		3
Knotweed, prostrate		3
Kochia*		3
Lettuce, miners		3
Morningglory		
Entireleaf		3
Ivyleaf		3
Smallflower		3
Tall		3
Purslane, common		3
Rocket, London		3
Smartweed		
Ladysthumb		3
Pennsylvania		3
Spurge, prostrate		3

*RAPTOR control non-ALS resistant kochia only.

GRASS WEEDS CONTROLLED BY RAPTOR

	Application Rate	
	4 fluid oz/A with a nonionic surfactant	4 fluid oz/A with a nonionic surfactant or a crop oil, nitrogen-based fertilizer and Basagran
	Maximum Weed Size (inches)	
Barnyardgrass		3
Blackgrass		3
Brome,		
downy	3	3
cheat	3	3
Japanese	3	3
Canarygrass, littleseed		3
Cereals, volunteer		
Barley	3	3
Oat	3	3
Wheat (non-CLEARFIELD)	3	3
Darnel, Persian	3	3
Foxtail,		
Giant	3	3
Green	3	3
Yellow	3	3
Jointed goatgrass	3	3
Oats, wild	3	3
Ryegrass, Italian		3
Shattercane	3	3
Volunteer corn*	2-8	2-8

GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS

Johnsongrass, rhizome	3
Crabgrass,	
Large	3
Smooth	3
Sedges	
Purple	3
Yellow	3
Quackgrass	3

*Except imidazolinone tolerant corn.

SOYBEANS - DIRECTIONS FOR USE

RAPTOR herbicide is effective in controlling weeds in conservation tillage and conventional production systems. RAPTOR can be applied early postemergence in soybeans but before the bloom stage. Refer to the specific treatment under the "APPLICATION INFORMATION" section of the label.

Unusually cool temperatures (50°F or less) reduce photosynthesis and transpiration and thus reduce uptake, translocation, and efficacy of RAPTOR herbicide in weeds. Delaying a RAPTOR application for 48 hours from the time the temperature increases to above 50°F, if air temperature has been below 50°F for 10 or more hours, will improve weed control and reduce crop response.

NO-TILL/MINIMUM TILLAGE AND DOUBLE CROP SOYBEANS

RAPTOR herbicide controls existing weeds and provides residual activity on some weeds when applied early postemergence to soybeans in no-till or minimum tillage and double crop soybean production systems. The application must be applied after emergence of the crop. (Refer to the WEEDS CONTROLLED chart for weeds controlled and recommended weed size).

To ensure thorough coverage, use a minimum of 20 gallons of water per acre in no-till or minimum tillage systems. Use higher gallonage for fields with dense vegetation or heavy crop residues.

Prior to planting or emergence of soybeans, Touchdown® or Roundup® Ultra or any glyphosate-containing product registered for that use may be applied to control emerged weeds. See specific product labeling for rates, recommendations, precautions and restrictions.

USE RATES

APPLY 4 FLUID OUNCES OF RAPTOR HERBICIDE PER ACRE WHEN PRECEDED BY A FULL RATE OF A REGISTERED SOIL APPLIED GRASS HERBICIDE LIKE PROWL® 3.3 EC HERBICIDE

OR

APPLY 5 FLUID OUNCES OF RAPTOR HERBICIDE PER ACRE IN A TOTAL POSTEMERGENCE HERBICIDE PROGRAM

RAPTOR may be applied postemergence at a broadcast rate of 4 fluid ounces per acre when it is preceded with a full labeled rate of a soil applied grass herbicide such as PROWL 3.3 EC herbicide. At this rate one gallon of RAPTOR will treat 32 acres of soybeans. RAPTOR may be applied postemergence at a broadcast rate of 5 fluid ounces per acre (including minimum and no-till). At this broadcast rate, one gallon of RAPTOR will treat 25.6 acres of soybeans.

Crop-Specific Restrictions and Limitation

There should be an interval of at least 85 days between an application of RAPTOR and soybean harvest.

RAPTOR applications must be made before soybean bloom.

Only one application of RAPTOR may be made during the season.

DO NOT graze or feed treated soybean forage, hay or straw to livestock.

