

241-379

10/7/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 7, 2014

Jeffrey H. Birk, Ph.D.  
Regulatory Manager  
BASF Corporation  
P.O. Box 13528  
Research Triangle Park, NC 27709-3528

Subject: Label Amendment - Add new use on clover grown for nonfood and nonfeed  
Product Name: Raptor Herbicide  
EPA Registration Number: 241-379  
Application Date: September 10, 2014  
Decision Number: 495383

Dear Dr. Birk:

The label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e).

If you have any questions, please contact Mindy Ondish at (703)605-0723 or at [ondish.mindy@epa.gov](mailto:ondish.mindy@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs



The Chemical Company

Group 2 Herbicide

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**ACCEPTED**

10/07/2014

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

# Raptor<sup>®</sup>

*herbicide*

**For use on alfalfa, beans (dry), chicory, clover grown for nonfood and nonfeed, clover grown for seed, edamame, lima bean (succulent), peas (dry), pea (English), snap bean, and soybean**

**Active Ingredient:**

ammonium salt of imazamox: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1*H*-imidazol-2-yl]-5-(methoxymethyl)-3-pyridinecarboxylic acid\* . . . . . 12.1%

**Other Ingredients:** . . . . . 87.9%

**Total:** . . . . . 100.0%

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

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

**EPA Reg. No. 241-379**

**EPA Est. No.**

**KEEP OUT OF REACH OF CHILDREN  
CAUTION/PRECAUCIÓN**

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.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Net Contents:**

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

<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth to mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOTLINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).</p>	

### 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)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber (includes natural rubber blends and laminates) ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

### 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 except as directed in this label. Off-site 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 washwater or rinsate.

### Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label 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.

### USER SAFETY RECOMMENDATIONS

**Users should:**

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

### 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 barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber (includes natural rubber blends and laminates) ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks

Ensure spray drift to nontarget species does not occur.

**DO NOT** apply **Raptor® herbicide** 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 canola, lentil, rice, sunflower, or wheat; leafy vegetables; and sugar beet.

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**.

**DO NOT** use **Raptor** other than in accordance with the instructions set forth on this label. Keep containers closed to avoid spills and contamination.

### STORAGE AND DISPOSAL

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

#### Pesticide Storage

- KEEP FROM FREEZING.
- **DO NOT** store below 32° F.

#### Pesticide Disposal

Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

#### Container Handling

**Nonrefillable Container. DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### Triple rinse containers small enough to shake

**(capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### Triple rinse containers too large to shake

**(capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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

## In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

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 (4357)

### Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing, and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

## Product Information

**Raptor® herbicide**, a soluble liquid, is a postemergence herbicide to control and suppress many broadleaf and grass weeds and sedges, as listed in this label.

The mode of weed-killing activity involves uptake of **Raptor** 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 on 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 **Raptor** application may improve weed control.

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

**DO NOT** tank mix organophosphate or carbamate insecticides with **Raptor** on listed crops unless otherwise specified in writing by BASF. When organophosphate (such as **Lorsban® insecticide**) or carbamate insecticides are tank mixed with **Raptor**, temporary injury may result to the treated crop. Separate organophosphate and **Raptor** application by at least 7 days to reduce potential for injury.

Use of **Raptor** 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.

## Replanting

If replanting is necessary in a field previously treated with **Raptor**, the field may be replanted to beans (dry), **Clearfield®** canola, **Clearfield** corn, **Clearfield** lentil, **Clearfield** rice, **Clearfield** and **Clearfield® Plus** sunflower, **Clearfield** and **Clearfield Plus** wheat, edamame, pea (English), peas (dry), lima bean (succulent), snap bean, or soybean. Rework the soil no deeper than 2 inches. **DO NOT** apply a second treatment of **Raptor**. **DO NOT** apply **Pursuit® herbicide**, **Pursuit® Plus EC herbicide** or **Raptor** if edamame or soybeans are replanted.

