

241-379

3-19-2003

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

**MAR 19 2003**

Mr. Joseph O'Grodnick  
BASF Corporation  
26 Davis Drive  
P.O. Box 13528  
Research Triangle Park, NC 27709-3528

Subject: Raptor/Beyond Herbicide  
EPA Registration No. 241-379  
Revised labeling (Raptor Master label, Raptor Subset Label, Beyond  
Subset Label, Raptor supplemental label, and Beyond supplemental label)  
submitted March 13, 2003

Dear Mr. O'Grodnick:

The amended labeling referred to above is acceptable provided that you make the changes specified below:

In the first sentence of the aerial application section of the chicory supplemental label, change "all crops listed on this label" to "chicory". In the first sentence of the aerial application section of the sunflower supplemental label, change "all crops listed on this label" to "sunflower".

The Raptor and Beyond supplemental labels expire 365 days after the date on this letter.

Submit one copy of the final printed labeling for each label before you release the product for shipment. In addition, please submit electronic copies (pdf text format) of the revised labels within one month of receipt of this letter. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA

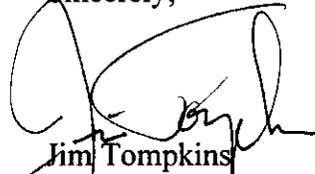
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section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

This labeling supercedes all previously accepted labeling for this product (except supplemental labeling). Stamped copies of the labels are enclosed for your records.

If you have any questions about this letter, you may call Tobi Colvin-Snyder at 703-305-7801.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Tompkins", written over a circular scribble.

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

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# RAPTOR® herbicide

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

**Apply Only on Imidazolinone Tolerant Canola, Sunflower 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%
<b>INERT INGREDIENTS</b>	<b>87.9%</b>
<b>TOTAL</b>	<b>100.0%</b>

\*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 Registration No. 241-379

EPA Establishment No. 241-PR-002

## 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 eye. 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

**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 (1-800-832-HELP)

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated**

MAR 19 2003

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

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

**See Next Page for Additional Precautionary Statements**

**See inside booklet for complete Precautionary Statements, Statement of Practical  
Treatment, Directions for Use, and Conditions of Sale and Warranty.**

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

Net Contents: 1 Gallon (3.785 liters)  
®Registered Trademark of BASF

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Precautions

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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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  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.

**User Safety Recommendations:**

Users Should:

- 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.

**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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  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 ground or air, RAPTOR spray drift or other indirect contact may injure sensitive crops, including non-imidazolinone tolerant wheat, sunflower 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. Keep containers closed to avoid spills and contamination.

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## STORAGE AND DISPOSAL

### 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, or by incineration or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

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## 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 OR CHICORY 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.

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## GENERAL INFORMATION

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.

When organophosphate (such as Lorsban™) or carbamate insecticides (such as Furadan™) are tank-mixed with RAPTOR herbicide, temporary injury may result to the treated crop.

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. Do not apply Pursuit® herbicide, Raptor® herbicide, or Pursuit® Plus EC herbicide if soybeans are replanted.

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®, Everest™, Finesse®, Glean®, Peak®, Rave®, Accent®, Ally®, Basis®, Classic®, Exceed®, Harmony® Extra, Maverick™, Permit®, Pinnacle®, etc.), imidazolinones (e.g., Pursuit®, Scepter®, Cadre® and Lightning®), the sulfonamides (e.g., Hornet®, 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.

RAPTOR is very active against many broadleaf and grass weed species. For long term weed management, use two herbicides with different modes of action to reduce the potential for weed resistance. Crop (and herbicide) rotation is also effective in managing weed resistance where herbicides of different modes of action are used. Tillage, where practical (such as in fallow production, or prior to planting) is also effective in controlling weeds to minimize resistance development. Additionally, a burndown herbicide during fallow or prior to planting is also effective in reducing weed resistance development.

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## MIXING INSTRUCTIONS

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 quarts per 100 gallons of spray solution (0.25%vol/vol). 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 liquid ammonium sulfate, 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.

**DO NOT USE CROP OIL CONCENTRATE OR METHYLATED SEED OIL WITH RAPTOR IN CHICORY, CLEARFIELD SUNFLOWER OR CLEARFIELD WHEAT**

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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, except in the states of Texas, New Mexico, Oklahoma, Arizona, and California.

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

#### **LIQUID FERTILIZER AS A CARRIER (Clearfield winter wheat only)**

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. Add a non-ionic surfactant at the rate of 1 quart per 100 gallons of spray solution(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

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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 (wetable 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 may 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 sugarbeet.

### **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 equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

### INFORMATION ON 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. 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).

### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than ¼ of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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.

#### SENSITIVE AREAS

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The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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.

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## ALFALFA - DIRECTIONS FOR USE

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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 0.031 - 0.047 lb imazamox a.e. per acre (4 to 6 ounces RAPTOR 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 Limitations

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

A maximum of 0.047 lb imazamox a.e./acre (6 ounces per acre of RAPTOR) per season may be applied to alfalfa.

DO NOT make sequential applications of PURSUIT followed by RAPTOR (or RAPTOR followed by PURSUIT) within a 60 day timeframe due to increased potential alfalfa crop response.

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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
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
Flixweed	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
Nettle, burning		2	2
Nettleleaf goosefoot	3	3	3
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.

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**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
Rocket, yellow		4	4
Shepherdspurse	3	4	5
Smartweed,			
Ladysthumb	3	3	3
Pennsylvania	3	3	3
Swamp		3	3
Spurge, prostate		3	3
Sunflower, common		3	3
Swinecress		3	3
Tansymustard, green	3	3	4
Thistle, Russian		3	3
Velvetleaf	3	4	5
Willoweed panicle		3	3

**BROADLEAF WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

Dandelion		3
Dock, curly	3	3
Dodder*		3
Fiddleneck		3
Ragweed,		
Common	3	3
Giant	3	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	3	3	3
Canarygrass, littleseed	3	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
Lovegrass	3	3	3
Millet, wild proso		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 may be exceeded.

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**CHICORY - DIRECTIONS FOR USE**

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. Apply RAPTOR herbicide as an early postemergence treatment when chicory has at least two and no more than four fully expanded true leaves present. Do not apply to chicory subjected to stress conditions such as hail damage, flooding, drought, injury from other herbicides, or widely fluctuating temperatures, as crop injury may result.

**USE RATE**

Apply RAPTOR postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. RAPTOR per acre). At this rate one gallon of RAPTOR will treat 32 acres of Chicory. It is recommended that a registered soil applied grass herbicide be used prior to use of RAPTOR.

APPLICATIONS OF RAPTOR REQUIRE THE ADDITION OF A SURFACTANT. Refer to the MIXING INSTRUCTIONS section for specific surfactant types and rates

**ADDITION OF NITROGEN FERTILIZER SUCH AS 28-0-0 OR 32-0-0 LIQUID FERTILIZER MAY IMPROVE WEED CONTROL BUT ALSO INCREASES THE LIKELIHOOD OF INJURY TO CHICORY.** Add liquid fertilizer at a rate of 2.5% v/v.

**Crop-Specific Restrictions and Limitations**

DO NOT apply more than 0.031 lb imazamox a.e./acre (4 ounces per acre of RAPTOR) during the growing season.