If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4-6 inches deep.

WEEDS CONTROLLED

When applied as directed, RAPTOR will control or suppress the weeds listed below as indicated. Refer to the MIXING INSTRUCTIONS section for recommendations when weeds are at the maximum recommended growth stage, or are under stress.

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**BROADLEAF WEEDS CONTROLLED BY RAPTOR HERBICIDE ALONE,
OR IN A SEQUENTIAL* PROGRAM**

	Application Rate	
	RAPTOR Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by RAPTOR* Postemergence
	5 oz./A	4 oz./A
	Weed Size (inches)	
Artichoke, Jerusalem	3-8	3-8
Carpetweed		2-4
Chickweed, common	2-5	2-5
Cocklebur, common	2-8	2-8
Jimsonweed	2-6	2-6
Kochia**	1-4	1-4
Lambsquarters, common	2-5	2-5
Marshelder	2-4	2-4
Mallow, Venice	1-4	
Morningglory,		
Entireleaf	2-4	
Ivyleaf	2-4	
Smallflower	2-4	
Tall	2-4	
Mustard spp.	2-8	2-8
Nightshade,		
black	2-5	2-5
Eastern black	2-5	2-5
hairy	2-5	2-5
Pigweed,		
Palmer amaranth***	2-4	2-4
prostrate	2-5	2-5
redroot	2-8	2-8
smooth	2-8	2-8
spiny	2-5	2-5
Puncturevine	1-3	
Purslane, common	1-3	1-3
Pusley, Florida		2-4
Radish, wild	2-4	2-4
Ragweed,		
Giant***	2-5	2-5
Common***	2-5	
Smartweed,		
ladysthumb	2-5	2-5
Pennsylvania	2-5	2-5

**BROADLEAF WEEDS CONTROLLED BY RAPTOR HERBICIDE ALONE,
OR IN A SEQUENTIAL* PROGRAM (Continued)**

	Application Rate	
	RAPTOR Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by RAPTOR* Postemergence
	5 oz/A	4 oz/A
Weed Size (inches)		
Spurge, annual		2-4
Sunflower	2-8	2-8
Velvetleaf	2-8	2-8

*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a postemergence application of RAPTOR herbicide at a broadcast rate of 4 fluid ounces per acre.

**Control of light to moderate populations only. For control of heavier populations use a SEQUENTIAL APPLICATION with a soil applied grass herbicide as described above.

***Control of light to moderate populations of ALS susceptible biotypes only. For control of heavier populations and ALS tolerant biotypes see the HERBICIDE COMBINATION section.

**BROADLEAF WEEDS SUPPRESSED BY RAPTOR HERBICIDE ALONE,
OR IN A SEQUENTIAL* PROGRAM**

	Application Rate	
	RAPTOR Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by RAPTOR* Postemergence
	5 oz/A	4 oz/A
Weed Size (inches)		
Bindweed		
field (seedling)	2-4	2-4
hedge (seedling)	2-4	2-4
Buckwheat, wild	1-3	1-3
Mallow, Venice**		1-4
Morningglory,		
entireleaf**		2-4
ivyleaf**		2-4
pitted	2-4	2-4
smallflower**		2-4
tall**		2-4
Ragweed, common**		2-5
Sida, prickly	2-4	2-4
Sowthistle, annual	2-4	2-4
Thistle, Canada	2-5	2-5

*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a postemergence application of RAPTOR herbicide at a broadcast rate of 4 fluid ounces per acre.

**For control see the 5 ounce rate and HERBICIDE COMBINATION section.

**GRASS WEEDS CONTROLLED BY RAPTOR HERBICIDE ALONE,
OR IN A SEQUENTIAL* PROGRAM**

	Application Rate	
	RAPTOR Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by RAPTOR* Postemergence
	5 oz/A	4 oz/A
Weed Size (inches)		
Barley, wild	2-4	2-4
Barnyardgrass	2-5**	2-5
Crabgrass, large		2-4
smooth		2-4
Crowfoot grass		2-5
Cupgrass, woolly		2-4
Foxtail, giant	2-6	2-6
green	2-6	2-6
yellow	2-6	2-6
Goosegrass		2-5
Johnsongrass, seedling	4-8	4-8
Millet, wild proso	2-4**	2-4
Oats, wild	2-6	2-6
Panicum, fall	2-6	2-6
Texas		2-6
Sandbur, field***		2-5
Shattercane	2-8	2-8
Signalgrass, broadleaf	2-5**	2-5
Volunteer corn****	2-8	2-8
Volunteer wheat (non-CLEARFIELD)	2-4***	2-4
Witchgrass		2-5

*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a post-emergence application of RAPTOR herbicide at a broadcast rate of 4 fluid ounces per acre.