## Resistance Management

Naturally occurring biotypes<sup>1</sup> of some of the weeds listed on this label may not be effectively controlled by this and/or other products with the ALS/AHAS enzyme-inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme-inhibiting mode of action include the sulfonylureas (e.g. **Finesse® herbicide**), imidazolinones (e.g. **Beyond® herbicide**), the triazolopyrimidine sulfoanilides (e.g. **FirstRate® herbicide**), the sulfonylaminocarbonyl triazolinones, and the pyrimidyl benzoates (e.g. **Staple® herbicide**). 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.

<sup>1</sup>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 at least two herbicides with different modes of action to reduce the potential for weed resistance. Crop (and herbicide) rotation is effective in managing weed resistance where herbicides of different modes of action are used. Tillage, where practical (such as in fallow production or before planting), is effective in controlling weeds to minimize resistance development. Additionally, a burndown herbicide during fallow or before planting is effective in reducing weed resistance development.

**Raptor has no preharvest interval (PHI) for any crop.**

## Mixing Instructions

**Postemergence application of Raptor requires the addition of an adjuvant AND a nitrogen fertilizer solution unless otherwise directed in this label.**

## Adjuvants

When an adjuvant (or a specific adjuvant product, such as a drift control agent) is to be used with this product, the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant is recommended.

## Crop Oil Concentrate (COC), Methylated Seed Oil (MSO), or High Surfactant Oil Concentrate (HSOC)

Petroleum-based or vegetable seed-based crop oil concentrate may be used. Methylated seed oil is recommended when weeds are under moisture or temperature stress.

Use MSO or COC at 1 to 2 gallons/100 gallons of spray solution [1% to 2% volume/volume (v/v)].

Use HSOC at 0.5 gallon/100 gallons of spray solution (0.5% v/v).

OR

## Surfactant

Use nonionic surfactant (NIS) containing at least 80% active ingredient. Apply NIS at 1 quart/100 gallons of spray solution (0.25% v/v). Organosilicone surfactant may be used in place of NIS.

AND

## Nitrogen Fertilizer

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

When targeting feral rye or other weeds under moisture or temperature stress, using higher nitrogen fertilizer rates [urea ammonium nitrate (UAN) at 5% v/v or 20 lbs AMS/100 gallons] may improve weed control. Additional crop response may be observed when higher fertilizer rates are used.

**Nitrogen fertilizer is not required when applied in use areas south of Interstate Highway 40, except in the states of Arizona, California, New Mexico, Oklahoma, and Texas.**

## Liquid Fertilizer as a Carrier

**DO NOT** apply **Raptor**® herbicide in liquid fertilizer as a carrier unless specifically allowed for a given crop. Refer to **Crop-specific Information** section for adjuvant recommendations and/or restrictions by crop.

## Additional Mixing Instructions for Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil].

**Raptor** application may be made to dry beans and dry peas either with or without the addition of a fertilizer. The addition of nitrogen-based fertilizer, such as ammonium sulfate or liquid fertilizer (such as 28-0-0), may improve weed control but also increases the likelihood of dry beans and dry peas response. When nitrogen is added to the mixture, add **Basagran**® herbicide (at 6 fl ozs to 16 fl ozs/A) to minimize crop response. For application to dry peas, **ALWAYS** add **Basagran** to the spray mixture. For enhanced grass activity, add crop oil or methylated seed oil instead of surfactant. **ALWAYS** add **Basagran** at

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the rates indicated above when crop oils and/or fertilizers are used in the spray mixture. **Basagran** application at rates higher than 16 fl ozs/A may reduce grass control.

See application information within **English Pea; Lima Bean (Succulent);** and **Snap Bean** in **Crop-specific Information** section for additional mixing instructions.

## Tank Mix Instructions

When applying **Raptor** as the only herbicide:

1. Fill spray tank 1/2 to 3/4 full with clean water.
2. While agitating, add **Raptor** to the spray tank.
3. Add adjuvants.
4. Fill remainder of spray tank with water.