**WEEDS CONTROLLED**

**BROADLEAF WEEDS CONTROLLED BY RAPTOR**

	Maximum Weed Size (inches)
Beet, wild	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
Tansymustard, green	3

**GRASS WEEDS CONTROLLED BY RAPTOR**

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**RAPTOR at 4 fl oz./A with a surfactant**

	<b>Maximum Weed Size (inches)</b>
Brome,	
downy	3
cheat	3
Japanese	3
Cereals, volunteer	
Barley	3
Oat	3
Wheat (non-CLEARFIELD)	3
Darnel, Persian	3
Foxtail,	
Giant	3
Green	3
Yellow	3
Jointed goatgrass	3
Oats, wild	3
Shattercane	3

**GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

**RAPTOR at 4 fl oz./A with a surfactant**

	<b>Maximum weed size (inches)</b>
Crabgrass,	
Large	3
Smooth	3
Sedges,	
Purple	3
Yellow	3
Quackgrass	3

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## 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 0.031 lb imazamox a.e./acre (4 oz.RAPTOR 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.

A surfactant 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.

### Crop-Specific Restrictions and Limitations

DO NOT apply more than 0.031 lb imazamox a.e./acre (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, common	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

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

**BROADLEAF WEEDS SUPPRESSED BY RAPTOR**

	Maximum Weed Size (inches)
Buckwheat, wild	3
Flax	2
Knotweed, prostrate	3
Lettuce, miners	3
Morningglory	
Entireleaf	3
Ivyleaf	3
Smallflower	3
Tall	3
Rocket, London	3
Rocket, Yellow	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)

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**Specific Weed Problems**

Canada Thistle: For enhanced activity of Canada thistle, add Stinger™ to the tank mixture. Apply to Canada thistle in the rosette stage.

**CLEARFIELD SUNFLOWER - DIRECTIONS FOR USE**

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RAPTOR herbicide is effective in controlling weeds in conservation and conventional tillage production systems. RAPTOR can be applied early postemergence in **CLEARFIELD SUNFLOWER** (Imidazolinone tolerant sunflower) varieties. Apply only on selected sunflower varieties labeled as "CLEARFIELD" and warranted by the seed supplier to possess tolerance to direct application of RAPTOR herbicide. **DO NOT** apply RAPTOR to sunflower varieties which lack resistance/tolerance to imidazolinone herbicides. Contact your seed supplier, chemical dealer or BASF to obtain information regarding imidazolinone tolerant sunflower varieties. Refer to the specific treatment under the "SPRAYING INSTRUCTIONS" section of the label.

**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, refer to weed control tables for specific weed sizes). Under conditions of cold temperatures (less than 50°F, maximum daytime temperatures), weed control may be less than optimal. Make application when the majority of weeds are at the recommended growth stage.

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.

For best weed control and to provide the highest crop competitive advantage, apply RAPTOR herbicide to actively growing CLEARFIELD sunflowers. Plant a locally adapted CLEARFIELD sunflower variety at the normal seeding rate for your geography. Apply to sunflower after the first pair of true leaves have unfolded and up to and including the fourth pair of leaves are unfolded (2-8 leaf stage).

**RAPTOR Application Timing – Sunflower**

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

CLEARFIELD Sunflowers	2-8 leaf stage
Broadleaf weeds	Refer to weed control tables for specific weed sizes.
Grass weeds	

**USE RATE**

Apply RAPTOR postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. RAPTOR per acre). At this rate one gallon of RAPTOR will treat 32 acres of CLEARFIELD Sunflowers. It is recommended that a registered soil applied grass herbicide like PROWL® 3.3 EC be used prior to use of RAPTOR.

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A nonionic 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 0.031 lb imazamox a.e./acre (4 ounces RAPTOR per acre) during the growing season.

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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
	4 oz./A	4 oz./A
Maximum Weed Size (inches)		
Beet, wild	3	3
Chickweed, common	3	3-5
Cocklebur, common	3	3
Jimsonweed	3	3-6
Kochia**		1-4
Lambsquarters, common	3	3-5
Marshelder	4	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,		
redroot	3	3-8
smooth	3	3-8
spiny	3	3-5
Puncturevine		1-3
Purslane, common		1-3
Radish, wild	3	3-4
Smartweed,		
ladysthumb	2-5	2-5
Pennsylvania	2-5	2-5
Spurge, prostrate		3-4
Sunflower, wild or volunteer (non-CLEARFIELD)	2-6	2-6
Tansymustard	3	3
Velvetleaf	3	3-8

\*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 of ALS susceptible biotypes only.

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**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
	4oz./A	4 oz./A
Maximum Weed Size (inches)		
Bindweed		
field (seedling)	2-4	2-4
hedge (seedling)	2-4	2-4
Buckwheat, wild	1-3	1-3
Flax	2	2
Knotweed, prostrate	3	3
Lettuce, miners	3	3
Mallow, Venice		1-4
Morningglory,		
entireleaf	3	3
ivyleaf	3	3
smallflower	3	3
tall	3	3
Rocket, London	3	3
Rocket, Yellow	3	3
Spurge, prostrate	3	
Sowthistle, annual	2-4	2-4
Thistle, Canada	2-5	2-5
Thistle, Russian (non-ALS resistant)**	3	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.

\*\*Control of light to moderate populations of ALS susceptible biotypes only.

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**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
	4 oz./A	4 oz./A
	Number of Leaves (Maximum tillers)	
Barley, wild	2-4	2-4
Barnyardgrass	3**	3-5
Blackgrass	1-4 (1)	1-4 (1)
Brome, downy	1-5 (2)	1-5 (2)
, cheat	1-5 (2)	1-5 (2)
, Japanese	1-5 (2)	1-5 (2)
Canarygrass, littleseed	1-5 (2)	1-5 (2)
Crabgrass,		
large		1-4
smooth		1-4
Cupgrass, woolly***		1-4
Darnel, Persian	1-5 (2)	1-5 (2)
Foxtail,		
giant	1-6 (2)	1-6 (2)
green	1-6 (1)	1-6 (1)
yellow	1-6 (1)	1-6 (1)
Goosegrass		1-4 (1)
Goatgrass, jointed	1-5 (2)	1-5 (2)
Millet, wild proso	2-4**	2-4
Oats, wild	1-5 (2)	1-5 (2)
Panicum,		
fall	1-5	1-5
Texas		1-5
Sandbur, field***		2-5
Shattercane	2-8	2-8
Signalgrass, broadleaf	2-5**	2-5
Stinkgrass		2-4
Volunteer cereals (non-CLEARFIELD)	1-6 (3)	1-6 (3)
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.

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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
	4oz./A	4 oz./A
	Number of Leaves (Maximum tillers)	
Crabgrass		
large	1-4 (1)	
smooth	1-4 (1)	
Cupgrass, woolly	1-3	
Goosegrass	1-3	
Itchgrass		2-5
Quackgrass		4-8
Stinkgrass	2-4	
<b>SEDGES</b>		
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.

**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 tillage 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.

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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. To avoid possible crop injury, do not apply RAPTOR herbicide to CLEARFIELD wheat when extreme cold temperatures (less than 40°F, maximum daytime temperatures) are expected within one week of application.

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 tiller initiation has begun 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	after tiller initiation and prior to joint
Broadleaf weeds	refer to weed control tables for specific weed sizes
Grass weeds	

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## USE RATE

### WINTER WHEAT:

APPLY 0.031-0.047 lb imazamox a.e./acre (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 0.062 lb imazamox a.e./acre (8 ounces of RAPTOR per acre) during the growing season.

There must be an interval of at least 30 days between an application of RAPTOR and feeding or grazing of wheat forage and hay. There must 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
Whitstem	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 RockyMountains.

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**BROADLEAF WEEDS CONTROLLED BY RAPTOR (Continued)**

	<b>Application Rate</b>	<b>Weed Size</b>
	<b>Ounces/Acre</b>	<b>Maximum size (inches)</b>
Rocket, London	5-6	5
Rocket, yellow	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
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**

Brome,		
California	4-6	6+ (3+)
downy	4-6	6+ (3+)
cheat	4-6	6+ (3+)
Japanese	4-6	6+ (3+)
Fescue, rattail	4-6	1-3
Johnsongrass, rhizome	6	1-5
Jointed goatgrass	4-6	6+(3+)
Sedges		
Purple	6	1-3
Yellow	6	1-3
Quackgrass	6	1-5

\*See Specific Weed Problems section.