**Control of light to moderate populations only. For control of heavier populations use a SEQUENTIAL APPLICATION with a soil applied grass herbicide as described above.

***For control a dinitroaniline (DNA) herbicide such as PROWL 3.3 EC herbicide must be soil applied at a full-labeled rate.

****Except imidazolinone tolerant corn.

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**GRASS WEEDS SUPPRESSED BY RAPTOR HERBICIDE ALONE,
OR IN A SEQUENTIAL* PROGRAM**

	Application Rate	
	RAPTOR Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by RAPTOR* Postemergence
	5 oz/A	4 oz/A
Weed Size (inches)		
Crabgrass		
large	2-4	
smooth	2-4	
Cupgrass, woolly	2-4	
Goosegrass	2-4	
Itchgrass		2-5
Johnsongrass rhizome	6-12	6-12
Quackgrass		4-8
Red rice		2-5
Stinkgrass	2-4	
SEDGES		
Nutsedge,		
purple	1-3	1-3
yellow	1-3	1-3

*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a postemergence application of RAPTOR herbicide at a broadcast rate of 4 fluid ounces per acre.

HERBICIDE COMBINATIONS

GRASS WEEDS

Use a soil applied grass herbicide (such as PROWL 3.3 EC herbicide) if heavy infestations of some grass weeds exist or if RAPTOR herbicide does not control the species present. Refer to the PROWL 3.3 EC (or other grass herbicide) label for specific use recommendations, rates and precautions.

Roundup® Ultra may be tank-mixed with RAPTOR to aid in control of certain grasses only in Roundup Ready Soybeans. Other glyphosate containing products registered for use on Roundup Ready soybeans may be substituted for Roundup Ultra. See the Roundup Ultra label (or other product labels) for rates and weeds controlled. DO NOT tankmix RAPTOR with EXTREME or BACKDRAFT herbicides. If a selective postemergence grass herbicide such as Poast Plus® is mixed with RAPTOR to control species that are not controlled with RAPTOR alone, include a methylated seed oil, or a crop oil concentrate (1-2 gallons per 100 gallons) AND liquid fertilizer (2.5 gallons per 100 gallons) should be added to the tank-mixture. In some cases the activity of the grass herbicide may be reduced when mixed with RAPTOR. The reduction in activity may be overcome by delaying the application of the postemergence grass herbicide 7 days following the application of RAPTOR. If the postemergence grass herbicide is applied first, wait 3 days before applying RAPTOR. Refer to the respective grass herbicide label for recommended application rate, weed size and restrictions.

BROADLEAF WEEDS

Roundup Ultra may be tank-mixed with RAPTOR to aid in control of certain broadleaf weeds only in Roundup Ready Soybeans. See the Roundup Ultra label for rates and weeds controlled.

Tank-mixing RAPTOR and certain broadleaf herbicides (e.g. diphenylethers and Basagran®) can reduce grass control, therefore a sequential program including a soil applied grass herbicide such as PROWL 3.3 EC is recommended for optimal control.

Enhanced control of ragweed species, Palmer amaranth, waterhemp, and Kochia.

Use a soil application of PROWL 3.3 EC herbicide followed by a postemergence application of RAPTOR herbicide at a broadcast rate of 4 to 5 fluid ounces per acre plus a diphenylether such as ULTRA BLAZER® (acifluorfen) or Roundup Ultra for enhanced control of ragweeds, Palmer amaranth, waterhemp, and kochia. Refer to the PROWL 3.3 EC and ULTRA BLAZER or Roundup® Ultra labels for specific use recommendations, rates, restrictions and precautions.