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.

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 most restrictive label restrictions and precautions. **DO NOT** exceed label rates. **Raptor** cannot be mixed with any product containing a label prohibiting such mixtures.

## Cleaning Spray Equipment

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

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## 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 sugar beet.

## Ground Application

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

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

Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's instructions). Use flat-fan nozzle tips or similar appropriate nozzle tips to ensure thorough coverage. Avoid overlaps when spraying.

### Ground Application with a Low-volume Sprayer

**Raptor® herbicide** may be applied with a low-volume sprayer. When applying **Raptor** with a low-volume sprayer, spray weeds before they reach the maximum size listed in this label. Weed control depends on thorough spray coverage. The sprayer must be calibrated to deliver the recommended spray volume and pressure to ensure thorough spray coverage of 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 to 60 PSI for optimum coverage.

### Aerial Application

**Raptor** 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 a nitrogen fertilizer solution are required for optimum weed control, unless otherwise directed in this label.**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-related and weather-related factors determines 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.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

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

The applicator must be familiar with and take into account the information covered in the aerial drift reduction advisory information that follows.

### 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 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

### Application Height

Applications must 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 downwind. Therefore, on the upwind 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 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application must be avoided below 2 mph because of 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.

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## Temperature Inversions

Applications must 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 because of 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 must 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 nontarget 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® herbicide** in a manner other than specified 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

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Apply **Raptor** as a postemergence treatment when weeds are actively growing and before they exceed the maximum specified size (see **Crop-specific Information** section weeds controlled tables by crop).

Delay application until the majority of weeds are at the specified growth stage. Apply **Raptor** when weeds are small and actively growing; however, delay application in seedling alfalfa, dry beans, and dry peas until minimum growth stages have occurred. Refer to the crop-specific sections **Alfalfa** (see **Seedling Alfalfa**) and **Dry Beans and Dry Peas**.

An adjuvant (either surfactant **OR** crop oil concentrate) **AND** nitrogen fertilizer **MUST** be added to the spray solution for optimum weed control. See **Adjuvants** section under **Mixing Instructions** for specific instructions.

When **Raptor** is applied postemergence, absorption will occur through both 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 cold temperature conditions (less than 40° F maximum daytime temperature), weed control may be less.

For improved weed control, cultivate (where possible) 7 to 10 days after a postemergence **Raptor** application. This timely cultivation will enhance residual weed control activation, especially under dry conditions.

Apply **Raptor** a minimum of 1 hour before rainfall or overhead irrigation.

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## Crop-specific Information

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### Alfalfa

Apply **Raptor** early postemergence 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 specified growth stage. Apply **Raptor** to actively growing crop and weeds.

### Use Rate

Apply **Raptor** early postemergence at a broadcast rate of 4 to 6 fl ozs/acre (0.031 to 0.047 lb imazamox ae/acre) to seedling or established alfalfa grown for forage, hay, or seed. At the specified application rate, 1 gallon of **Raptor** will treat 21 to 32 acres.

### Seedling Alfalfa

Apply **Raptor** when seedling alfalfa is in the second trifoliate stage or larger and when the majority of weeds are 1-inch to 3-inches tall. When applied to alfalfa grown for seed, apply **Raptor** before bud formation. For prostrate growing weeds (such as mustards and filaree), 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

Apply **Raptor** to established alfalfa in fall, winter, or spring to dormant or semidormant alfalfa, or between cuttings. Apply before significant alfalfa growth or regrowth (3 inches) to allow **Raptor** to reach target weeds.

### Alfalfa Restrictions and Limitations

- **DO NOT** make more than one **Raptor** application to alfalfa per year (growing season).
- **DO NOT** apply more than 6 fl ozs **Raptor**/acre (0.047 lb imazamox ae/acre) to alfalfa per year (growing season).
- **DO NOT** make sequential applications of **Pursuit® herbicide** (imazethapyr) followed by **Raptor** (or **Raptor** followed by **Pursuit**) within a 60-day time frame because of increased potential for alfalfa crop response.