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### Specific Weed Problems

RAPTOR is most effective for grass control when applied in the fall. If summer annual broadleaf 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. For improved control of grasses such as feral rye, Italian regrass, and downy brome, use higher rates of nitrogen fertilizer up to 50% of the spray solution. Higher rates of nitrogen can improve grass weed control with RAPTOR, especially under drought stress conditions.

**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 are recommended to achieve 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 ALS/AHAS 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(s) recommended to control on kochia (i.e. CLARITY + 2,4-D). Apply to kochia 2 inches in size or less.

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

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.

**Sulfonylurea herbicides such as Ally®, Amber®, Everest™, Finesse®, Express®, Harmony® Extra and Maverick™ should not be tankmixed with RAPTOR herbicide. RAPTOR herbicide tankmixes with sulfonylurea herbicides may result in unacceptable crop response.**

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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
Adzuki, 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 0.031 lb imazamox a.e./acre (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

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(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. For enhanced grass activity, add a crop oil instead of surfactant. 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.

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**Crop-Specific Restrictions and Limitations**

There must 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 0.031 lb imazamox a.e./acre (4 ounces of RAPTOR per acre) per season may be applied to dry beans.

**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
Cocklebur, Common		3
Flixweed	3	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
Radish, wild	3	3
Shepherdspurse	3	3
Tansymustard, green	3	3
Velvetleaf		3

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

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**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	
Knotweed, prostrate		3
Kochia*		3
Lettuce, miners		3
Morningglory		
Entireleaf		3
Ivyleaf		3
Smallflower		3
Tall		3
Purslane, common		3
Rocket, London		3
Rocket, yellow		3
Smartweed		
Ladysthumb		3
Pennsylvania		3
Spurge, prostrate		3

\*RAPTOR controls non-ALS resistant kochia only.

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**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)	
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

**GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

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

\*Except imidazolinone tolerant corn.

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## SOYBEANS - DIRECTIONS FOR USE

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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 0.031 lb imazamox a.e./acre (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 0.040 lb imazamox a.e./acre (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.

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### **Crop-Specific Restrictions and Limitation**

There must 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 apply more than 0.04 lb a.e. imazamox (5 oz RAPTOR) per acre per season.

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

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**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 of 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.

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**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	
<b>SEDGES</b>		
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.

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**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:

<b>ULTRA BLAZER Rate (ounces per acre)*</b>			
<b>Weed</b>	<b>8-10 oz.</b>	<b>12-14 oz.</b>	<b>16-20 oz.</b>
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"

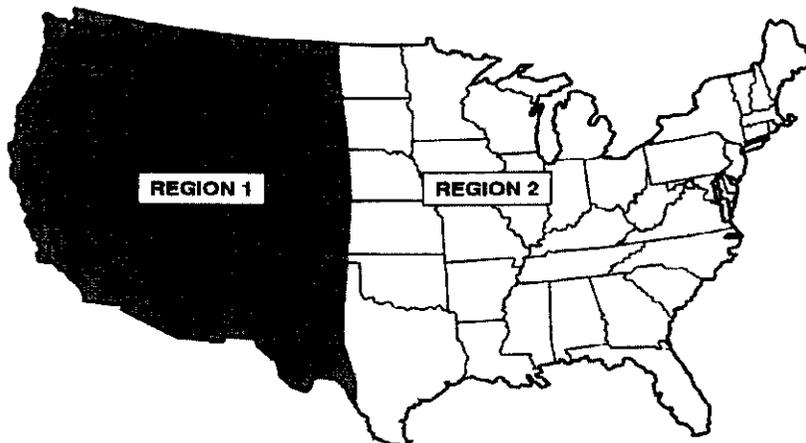
\*Use the higher rate if common ragweed is present or the weed population is high.

**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.

## ROTATIONAL CROP RESTRICTIONS

Rotational crops may be planted after applying the recommended rate of RAPTOR herbicide in the regions as indicated below.



**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).

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**Rotational Interval (months) Following an Application of RAPTOR Herbicide**

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

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

\*\*In **Region 2**, sugarbeet 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. Sugarbeet 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 sugarbeet 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.

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**Barley Rotational Interval Based on pH, Moisture 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.

**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, Result, 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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**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

NVA 2002-04-133-0089

Revised: 3-12-03

**RAPTOR® herbicide**

**SUPPLEMENTAL LABELING**

54/134  
ACCEPTED  
with COMMENTS  
In EPA Letter Dated

**FOR USE ON CHICORY**  
**EPA Registration No. 241-379**

MAR 19 2003  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
241-379

**FOR USE IN NEBRASKA, WYOMING, COLORADO AND MONTANA ONLY**

**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. All applicable directions, restrictions, precautions, Worker Protection Standard Requirements and **Conditions of Sale and Warranty** on the EPA-registered label for Raptor® herbicide (EPA Reg No 241-379) must be followed

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.

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 ground or air, RAPTOR spray drift or other indirect contact may injure sensitive crops, including non-imidazolinone tolerant wheat, sunflower 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. Keep containers closed to avoid spills and contamination.

**GENERAL INFORMATION**

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.

When organophosphate (such as Lorsban™) or carbamate insecticides (such as Furadan™) are tank-mixed with RAPTOR herbicide, temporary injury may result to the treated crop.

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. Do not apply Pursuit® herbicide, Raptor® herbicide, or Pursuit® Plus EC herbicide if soybeans are re-planted.

**MIXING INSTRUCTIONS**

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

- I. **SURFACTANTS:** Use a nonionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 1 quarts per 100 gallons of spray solution (0.25%vol/vol). 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 liquid ammonium sulfate, 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.

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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.

**TANK MIX COMBINATIONS WITH OTHER HERBICIDES**

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 may be exceeded. RAPTOR cannot be mixed with any product containing a label prohibiting such mixtures.

**SPRAYING INSTRUCTIONS**

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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 sugarbeet.

### GROUND APPLICATION

See Raptor® herbicide main label.

### AERIAL APPLICATION

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

Uniformly apply with properly calibrated equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON 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. 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).

#### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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.

#### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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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.

**CHICORY - DIRECTIONS FOR USE**

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. Apply RAPTOR herbicide as an early postemergence treatment when chicory has at least two and no more than four fully expanded true leaves present. Do not apply to chicory subjected to stress conditions such as hail damage, flooding, drought, injury from other herbicides, or widely fluctuating temperatures, as crop injury may result.

**USE RATE**

Apply RAPTOR postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. RAPTOR per acre). At this rate one gallon of RAPTOR will treat 32 acres of Chicory. It is recommended that a registered soil applied grass herbicide be used prior to use of RAPTOR.

APPLICATIONS OF RAPTOR REQUIRE THE ADDITION OF A SURFACTANT. Refer to the MIXING INSTRUCTIONS section for specific surfactant types and rates

**ADDITION OF NITROGEN FERTILIZER SUCH AS 28-0-0 OR 32-0-0 LIQUID FERTILIZER MAY IMPROVE WEED CONTROL BUT ALSO INCREASES THE LIKELIHOOD OF INJURY TO CHICORY.** Add liquid fertilizer at a rate of 2.5% v/v.

**Crop-Specific Restrictions and Limitations**

DO NOT apply more than 0.031 lb imazamox a.e./acre (4 ounces per acre of RAPTOR) during the growing season.