When tank-mixing RAPTOR and ULTRA BLAZER, apply RAPTOR at a broadcast rate of 5 fluid ounces per acre or 4 fluid ounces per acre when preceded by a full rate of a registered soil applied grass herbicide. Apply ULTRA BLAZER at the following rates depending on weed height:

ULTRA BLAZER Rate (ounces per acre)*			
Weed	8-10 oz.	12-14 oz.	6-20 oz.
Ragweed spp.	2-4"	4-6"	6-8"
Palmer amaranth	2-4"	4-6"	6-8"
Waterhemp spp.	2-4"	4-6"	6-8"
Kochia	2-4"	4-6"	6-8"

*Use the higher rate if common ragweed is present or the weed population is high.

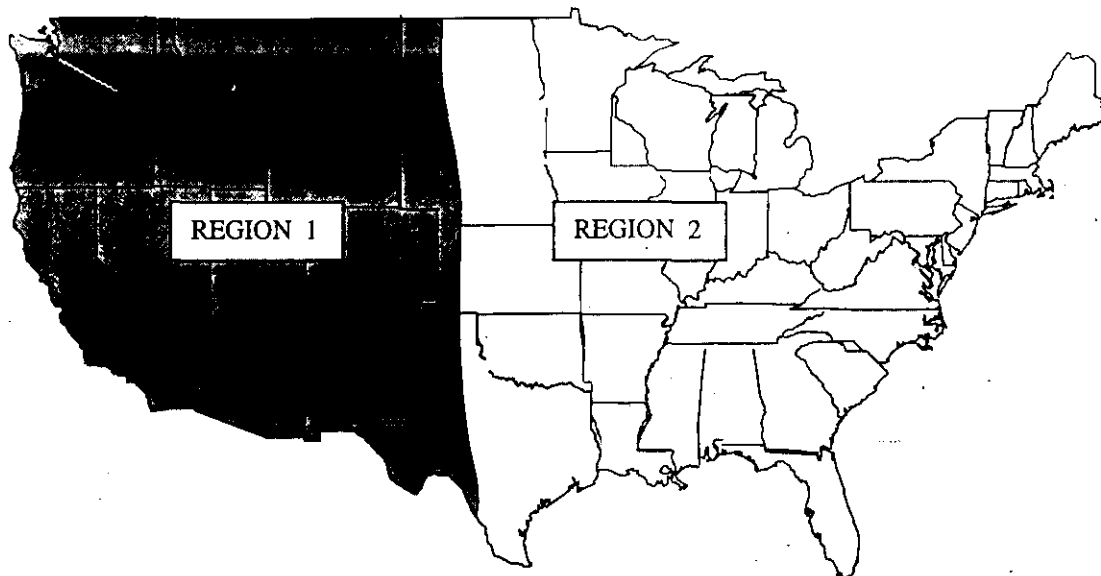
Enhanced control of common ragweed and giant ragweed.

Firstrate® may be tank-mixed with RAPTOR to aid in the control of common ragweed and giant ragweed. When tank-mixing Firstrate with RAPTOR, apply 0.15 to 0.3 ounces per acre of Firstrate. Use the higher rate when weeds approach maximum labeled size. See the Firstrate label for recommended rates and precautions.

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ROTATIONAL CROP GUIDELINES

Rotational crops may be planted after applying the recommended rate of RAPTOR herbicide in the regions as indicated below. Planting earlier than the recommended interval may result in crop injury.



Region 1 consists of states and parts of states WEST of U.S. Highway 83. (Arizona, California, Idaho, Oregon, Washington, Utah, Nevada, New Mexico, Wyoming, Montana, Colorado, and western parts of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas.

Region 2 consists of states and parts of states to the EAST of U.S. Highway 83. (Includes the Eastern parts of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, and the states to the east of these states.