## Weeds Controlled (Alfalfa)

**Raptor® herbicide** will control or suppress listed weeds when applied postemergence at the specified rates listed as follows.

### Broadleaf Weeds Controlled by Raptor® herbicide in Alfalfa

	Application Rate (fl ozs/A)		
	4	5	6
	Maximum Weed Size (inches)		
Bedstraw		3	3
Beet, wild	3	3	3
Buckwheat, wild		3	3
Buttercup		3	3
Canola, volunteer (non- <b>Clearfield®</b> )	3	3	3
Cocklebur, common	3	3	3
Filaree, redstem			3
whitestem			3
Flixweed	3	3	3
Henbit			2
Jimsonweed	3	3	3
Knotweed, prostrate		3	3
Kochia*		3	3
Lambsquarters, common	3**	3	3
Lettuce, miner's		3	3
Mallow, common	3	3	3
Venice		1	1
Morningglory, entireleaf		3	3
ivyleaf		3	3
smallflower		3	3
tall		3	3
Mustard, black	3	3	4
tumble	3	3	3
wild	3	3	4
Nettle, burning		2	2
Nettleleaf goosefoot	3	3	3
Nightshade, black	3	5	5
Eastern black	3	5	5
hairy	3	4	5
Pennycress, field	3	3	3

(continued)

### Broadleaf Weeds Controlled by Raptor® herbicide in Alfalfa (continued)

	Application Rate (fl ozs/A)		
	4	5	6
	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		3	3
yellow		4	4
Shepherd's-purse			3
Smartweed, ladysthumb	3	3	3
Pennsylvania	3	3	3
swamp		3	3
Spurge, prostrate		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

\* **Raptor** controls non-ALS-resistant kochia only.

\*\* **Raptor** controls common lambsquarters at 4 fl ozs/A east of the Rocky Mountains.

### Broadleaf Weeds Suppressed by Raptor® herbicide in Alfalfa

	Application Rate (fl ozs/A)		
	4	5	6
	Maximum Weed Size (inches)		
Chickweed, common	3	3	3
Dandelion			3
Dock, curly		3	3
Dodder*			3
Fiddleneck			3
Ragweed, common		3	3
giant		3	3
Thistle, Canada			3
Shepherd's-purse	3	3	

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

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**Grass Weeds Controlled by Raptor® herbicide in Alfalfa**

	Application Rate (fl ozs/A)		
	4	5	6
	Maximum Weed Size (inches)		
Barnyardgrass		3	3
Blackgrass	3	3	3
Brome,			
California	3	3	3
cheat	3	3	3
downy	3	3	3
Japanese	3	3	3
Canarygrass, littleseed	3	3	3
Cereals, volunteer			
barley	3	3	3
oat	3	3	3
wheat (non- <b>Clearfield</b> ®)	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
Oat, wild	3	3	3
Rye, feral or cereal		3	3
Ryegrass, Italian	3	3	3
Shattercane	3	4	5

**Grass Weeds and Sedges Suppressed by Raptor® herbicide in Alfalfa**

	Application Rate (fl ozs/A)		
	4	5	6
	Maximum Weed Size (inches)		
<b>Grass Weeds</b>			
Bluegrass, annual			3
Johnsongrass, rhizome			3
<b>Sedges</b>			
Nutsedge,			
purple			3
yellow			3
Quackgrass			3

**Tank Mix Herbicides**

To control weeds not listed on the **Raptor** label, other herbicides 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 most restrictive label restrictions and precautions. **DO NOT** exceed label rates.

**Chicory**

**DO NOT** use on chicory in California.

Apply **Raptor** early postemergence when weeds are actively growing and before they exceed a height of 3 inches, unless otherwise indicated. Apply **Raptor** early postemergence when chicory has at least 2, and no more than 4, 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, or crop injury may result.