**WEEDS CONTROLLED**

**BROADLEAF WEEDS CONTROLLED BY RAPTOR**

	Maximum Weed Size (inches)
Beet, wild	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,	

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Redroot	3
Smooth	3
Spiny	3
Radish, wild	3
Shepherdspurse	3
Tansymustard, green	3

**GRASS WEEDS CONTROLLED BY RAPTOR**

**RAPTOR at 4 fl oz./A with a surfactant**

	Maximum Weed Size (inches)
Brome,	
downy	3
cheat	3
Japanese	3
Cereals, volunteer	
Barley	3
Oat	3
Wheat (non-CLEARFIELD)	3
Darnel, Persian	3
Foxtail,	
Giant	3
Green	3
Yellow	3
Jointed goatgrass	3
Oats, wild	3
Shattercane	3

**GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

**RAPTOR at 4 fl oz./A with a surfactant**

	Maximum weed size (inches)
Crabgrass,	
Large	3
Smooth	3
Sedges,	
Purple	3
Yellow	3
Quackgrass	3

**DISCLAIMER**

THIS PRODUCT WHEN USED ON CHICORY MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF CORPORATION 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

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**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 CHICORY CONTRARY TO THE LABEL INSTRUCTIONS. 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. 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.**

### **GENERAL PRECAUTIONS**

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

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

Raptor and are registered trademarks of BASF AG.  
Lorsban is a registered trademark of Dow Agrosience.  
Furadan is a trademark of FMC Corporation.

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

NVA 2002-04-133-0089

Revised: 3-13-03

**BEYOND® herbicide**  
**CLEARFIELD PRODUCTION SYSTEM LABELING**

6/1/34  
**ACCEPTED**  
**with COMMENTS**  
**in EPA Letter Dated**

**Apply only to Imidazolinone Tolerant Sunflower Varieties**

EPA Registration No. 241-379

**MAR 19 2003**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
241-379

**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. All applicable directions, restrictions, precautions, Worker Protection Standard Requirements and **Conditions of Sale and Warranty** on the EPA-registered label for Beyond® herbicide (EPA Reg No 241-379) must be followed.

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.

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

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

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

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

Spray equipment used for BEYOND 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 BEYOND herbicide. Do not use BEYOND other than in accordance with the instructions set forth on this label. Keep containers closed to avoid spills and contamination.

**GENERAL INFORMATION**

The mode of weed killing activity involves uptake of BEYOND® herbicide by foliage and/or weed roots and rapid translocation to the growing points. After BEYOND 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 BEYOND activity. When adequate soil moisture is present, BEYOND 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 BEYOND application may improve general weed control.

When organophosphate (such as Lorsban™) or carbamate insecticides (such as Furadan™) are tank-mixed with BEYOND herbicide, temporary injury may result to the treated crop.

Use of BEYOND 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.

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Replanting: If replanting is necessary in a field previously treated with BEYOND, 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 BEYOND. Do not apply Pursuit® herbicide, Raptor® herbicide, or Pursuit® Plus EC herbicide if soybeans are re-planted.

### MIXING INSTRUCTIONS

POSTEMERGENCE APPLICATIONS OF BEYOND REQUIRE THE ADDITION OF A SURFACTANT AND A NITROGEN FERTILIZER SOLUTION.

- I. **SURFACTANTS:** Use a nonionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 1 quarts per 100 gallons of spray solution (0.25%vol/vol). 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 liquid ammonium sulfate, 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.

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Fill the spray tank one-half to three-quarters full with clean water. Use a calibrated measuring device to measure the required amount of BEYOND herbicide. Add BEYOND 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, except in the states of Texas, New Mexico, Oklahoma, Arizona, and California.

### TANK MIX COMBINATIONS WITH OTHER HERBICIDES

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

When BEYOND 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 may be exceeded. BEYOND 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 sugarbeet.

### GROUND APPLICATION

See Beyond® herbicide main label.

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## AERIAL APPLICATION

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

Uniformly apply with properly calibrated equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

### INFORMATION ON 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. 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).

### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

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#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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.

#### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Applicator is responsible for any loss or damage, which results from spraying BEYOND 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.

#### CLEARFIELD SUNFLOWER - DIRECTIONS FOR USE

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BEYOND herbicide is effective in controlling weeds in conservation and conventional tillage production systems. BEYOND can be applied early postemergence in CLEARFIELD SUNFLOWER (Imidazolinone tolerant sunflower) varieties. Apply only on selected sunflower varieties labeled as "CLEARFIELD" and warranted by the seed supplier to possess tolerance to direct application of BEYOND herbicide. DO NOT apply BEYOND to sunflower varieties which lack resistance/tolerance to imidazolinone herbicides. Contact your seed supplier, chemical dealer or BASF to obtain information regarding imidazolinone tolerant sunflower varieties. Refer to the specific treatment under the "SPRAYING INSTRUCTIONS" section of the label.

Apply BEYOND 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, refer to weed control tables for specific weed sizes). Under conditions of cold temperatures (less than 50°F, maximum daytime temperatures), weed control may be less than optimal. Make application when the majority of weeds are at the recommended growth stage.

When adequate soil moisture is present, BEYOND 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 BEYOND 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.

For best weed control and to provide the highest crop competitive advantage, apply BEYOND herbicide to actively growing CLEARFIELD sunflowers. Plant a locally adapted CLEARFIELD sunflower variety at the normal seeding rate for your geography. Apply to sunflower after the first pair of true leaves have unfolded and up to and including the fourth pair of leaves are unfolded (2-8 leaf stage).

**BEYOND Application Timing – Sunflower**

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

CLEARFIELD Sunflowers	2-8 leaf stage
Broadleaf weeds	Refer to weed control tables for specific weed sizes.
Grass weeds	

**USE RATE**

Apply BEYOND postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. BEYOND per acre). At this rate one gallon of BEYOND will treat 32 acres of CLEARFIELD Sunflowers. It is recommended that a registered soil applied grass herbicide like PROWL® 3.3 EC be used prior to use of BEYOND.

A nonionic 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 0.031 lb imazamox a.e./acre (4 ounces BEYOND per acre) during the growing season.

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

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Application Rate

	BEYOND Postemergence Alone 4 oz./A	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence 4 oz./A
Maximum Weed Size (inches)		
Beet, wild	3	3
Chickweed, common	3	3-5
Cocklebur, common	3	3
Jimsonweed	3	3-6
Kochia**		1-4
Lambsquarters, common	3	3-5
Marshelder	4	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, redroot	3	3-8
smooth	3	3-8
spiny	3	3-5
Puncturevine		1-3
Purslane, common		1-3
Radish, wild	3	3-4
Smartweed, ladysthumb	2-5	2-5
Pennsylvania	2-5	2-5
Spurge, prostrate		3-4
Sunflower, wild or volunteer (non-CLEARFIELD)	2-6	2-6
Tansymustard	3	3
Velvetleaf	3	3-8

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

\*\*Control of light to moderate populations of ALS susceptible biotypes only.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4oz./A	4 oz./A
Maximum Weed Size (inches)		
Bindweed		
field (seedling)	2-4	2-4
hedge (seedling)	2-4	2-4
Buckwheat, wild	1-3	1-3
Flax	2	2
Knotweed, prostrate	3	3
Lettuce, miners	3	3
Mallow, Venice		1-4
Morningglory,		
entireleaf	3	3
ivyleaf	3	3
smallflower	3	3
tall	3	3
Rocket, London	3	3
Rocket, Yellow	3	3
Spurge, prostrate	3	
Sowthistle, annual	2-4	2-4
Thistle, Canada	2-5	2-5
Thistle, Russian (non-ALS resistant)**	3	3