Rotational Interval (months) Following an Application of RAPTOR Herbicide

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Plant-back Interval (Months)	Region 1	Region 2
Anytime	CLEARFIELD canola CLEARFIELD wheat Edible legumes soybeans	CLEARFIELD canola CLEARFIELD wheat Edible legumes soybeans
Three months	Alfalfa Wheat (non -CLEARFIELD)	Alfalfa Wheat (non -CLEARFIELD)
Four months	Rye	Barley Rye
Eight and one-half months	Corn (field, pop, seed, sweet, CLEARFIELD and non-CLEARFIELD)	Corn (field, pop, seed, sweet, CLEARFIELD and non-CLEARFIELD)
Nine months	Barley* Cantalope Cotton GrainSorghum Lettuce Millets Oat Onion	Peanut Pumkin Rice Squash Sunflower Tobacco Watermelon
		Broccoli Cabbage Cantalope Carrot Cotton Cucumber GrainSorghum Lettuce Millets Oat Onion
		Peanut Pepper Potato Pumkin Rice Squash Sunflower Tobacco Tomato Turnip Watermelon
Eighteen months	Barley* Broccoli Cabbage Carrot Cucumber All other crops not listed in the ROTATIONAL CROP guideline	Pepper Potato Tomato Turnip All other crops not listed in the ROTATIONAL CROPS guideline
Twenty-six months	Sugar beet Table beet	Canola Sugar beet** Table beet** All other crops not listed in the ROTATIONAL CROPS guideline
		Sugar beet** Table beet**

*In Region 1, refer to the following table for guideline for planting barley following applications of RAPTOR herbicide.

Barley Rotational Interval Based on pH, Rainfall and Tillage (Region 1)

		Moldboard plowing?	
		NO	YES
pH and Rainfall Requirements	>18" R+I AND pH >6.2	9 months	9 months
	<18" R+I OR pH <6.2	18 months	9 months

R+I - Rainfall and overhead irrigation from the time of Raptor application to barley planting. Does not include furrow or flood irrigation.

If the rainfall or pH requirements are not fully met, and barley is planted prior to 18 months, injury may be reduced by tillage, such as deep disking (greater than 6 inches deep) after crop harvest but prior to November 1.

****In Region 2**, sugar beet and table beets can be planted eighteen months following an application of RAPTOR if the soil pH is uniformly 6.2 or greater. If the soil pH is less than 6.2, the rotational interval is 26 months. Sugar beet yields can be reduced when grown in soil conditions with a pH less than 6.2. If the soil is limed to adjust the soil pH, apply the lime at least 18 months prior to planting sugar beets or other rotational crops under the 18 month rotational interval.

When taking soil samples to determine soil pH, utilize a grid sampling technique, sampling to a depth of 3-4 inches.

Furrow and Flood Irrigated Crops

Following harvest of furrow or flood irrigated crops, the soil should be thoroughly mixed by plowing or deep disking in order to minimize the potential for herbicide carryover to the following crop.

Use of RAPTOR herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors, such as arid conditions, make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

GENERAL PRECAUTIONS

In the event of a crop loss due to weather, edible legumes, CLEARFIELD canola, CLEARFIELD wheat, or soybeans can be replanted. Do not make an additional application of RAPTOR.

Application of products containing chlorimuron ethyl (Classic®, Canopy®, Synchrony®, Gemini®, Lorox Plus®, Preview®, etc.), metsulfuron-methyl (Harmony® Extra), flumetsulam (Broadstrike + Dual®, Broadstrike® + Treflan®), imazaquin (SCEPTER®, SQUADRON®, TRI-SCEPT®, SCEPTER® O.T.®, SCEPTER® 70DG, or imazethapyr (PURSUIT®, PURSUIT® DG, PURSUIT® PLUS EC) the same year as RAPTOR may increase the risk of injury to sensitive rotational crops. Consult all pertinent labels for recommended uses of these products in combinations.

If arid conditions occur during the year of application rotational crop injury may occur.

Backdraft, Banvel, Basagran, Cadre, Clarity, Clearfield, Extreme, Poast, Poast Plus, Prowl 3.3 EC, Rezult, Scepter, Squadron, Tri-Scept, Scepter O.T., Pursuit, Pursuit DG, Pursuit Plus EC, Raptor and Weedmaster are registered trademarks of BASF AG.

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