**THIS PRODUCT WHEN USED IN CHICORY MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

**Use Rate**

Apply **Raptor** early postemergence to chicory at a broadcast rate of 4 fl ozs/acre (0.031 lb imazamox ae/acre). At this rate, 1 gallon of **Raptor** will treat 32 acres of chicory. The use of a soil-applied grass herbicide is recommended before **Raptor** application.

Application of **Raptor** requires the addition of a surfactant. Refer to **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 2.5% v/v.

**Chicory Restrictions and Limitations**

- **DO NOT** make more than one **Raptor** application to chicory per year (growing season).
- **DO NOT** apply more than 4 fl ozs **Raptor**/acre (0.031 lb imazamox ae/acre) to chicory per year (growing season).

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## Weeds Controlled (Chicory)

### Broadleaf Weeds Controlled by Raptor® herbicide in Chicory

	Raptor at 4 fl ozs/A + surfactant
	Maximum Weed Size (inches)
Beet, wild	3
Flixweed	3
Jimsonweed	3
Lambsquarters, common	3
Mustard, black	3
tumble	3
wild	3
Nightshade, black	3
Eastern black	3
hairy	3
Pennycress, field	3
Pigweed, redroot	3
smooth	3
spiny	3
Radish, wild	3
Shepherd's-purse	3
Tansymustard, green	3

### Grass Weeds Controlled by Raptor® herbicide in Chicory

	Raptor at 4 fl ozs/A + surfactant
	Maximum Weed Size (inches)
Brome, cheat	3
downy	3
Japanese	3
Cereals, volunteer barley	3
oat	3
wheat (non- <b>Clearfield</b> ®)	3
Darnel, Persian	3
Foxtail, giant	3
green	3
yellow	3
Jointed goatgrass	3
Oat, wild	3
Shattercane	3

## Grass Weeds and Sedges Suppressed by Raptor® herbicide in Chicory

	Raptor at 4 fl ozs/A + surfactant
	Maximum Weed Size (inches)
<b>Grass Weeds</b>	
Crabgrass, large	3
smooth	3
<b>Sedges</b>	
Nutsedge, purple	3
yellow	3
Quackgrass	3

### Clover Grown for Nonfood and Nonfeed

Not for use in California.

#### Application Instructions

Apply **Raptor** early postemergence at a rate of 4 to 5 fl ozs/acre (0.031 to 0.04 lb imazamox ae/acre) with a spray adjuvant; when clover has a minimum of 2 trifoliate leaves; and when the majority of weeds are 1-inch to 3-inches tall.

#### Mixing Instructions per 1000 square feet

To treat 1000 square feet, mix the following amount of **Raptor** per gallon of spray mixture.

One gallon of spray mixture will treat 1000 square feet.

Raptor Rate (fl ozs/A)	Raptor Rate (fl ozs/1000 sq ft)	Teaspoons* per 1000 sq ft
4	0.09	0.5
5	0.15	0.9

\*One teaspoon = 0.167 fluid ounces

#### Clover Grown for Nonfood and Nonfeed Restrictions and Limitations

- **DO NOT** make more than one **Raptor** application per year (growing season).
- **DO NOT** apply more than 5 fl ozs **Raptor**/acre (0.04 lb imazamox ae/acre) per year (growing season).
- Not for use on clover grown for seed. See **Clover Grown for Seed** section for use directions.

**Weeds Controlled  
(Clover Grown for Nonfood and Nonfeed)**

**Broadleaf Weeds Controlled by Raptor® herbicide in  
Clover Grown for Nonfood and Nonfeed**

	Maximum Weed Size (inches)
Bedstraw	3
Beet, wild	3
Buckwheat, wild	3
Buttercup	3
Canola, volunteer (non- <b>Clearfield</b> ®)	3
Cocklebur, common	3
Flixweed	3
Jimsonweed	3
Knotweed, prostrate	3
Kochia*	3
Lambsquarters, common	3
Lettuce, miner's	3
Mallow, common	3
Venice	1
Morningglory, entireleaf	3
ivyleaf	3
smallflower	3
tall	3
Mustard, black	3
tumble	3
wild	3
Nettle, burning	2
Nettleleaf goosefoot	3
Nightshade, black	5
Eastern black	5
hairy	4
Pennycress, field	3
Pigweed, redroot	4
smooth	4
spiny	3
Radish, wild	3
Rocket, London	3
yellow	4