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

\*\*Control of light to moderate populations of ALS susceptible biotypes only.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4 oz./A	4 oz./A
	Number of Leaves (Maximum tillers)	
Barley, wild	2-4	2-4
Barnyardgrass	3**	3-5
Blackgrass	1-4 (1)	1-4 (1)
Brome, downy	1-5 (2)	1-5 (2)
, cheat	1-5 (2)	1-5 (2)
, Japanese	1-5 (2)	1-5 (2)
Canarygrass, littleseed	1-5 (2)	1-5 (2)
Crabgrass,		
large		1-4
smooth		1-4
Cupgrass, woolly***		1-4
Darnel, Persian	1-5 (2)	1-5 (2)
Foxtail,		
giant	1-6 (2)	1-6 (2)
green	1-6 (1)	1-6 (1)
yellow	1-6 (1)	1-6 (1)
Goosegrass		1-4 (1)
Goatgrass, jointed	1-5 (2)	1-5 (2)
Millet, wild proso	2-4**	2-4
Oats, wild	1-5 (2)	1-5 (2)
Panicum,		
fall	1-5	1-5
Texas		1-5
Sandbur, field***		2-5
Shattercane	2-8	2-8
Signalgrass, broadleaf	2-5**	2-5
Stinkgrass		2-4
Volunteer cereals (non-CLEARFIELD)	1-6 (3)	1-6 (3)
Witchgrass		2-5

\*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a post-emergence application of BEYOND 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.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4oz./A	4 oz./A
Number of Leaves (Maximum tillers)		
Crabgrass		
large	1-4 (1)	
smooth	1-4 (1)	
Cupgrass, woolly	1-3	
Goosegrass	1-3	
Itchgrass		2-5
Quackgrass		4-8
Stinkgrass	2-4	
<b>SEDGES</b>		
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 BEYOND herbicide at a broadcast rate of 4 fluid ounces per acre.

**GENERAL PRECAUTIONS**

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

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

Beyond, Prowl 3.3 EC, and Raptor are registered trademarks of BASF AG.  
Lorsban is a trademark of Dow Agrosience.  
Furadan is a trademark of FMC Corporation.

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

NVA 2002-04-133-0089

Revised: 3-13-03

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# RAPTOR® herbicide

FOR USE ON ALFALFA, CHICORY, EDIBLE LEGUMES AND SOYBEANS

### 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%
<b>INERT INGREDIENTS</b>	<b>87.9%</b>
<b>TOTAL</b>	<b>100.0%</b>

\*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 Registration No. 241-379

EPA Establishment No. 241-PR-002

### 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 eye. 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

#### 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 (1-800-832-HELP)

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated**  
**MAR 19 2003**

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

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

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**See Next Page for Additional Precautionary Statements**

**See inside booklet for complete Precautionary Statements, Statement of Practical Treatment, Directions for Use, and Conditions of Sale and Warranty.**

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

Net Contents: 1 Gallon (3.785 liters)

®Registered Trademark of BASF

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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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  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.

#### **User Safety Recommendations:**

Users Should:

- 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.

### 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.

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### 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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  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 ground or air, RAPTOR spray drift or other indirect contact may injure sensitive crops, including non-imidazolinone tolerant wheat, sunflower 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. Keep containers closed to avoid spills and contamination.

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## STORAGE AND DISPOSAL

### 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, or by incineration or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

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## 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 OR CHICORY 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.

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## GENERAL INFORMATION

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.

When organophosphate (such as Lorsban™) or carbamate insecticides (such as Furadan™) are tank-mixed with RAPTOR herbicide, temporary injury may result to the treated crop.

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. Do not apply Pursuit® herbicide, Raptor® herbicide, or Pursuit® Plus EC herbicide if soybeans are replanted.

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®, Everest™, Finesse®, Glean®, Peak®, Rave®, Accent®, Ally®, Basis®, Classic®, Exceed®, Harmony® Extra, Maverick™, Permit®, Pinnacle®, etc.), imidazolinones (e.g., Pursuit®, Scepter®, Cadre® and Lightning®), the sulfonamides (e.g., Hornet®, 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.

RAPTOR is very active against many broadleaf and grass weed species. For long term weed management, use two herbicides with different modes of action to reduce the potential for weed resistance. Crop (and herbicide) rotation is also effective in managing weed resistance where herbicides of different modes of action are used. Tillage, where practical (such as in fallow production, or prior to planting) is also effective in controlling weeds to minimize resistance development. Additionally, a burndown herbicide during fallow or prior to planting is also effective in reducing weed resistance development.

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## MIXING INSTRUCTIONS

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 quarts per 100 gallons of spray solution (0.25%vol/vol). 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 liquid ammonium sulfate, 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.

**DO NOT USE CROP OIL CONCENTRATE OR METHYLATED SEED OIL WITH RAPTOR IN CHICORY**

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, except in the states of Texas, New Mexico, Oklahoma, Arizona, and California.

**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**

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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 (wetttable 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 may 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 sugarbeet.

#### **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 gallongage 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 equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

### INFORMATION ON 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. 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).

### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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.

#### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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.

### 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.

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## ALFALFA - DIRECTIONS FOR USE

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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 0.031 - 0.047 lb imazamox a.e. per acre (4 to 6 ounces RAPTOR 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 Limitations

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

A maximum of 0.047 lb imazamox a.e./acre (6 ounces per acre of RAPTOR) per season may be applied to alfalfa.

DO NOT make sequential applications of PURSUIT followed by RAPTOR (or RAPTOR followed by PURSUIT) within a 60 day timeframe due to increased potential alfalfa crop response.

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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
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
Flixweed	3	3	3
Filaree,			
Redstem			3
Whitestem			3
Henbit			2
Knotweed, prostrate		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
Nettle, burning		2	2
Nettleleaf goosefoot	3	3	3
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.

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**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
Rocket, yellow		4	4
Shepherdspurse	3	4	5
Smartweed,			
Ladysthumb	3	3	3
Pennsylvania	3	3	3
Swamp		3	3
Spurge, prostate		3	3
Sunflower, common		3	3
Swinecress		3	3
Tansymustard, green	3	3	4
Thistle, Russian		3	3
Velvetleaf	3	4	5
Willoweed panicle		3	3

**BROADLEAF WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

Dandelion		3
Dock, curly	3	3
Dodder*		3
Fiddleneck		3
Ragweed,		
Common	3	3
Giant	3	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	3	3	3
Canarygrass, littleseed	3	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
Lovegrass	3	3	3
Millet, wild proso		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 may be exceeded.

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**CHICORY - DIRECTIONS FOR USE**

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. Apply RAPTOR herbicide as an early postemergence treatment when chicory has at least two and no more than four fully expanded true leaves present. Do not apply to chicory subjected to stress conditions such as hail damage, flooding, drought, injury from other herbicides, or widely fluctuating temperatures, as crop injury may result.

**USE RATE**

Apply RAPTOR postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. RAPTOR per acre). At this rate one gallon of RAPTOR will treat 32 acres of Chicory. It is recommended that a registered soil applied grass herbicide be used prior to use of RAPTOR.

APPLICATIONS OF RAPTOR REQUIRE THE ADDITION OF A SURFACTANT. Refer to the MIXING INSTRUCTIONS section for specific surfactant types and rates

**ADDITION OF NITROGEN FERTILIZER SUCH AS 28-0-0 OR 32-0-0 LIQUID FERTILIZER MAY IMPROVE WEED CONTROL BUT ALSO INCREASES THE LIKELIHOOD OF INJURY TO CHICORY.** Add liquid fertilizer at a rate of 2.5% v/v.

**Crop-Specific Restrictions and Limitations**

DO NOT apply more than 0.031 lb imazamox a.e./acre (4 ounces per acre of RAPTOR) during the growing season.