(continued)

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**Broadleaf Weeds Controlled by Raptor® herbicide in  
Clover Grown for Nonfood and Nonfeed (continued)**

	Maximum Weed Size (inches)
Smartweed, ladysthumb	3
Pennsylvania swamp	3
Spurge, prostrate	3
Sunflower, common	3
Swinecress	3
Tansymustard, green	3
Thistle, Russian	3
Velvetleaf	4
Willoweed panicle	3

\* **Raptor** controls non-ALS-resistant kochia only.

**Broadleaf Weeds Suppressed by Raptor® herbicide in  
Clover Grown for Nonfood and Nonfeed**

	Maximum Weed Size (inches)
Chickweed, common	3
Dock, curly	3
Ragweed, common	3
giant	3
Shepherd's-purse	3

**Grass Weeds Controlled by Raptor® herbicide in  
Clover Grown for Nonfood and Nonfeed**

	Maximum Weed Size (inches)
Barnyardgrass	3
Blackgrass	3
Brome, California	3
cheat	3
downy	3
Japanese	3
Canarygrass, littleseed	3
Cereals, volunteer barley	3
oat	3
wheat (non- <b>Clearfield</b> ®)	3
Corn, volunteer	5
Crabgrass, large	3
Darnel, Persian	3

(continued)

**Grass Weeds Controlled by Raptor® herbicide in Clover Grown for Nonfood and Nonfeed** *(continued)*

	Maximum Weed Size (inches)
Foxtail, giant	4
green	3
yellow	3
Johnsongrass, seedling	3
Jointed goatgrass	3
Lovegrass	3
Millet, wild proso	3
Oat, wild	3
Rye, feral or cereal	3
Ryegrass, Italian	3
Shattercane	4

**Clover Grown for Seed**

For use only in Oregon and Washington.

**Application Timing**

Apply **Raptor** early postemergence in a tank mix, as described below, when clover has a minimum of 2 trifoliolate leaves and when the majority of weeds are 1-inch to 3-inches tall. **Raptor** application must be made before clover bloom.

**Use Rate**

Apply **Raptor** early postemergence to clover grown for seed at a broadcast rate of 5 fl ozs/acre (0.04 lb imazamox ae/acre).

Application of **Raptor** in clover grown for seed requires the addition of an adjuvant, nitrogen fertilizer, and **Basagran® herbicide**.

**Adjuvants**

• **Nonionic surfactant** - Use NIS containing at least 80% active ingredient. Apply NIS at 0.25% v/v (1 quart/100 gallons of spray solution).

**OR**

• **Crop oil concentrate** - Use COC at 1 pint/acre (0.5 gallon/100 gallons of spray solution).

**OR**

• **High surfactant oil concentrate** - Use HSOC at 0.5% v/v (0.5 gallon/100 gallons of spray solution).

**Nitrogen Fertilizer**

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

**Basagran**

Add **Basagran** at 8 to 16 fl ozs/acre to minimize crop response. **Basagran** application at rates higher than

16 fl ozs/acre may reduce grass control. **Basagran** may only be applied to clover grown for seed.

Apply **Raptor** plus **Basagran** tank mix a minimum of 4 hours before rainfall or overhead irrigation.