**WEEDS CONTROLLED**

**BROADLEAF WEEDS CONTROLLED BY RAPTOR**

	Maximum Weed Size (inches)
Beet, wild	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
Tansymustard, green	3

**GRASS WEEDS CONTROLLED BY RAPTOR**

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<b>RAPTOR at 4 fl oz./A with a surfactant</b>	
	<b>Maximum Weed Size (inches)</b>
Brome,	
downy	3
cheat	3
Japanese	3
Cereals, volunteer	
Barley	3
Oat	3
Wheat (non-CLEARFIELD)	3
Darnel, Persian	3
Foxtail,	
Giant	3
Green	3
Yellow	3
Jointed goatgrass	3
Oats, wild	3
Shattercane	3

**GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

<b>RAPTOR at 4 fl oz./A with a surfactant</b>	
	<b>Maximum weed size (inches)</b>
Crabgrass,	
Large	3
Smooth	3
Sedges,	
Purple	3
Yellow	3
Quackgrass	3

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**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
Adzuki, 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 0.031 lb imazamox a.e./acre (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. For enhanced grass activity, add a crop oil instead of surfactant. 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.

**Crop-Specific Restrictions and Limitations**

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There must 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 0.031 lb imazamox a.e./acre (4 ounces of RAPTOR per acre) per season may be applied to dry beans.

**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
Cocklebur, Common		3
Flixweed	3	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
Radish, wild	3	3
Shepherdspurse	3	3
Tansymustard, green	3	3
Velvetleaf		3

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

**BROADLEAF WEEDS SUPPRESSED BY RAPTOR**

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	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	
Knotweed, prostrate		3
Kochia*		3
Lettuce, miners		3
Morningglory		
Entireleaf		3
Ivyleaf		3
Smallflower		3
Tall		3
Purslane, common		3
Rocket, London		3
Rocket, yellow		3
Smartweed		
Ladysthumb		3
Pennsylvania		3
Spurge, prostrate		3

\*RAPTOR controls non-ALS resistant kochia only.

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**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)		
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

**GRASS WEEDS SUPPRESSED BY RAPTOR APPLICATIONS**

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

\*Except imidazolinone tolerant corn.

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## SOYBEANS - DIRECTIONS FOR USE

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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 0.031 lb imazamox a.e./acre (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 0.040 lb imazamox a.e./acre (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.

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### **Crop-Specific Restrictions and Limitation**

There must 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 apply more than 0.04 lb a.e. imazamox (5 oz RAPTOR) per acre per season.

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

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**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 of 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.

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**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	
<b>SEDGES</b>		
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.

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**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:

<b>ULTRA BLAZER Rate (ounces per acre)*</b>			
<b>Weed</b>	<b>8-10 oz.</b>	<b>12-14 oz.</b>	<b>16-20 oz.</b>
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.

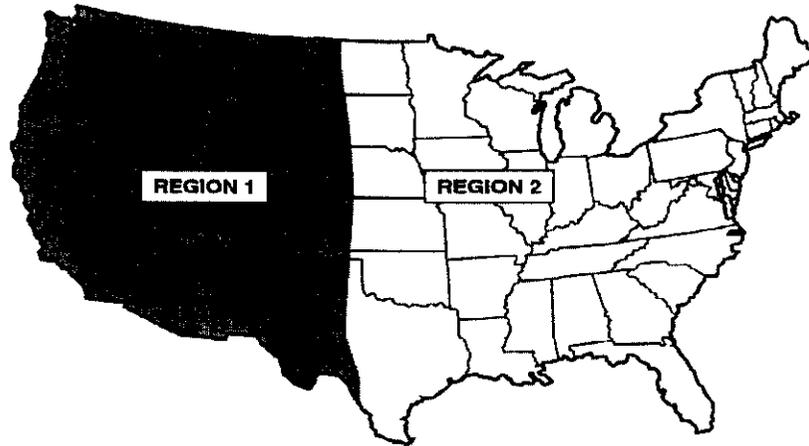
**Enhanced control of common ragweed and giant ragweed.**

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 RESTRICTIONS

Rotational crops may be planted after applying the recommended rate of RAPTOR herbicide in the regions as indicated below.



**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).

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**Rotational Interval (months) Following an Application of RAPTOR Herbicide**

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

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

\*\*In **Region 2**, sugarbeet 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. Sugarbeet 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 sugarbeet 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.

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**Barley Rotational Interval Based on pH, Moisture 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.

**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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Maverick, Permit, Roundup Ready and Roundup Ultra are trademarks of Monsanto.

Firstrate, Lorsban and Hornet are trademarks of Dow Agrosience.

Bronate and Bucril are trademarks of Aventis.

Prizm and Select are trademarks of Valent USA Corp.

Everest is a registered trademark of Bayer Corp.

Spra-Coupe is a trademark of Melroe Agricultural Products.

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Furadan is a trademark of FMC Corporation.

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

NVA 2002-04-133-0089

Revised: 3-12-03

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# BEYOND® herbicide CLEARFIELD PRODUCTION SYSTEM

FOR USE ON CLEARFIELD\* CANOLA, CLEARFIELD\* SUNFLOWER AND  
CLEARFIELD\* WHEAT,

Apply Only on Imidazolinone Tolerant Canola, Sunflower 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 Registration No. 241-379

EPA Establishment No. 241-PR-002

### 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 eye. 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

**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 (1-800-832-HELP)

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated**

MAR 19 2003

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

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

**See Next Page for Additional Precautionary Statements**

**See inside booklet for complete Precautionary Statements, Statement of Practical  
Treatment, Directions for Use, and Conditions of Sale and Warranty.**

**BASF Corporation**  
26 Davis Drive  
Research Triangle Park, NC 27709

Net Contents: 1 Gallon (3.785 liters)  
®Registered Trademark of BASF

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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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  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.

**User Safety Recommendations:**

Users Should:

- 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.

**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.

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### 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  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils
- shoes plus socks

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

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

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

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

Spray equipment used for BEYOND 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 BEYOND herbicide. Do not use BEYOND other than in accordance with the instructions set forth on this label. Keep containers closed to avoid spills and contamination.

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## STORAGE AND DISPOSAL

### 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, or by incineration or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

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## 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.

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 BEYOND 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**

The mode of weed killing activity involves uptake of BEYOND® herbicide by foliage and/or weed roots and rapid translocation to the growing points. After BEYOND 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 BEYOND activity. When adequate soil moisture is present, BEYOND 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 BEYOND application may improve general weed control.

When organophosphate (such as Lorsban™) or carbamate insecticides (such as Furadan™) are tank-mixed with BEYOND herbicide, temporary injury may result to the treated crop.

Use of BEYOND 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.

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Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following BEYOND 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 BEYOND, 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 BEYOND. Do not apply Pursuit® herbicide, Raptor® herbicide, or Pursuit® Plus EC herbicide if soybeans are re-planted.

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®, Everest™, Finesse®, Glean®, Peak®, Rave®, Accent®, Ally®, Basis®, Classic®, Exceed®, Harmony® Extra, Maverick™, Permit®, Pinnacle®, etc.), imidazolinones (e.g., Pursuit®, Scepter®, Cadre® and Lightning®), the sulfonamides (e.g., Hornet®, etc.) and the pyrimidyl benzoates (e.g., Staple®, etc.). If naturally occurring ALS/AHAS resistant biotypes are present in a field, BEYOND 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.

BEYOND is very active against many broadleaf and grass weed species. For long term weed management, use two herbicides with different modes of action to reduce the potential for weed resistance. Crop (and herbicide) rotation is also effective in managing weed resistance where herbicides of different modes of action are used. Tillage, where practical (such as in fallow production, or prior to planting) is also effective in controlling weeds to minimize resistance development. Additionally, a burndown herbicide during fallow or prior to planting is also effective in reducing weed resistance development.

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## MIXING INSTRUCTIONS

POSTEMERGENCE APPLICATIONS OF BEYOND 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 quarts per 100 gallons of spray solution (0.25%vol/vol). 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 liquid ammonium sulfate, 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.