**Clover Grown for Seed Restrictions and Limitations**

- **Raptor** application must be made before clover bloom.
- **DO NOT** make more than one **Raptor** application to clover grown for seed per year (growing season).
- **DO NOT** apply more than 5 fl ozs **Raptor**/acre (0.04 lb imazamox ae/acre) to clover grown for seed per year (growing season).
- If arid conditions occur during the year of application, rotational crop injury may occur.
- **DO NOT** apply to clover subjected to stress conditions, such as hail damage, flooding, drought, injury from other herbicides, or widely fluctuating temperatures, or crop injury may result.
- **DO NOT** apply to weeds under stress, such as lack of moisture, previous herbicide injury, mechanical injury, or cold temperatures, or unsatisfactory weed control could result.
- **DO NOT** apply more than a total of 4 pints of **Basagran**/acre per calendar year or 2.0 pounds of bentazon active ingredient (ai) from all sources per acre per calendar year.

**Weeds Controlled (Clover Grown for Seed)**

**Raptor** will control or suppress listed weeds when applied postemergence to 1-inch to 3-inch weeds (unless otherwise indicated) at the specified rates listed as follows.

**Broadleaf Weeds Controlled by Raptor® herbicide in Clover Grown for Seed**

	Raptor at 5 fl ozs/A + surfactant, COC, or HSOC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)
Bedstraw	3
Beet, wild	3
Buttercup	3
Chickweed, common	3
Cocklebur, common	3
Flixweed	3
Jimsonweed	3
Mustard,	
black	3
tumble	3
wild	3

*(continued)*

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**Broadleaf Weeds Controlled by Raptor® herbicide in Clover Grown for Seed** *(continued)*

	<b>Raptor at 5 fl ozs/A + surfactant, COC, or HSOC + nitrogen-based fertilizer + Basagran</b>
	<b>Maximum Weed Size (inches)</b>
Nightshade, black	3
Eastern black hairy	3
Pennycress, field	3
Pigweed, redroot	3
smooth	3
spiny	3
Puncturevine	3
Radish, wild	3
Shepherd's-purse	3
Tansymustard, green	3
Velvetleaf	3

**Broadleaf Weeds Suppressed by Raptor® herbicide in Clover Grown for Seed**

	<b>Raptor at 5 fl ozs/A + surfactant, COC, or HSOC + nitrogen-based fertilizer + Basagran</b>
	<b>Maximum Weed Size (inches)</b>
Buckwheat, wild	3
Chickweed, common	3
Knotweed, prostrate	3
Kochia*	3
Lambsquarters, common	3
Lettuce, miner's	3
Morningglory, entireleaf	3
ivyleaf	3
smallflower	3
tall	3
Purslane, common	3
Rocket, London	3
yellow	3
Smartweed, ladythumb	3
Pennsylvania	3
Spurge, prostrate	3

\* Raptor controls non-ALS-resistant kochia only.

**Grass Weeds Controlled by Raptor® herbicide in Clover Grown for Seed**

	<b>Raptor at 5 fl ozs/A + surfactant, COC, or HSOC + nitrogen-based fertilizer + Basagran</b>
	<b>Maximum Weed Size (inches)</b>
Blackgrass	3
Brome, cheat	3
downy	3
Japanese	3
Canarygrass, littleseed	3
Cereals, volunteer	
barley	3
oat	3
wheat (non-Clearfield®)	3
Corn, volunteer*	2 to 8
Darnel, Persian	3
Foxtail, giant	3
green	3
yellow	3
Jointed goatgrass	3
Oat, wild	3
Ryegrass, Italian	3
Shattercane	3

\* Except imidazolinone-tolerant corn

**Grass Weeds and Sedges Suppressed by Raptor® herbicide in Clover Grown for Seed**

	<b>Raptor at 5 fl ozs/A + surfactant, COC, or HSOC + nitrogen-based fertilizer + Basagran</b>
	<b>Maximum Weed Size (inches)</b>
<b>Grass Weeds</b>	
Barnyardgrass	3
Crabgrass, large	3
smooth	3
Johnsongrass, rhizome	3
<b>Sedges</b>	
Nutsedge, purple	3
yellow	3
Quackgrass	3