**DO NOT USE CROP OIL CONCENTRATE OR METHYLATED SEED OIL WITH BEYOND IN CLEARFIELD SUNFLOWER OR CLEARFIELD WHEAT**

Fill the spray tank one-half to three-quarters full with clean water. Use a calibrated measuring device to measure the required amount of BEYOND herbicide. Add BEYOND 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, except in the states of Texas, New Mexico, Oklahoma, Arizona, and California.

**NOTE:** Do not apply BEYOND in liquid fertilizer as the carrier (except to Clearfield winter wheat).

#### **LIQUID FERTILIZER AS A CARRIER (Clearfield winter wheat only)**

DO NOT apply BEYOND in liquid fertilizer concentrate except BEYOND may be applied to CLEARFIELD winter wheat in a water/liquid fertilizer solution with at least 50% water. Add a non-ionic surfactant at the rate of 1 quart per 100 gallons of spray solution(0.25%). Some crop leaf burn from the fertilizer in the solution may occur from the fertilizer application.

## TANK MIX COMBINATIONS WITH OTHER HERBICIDES

If other herbicides or other spray tank components are tank-mixed with BEYOND, 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 (wetable powder), DG (dispersible granule), DF (dry flowable) or liquid flowable formulations not in soluble packets.
- 4) Add BEYOND 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 BEYOND applications must be drained and thoroughly cleaned with water before being used to apply other products.

When BEYOND 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 may be exceeded. BEYOND 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 sugarbeet.

### 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 BEYOND 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

BEYOND® may be applied with a low volume (Spra-Coupe™-type) sprayer. When applying BEYOND 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 BEYOND 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

BEYOND herbicide may be applied by air to all crops listed on this label. Uniformly apply with properly calibrated equipment in 5 or more gallons of water per acre. The addition of an adjuvant AND fertilizer solution are required for optimum weed control.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information presented below.

### INFORMATION ON 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. 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).

### CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### BOOM LENGTH

For some use patterns, reducing the effective boom length to less than ¼ of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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.

#### SENSITIVE AREAS

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The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Applicator is responsible for any loss or damage, which results from spraying BEYOND 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.

### APPLICATION INFORMATION

Apply BEYOND 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, BEYOND 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 BEYOND 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. BEYOND 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 BEYOND application. This timely cultivation will enhance residual weed activity, especially under dry conditions.

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

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**CLEARFIELD CANOLA - DIRECTIONS FOR USE**

BEYOND herbicide is effective in controlling weeds in conservation tillage and conventional production systems. BEYOND 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 BEYOND postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz.BEYOND per acre). At this rate one gallon of BEYOND will treat 32 acres of CLEARFIELD Canola. It is recommended that a registered soil applied grass herbicide be used prior to use of BEYOND.

A surfactant 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.

**Crop-Specific Restrictions and Limitations**

DO NOT apply more than 0.031 lb imazamox a.e./acre (4 ounces of BEYOND) during the growing season.

**WEEDS CONTROLLED**

**BROADLEAF WEEDS CONTROLLED BY BEYOND**

	Maximum Weed Size (inches)
Beet, wild	3
Canola, volunteer (non-CLEARFIELD)	3
Chickweed, common	3
Cocklebur, common	3
Jimsonweed	3
Flixweed	3
Lambsquarters, common	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

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

**BROADLEAF WEEDS SUPPRESSED BY BEYOND**

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

**GRASS WEEDS CONTROLLED BY BEYOND**

	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 BEYOND APPLICATIONS**

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

**Specific Weed Problems**

Canada Thistle: For enhanced activity of Canada thistle, add Stinger™ to the tank mixture. Apply to Canada thistle in the rosette stage.

**CLEARFIELD SUNFLOWER - DIRECTIONS FOR USE**

BEYOND herbicide is effective in controlling weeds in conservation and conventional tillage production systems. BEYOND can be applied early postemergence in CLEARFIELD SUNFLOWER (Imidazolinone tolerant sunflower) varieties. Apply only on selected sunflower varieties labeled as "CLEARFIELD" and warranted by the seed supplier to possess tolerance to direct application of BEYOND herbicide. DO NOT apply BEYOND to sunflower varieties which lack resistance/tolerance to imidazolinone herbicides. Contact your seed supplier, chemical dealer or BASF to obtain information regarding imidazolinone tolerant sunflower varieties. Refer to the specific treatment under the "SPRAYING INSTRUCTIONS" section of the label.

**Apply BEYOND 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, refer to weed control tables for specific weed sizes). Under conditions of cold temperatures (less than 50°F, maximum daytime temperatures), weed control may be less than optimal. Make application when the majority of weeds are at the recommended growth stage.

When adequate soil moisture is present, BEYOND 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 BEYOND 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.

For best weed control and to provide the highest crop competitive advantage, apply BEYOND herbicide to actively growing CLEARFIELD sunflowers. Plant a locally adapted CLEARFIELD sunflower variety at the normal seeding rate for your geography. Apply to sunflower after the first pair of true leaves have unfolded and up to and including the fourth pair of leaves are unfolded (2-8 leaf stage).

**BEYOND Application Timing – Sunflower**

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

CLEARFIELD Sunflowers	2-8 leaf stage
Broadleaf weeds	Refer to weed control tables for specific weed sizes.
Grass weeds	

**USE RATE**

Apply BEYOND postemergence only at a rate of 0.031 lb imazamox a.e./acre (4 oz. BEYOND per acre). At this rate one gallon of BEYOND will treat 32 acres of CLEARFIELD Sunflowers. It is recommended that a registered soil applied grass herbicide like PROWL® 3.3 EC be used prior to use of BEYOND.

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A nonionic 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 0.031 lb imazamox a.e./acre (4 ounces BEYOND per acre) during the growing season.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4 oz./A	4 oz./A
Maximum Weed Size (inches)		
Beet, wild	3	3
Chickweed, common	3	3-5
Cocklebur, common	3	3
Jimsonweed	3	3-6
Kochia**		1-4
Lambsquarters, common	3	3-5
Marshelder	4	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,		
redroot	3	3-8
smooth	3	3-8
spiny	3	3-5
Puncturevine		1-3
Purslane, common		1-3
Radish, wild	3	3-4
Smartweed,		
ladysthumb	2-5	2-5
Pennsylvania	2-5	2-5
Spurge, prostrate		3-4
Sunflower, wild or volunteer (non-CLEARFIELD)	2-6	2-6
Tansymustard	3	3
Velvetleaf	3	3-8

\*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a postemergence application of BEYOND herbicide at a broadcast rate of 4 fluid ounces per acre.  
 \*\*Control of light to moderate populations of ALS susceptible biotypes only.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4oz./A	4 oz./A
Maximum Weed Size (inches)		
Bindweed		
field (seedling)	2-4	2-4
hedge (seedling)	2-4	2-4
Buckwheat, wild	1-3	1-3
Flax	2	2
Knotweed, prostrate	3	3
Lettuce, miners	3	3
Mallow, Venice		1-4
Morningglory,		
entireleaf	3	3
ivyleaf	3	3
smallflower	3	3
tall	3	3
Rocket, London	3	3
Rocket, Yellow	3	3
Spurge, prostrate	3	
Sowthistle, annual	2-4	2-4
Thistle, Canada	2-5	2-5
Thistle, Russian (non-ALS resistant)**	3	3

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

\*\*Control of light to moderate populations of ALS susceptible biotypes only.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4 oz./A	4 oz./A
	Number of Leaves (Maximum tillers)	
Barley, wild	2-4	2-4
Barnyardgrass	3**	3-5
Blackgrass	1-4 (1)	1-4 (1)
Brome, downy	1-5 (2)	1-5 (2)
, cheat	1-5 (2)	1-5 (2)
, Japanese	1-5 (2)	1-5 (2)
Canarygrass, littleseed	1-5 (2)	1-5 (2)
Crabgrass,		
large		1-4
smooth		1-4
Cupgrass, woolly***		1-4
Darnel, Persian	1-5 (2)	1-5 (2)
Foxtail,		
giant	1-6 (2)	1-6 (2)
green	1-6 (1)	1-6 (1)
yellow	1-6 (1)	1-6 (1)
Goosegrass		1-4 (1)
Goatgrass, jointed	1-5 (2)	1-5 (2)
Millet, wild proso	2-4**	2-4
Oats, wild	1-5 (2)	1-5 (2)
Panicum,		
fall	1-5	1-5
Texas		1-5
Sandbur, field***		2-5
Shattercane	2-8	2-8
Signalgrass, broadleaf	2-5**	2-5
Stinkgrass		2-4
Volunteer cereals (non-CLEARFIELD)	1-6 (3)	1-6 (3)
Witchgrass		2-5

\*Soil applied grass herbicide such as PROWL 3.3 EC herbicide is followed by a post-emergence application of BEYOND 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.

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

	Application Rate	
	BEYOND Postemergence Alone	PROWL 3.3 EC Soil Applied Followed by BEYOND* Postemergence
	4oz./A	4 oz./A
	Number of Leaves (Maximum tillers)	
Crabgrass		
large	1-4 (1)	
smooth	1-4 (1)	
Cupgrass, woolly	1-3	
Goosegrass	1-3	
Itchgrass		2-5
Quackgrass		4-8
Stinkgrass	2-4	
<b>SEDGES</b>		
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 BEYOND herbicide at a broadcast rate of 4 fluid ounces per acre.

**CLEARFIELD WHEAT - DIRECTIONS FOR USE**

BEYOND 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 BEYOND 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 BEYOND 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. BEYOND herbicide is effective in controlling weeds in conservation tillage and conventional tillage wheat production systems. BEYOND 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, BEYOND 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.

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Occasionally, reduction in plant height or temporary yellowing of crop plants may occur following BEYOND 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. To avoid possible crop injury, do not apply BEYOND herbicide to CLEARFIELD wheat when extreme cold temperatures (less than 40°F, maximum daytime temperatures) are expected within one week of application.

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

**BEYOND Application Timing – Winter Wheat**

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

CLEARFIELD Wheat	after tiller initiation and prior to joint
Broadleaf weeds	refer to weed control tables for specific weed sizes
Grass weeds	

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## USE RATE

### WINTER WHEAT:

APPLY 0.031-0.047 lb imazamox a.e./acre (4-6 FLUID OUNCES OF BEYOND 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 0.062 lb imazamox a.e./acre (8 ounces of BEYOND per acre) during the growing season.

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

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**WEEDS CONTROLLED – WINTER WHEAT**

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

**BROADLEAF WEEDS CONTROLLED BY BEYOND**

	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

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

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**BROADLEAF WEEDS CONTROLLED BY BEYOND (Continued)**

	<b>Application Rate</b>	<b>Weed Size</b>
	<b>Ounces/Acre</b>	<b>Maximum size (inches)</b>
Rocket, London	5-6	5
Rocket, yellow	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 BEYOND 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
Thistle, Canada	5-6	3

\*See Specific Weed Problems section for more information.

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**GRASS WEEDS CONTROLLED BY BEYOND – WINTER WHEAT**

	<b>Application Rate</b>	<b>Weed Size</b>
	<b>Ounces/Acre</b>	<b>Number of Leaves (maximum tillers)</b>
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 BEYOND APPLICATIONS**

Brome,		
California	4-6	6+ (3+)
downy	4-6	6+ (3+)
cheat	4-6	6+ (3+)
Japanese	4-6	6+ (3+)
Fescue, rattail	4-6	1-3
Johnsongrass, rhizome	6	1-5
Jointed goatgrass	4-6	6+(3+)
Sedges		
Purple	6	1-3
Yellow	6	1-3
Quackgrass	6	1-5

\*See Specific Weed Problems section.

**Specific Weed Problems**

BEYOND is most effective for grass control when applied in the fall. If summer annual broadleaf weeds germinate in the spring, (following a fall application of BEYOND) a broadleaf herbicide may need to be applied. If the BEYOND application is made in the spring, the broadleaf herbicide may be tank mixed with BEYOND. For improved control of grasses such as feral rye, Italian regrass, and downy brome, use higher rates of nitrogen fertilizer up to 50% of the spray solution. Higher rates of nitrogen can improve grass weed control with BEYOND, especially under drought stress conditions.

**Feral Rye (cereal, volunteer rye):** BEYOND 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 BEYOND in the fall will provide the best control. If feral rye germinates following an application of BEYOND in the fall, a spring application may be necessary for control of subsequent germination flushes.

**Italian Ryegrass:** BEYOND controls emerged Italian Ryegrass only. Under favorable growing conditions, ryegrass may germinate over several weeks (especially in the Southern US). BEYOND 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 BEYOND are recommended to achieve 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 ALS/AHAS resistant biotypes of kochia are common in wheat fields. In many cases, a tank mixture with BEYOND will be required for acceptable control. If BEYOND is applied in the spring, apply BEYOND in a tank mixture with a herbicide(s) recommended to control on kochia (i.e. CLARITY + 2,4-D). Apply to kochia 2 inches in size or less.

**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 BEYOND HERBICIDE**

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

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

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

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

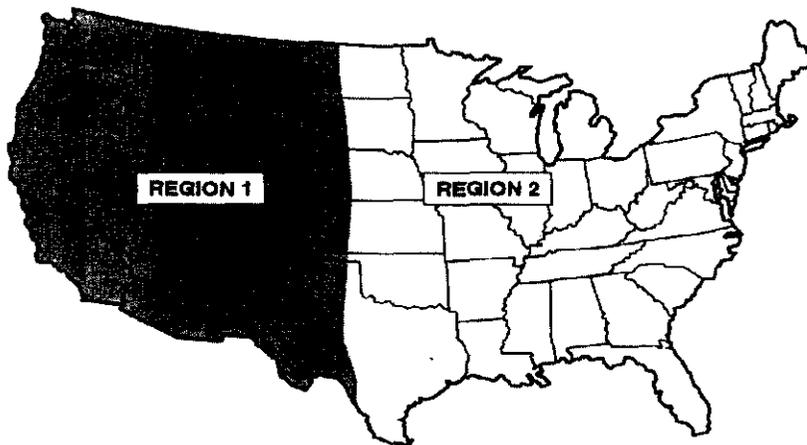
**Sulfonylurea herbicides such as Ally®, Amber®, Everest™, Finnesse®, Express®, Harmony® Extra and Maverick™ should not be tankmixed with BEYOND herbicide. BEYOND herbicide tankmixes with sulfonylurea herbicides may result in unacceptable crop response.**

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When BEYOND 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.

### ROTATIONAL CROP RESTRICTIONS

Rotational crops may be planted after applying the recommended rate of BEYOND herbicide in the regions as indicated below.



**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).

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**Rotational Interval (months) Following an Application of BEYOND Herbicide**

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

\*In Region 1, refer to the following table for rotational intervals for planting barley following applications of BEYOND herbicide.

\*\*In Region 2, sugarbeet and table beets can be planted eighteen months following an application of BEYOND 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. Sugarbeet 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 sugarbeet 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.

**Barley Rotational Interval Based on pH, Moisture 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 BEYOND 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.

**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 BEYOND 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 BEYOND.

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 BEYOND 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, Beyond, Cadre, Clarity, Clearfield, Extreme, Poast, Poast Plus, Prowl 3.3 EC,

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