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**Dry Beans and Dry Peas  
[other than English Pea, Lima Bean  
(Succulent), Snap Bean,  
and Clearfield® Lentil]**

**DO NOT apply Raptor® herbicide to dry beans and dry peas in California.**

Raptor may be applied to the following dry beans and dry peas:

Dry Beans		Dry Peas
Adzuki	Lima (dry)	Dry edible peas (field peas)
Anasazi	Navy	Southern pea (cow pea)
Black	Pink	
Black turtle	Pinto	
Cranberry	Red kidney	
Great Northern	Small red	
Lablab	Small white	

**DO NOT apply Raptor to succulent pea, snap bean, or fresh lima (except as specifically directed below).**

**DO NOT apply Raptor to chickpea (garbanzo bean) or lentil.**

Reduced crop growth, quality, and yield; temporary yellowing; and/or delayed maturity may result from Raptor application to dry bean and dry pea crops listed on this label. Because 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 before maturity is likely. Some varieties of dry beans and dry peas 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 used, including good soil fertility, proper crop rotation, disease and insect management, and tillage practices that eliminate compaction and hardpans.

Raptor is effective in controlling weeds in conservation tillage and conventional tillage production systems. Apply Raptor postemergence before bloom stage but after dry beans have at least 1 fully expanded trifoliate leaf and dry peas have at least 3 pairs of leaves. Delay application until the majority of weeds are at the specified growth stage. Base application timing on weed size and crop growth stage. Apply Raptor to actively growing crop and weeds.

**THIS PRODUCT WHEN USED ON DRY BEANS AND DRY PEAS MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

**Use Rate**

Apply Raptor postemergence to dry beans and dry peas at a broadcast rate of 4 fl ozs/acre (0.031 lb imazamox ae/acre). At this application rate, one gallon will treat 32 acres of dry beans and dry peas.

**Additional Mixing Instructions for Dry Beans and Dry Peas**

Raptor application may be made to dry beans and dry peas with or without addition of fertilizer. 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 oil are added to the mixture, add Basagran® herbicide (at 6 fl ozs to 16 fl ozs/A) as a tank mix partner to minimize crop response.

For application to dry peas, **ALWAYS** add Basagran to the spray mixture, regardless of additives used. For enhanced grass activity, add crop oil concentrate instead of surfactant. Basagran at 16 fl ozs/A will enhance control of common lambsquarters and kochia. Basagran application at rates higher than 16 fl ozs/A may reduce grass weed control.

**Dry Beans and Dry Peas Restrictions and Limitations**

- Raptor application must be made before dry beans and dry peas bloom.
- **DO NOT** make more than one Raptor application to dry beans and dry peas per year (growing season).
- **DO NOT** apply more than 4 fl ozs Raptor/acre (0.031 lb imazamox ae/acre) to dry beans and dry peas per year (growing season).

**Weeds Controlled (Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil])**

Raptor will control or suppress listed weeds when applied postemergence to 1-inch to 3-inch weeds (unless otherwise indicated) at the specified rates listed as follows.

**Broadleaf Weeds Controlled by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil]**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Bedstraw		3
Beet, wild	3	3
Buttercup		3
Chickweed, common		3
Cocklebur, common		3
Flixweed	3	3

(continued)

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**Broadleaf Weeds Controlled by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil] (continued)**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Jimsonweed	3	3
Lambsquarters, common*	3	3
Mustard, black	3	3
tumble	3	3
wild	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
Shepherd's-purse	3	3
Tansymustard, green	3	3
Velvetleaf		3

\* Raptor controls common lambsquarters at 4 fl ozs/A east of the Rocky Mountains.

**Broadleaf Weeds Suppressed by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil]**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Buckwheat, wild		3
Chickweed, common	3	
Knotweed, prostrate		3
Kochia*		3
Lettuce, miner's		3

(continued)

**Broadleaf Weeds Suppressed by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil] (continued)**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Morningglory, entireleaf		3
ivyleaf		3
smallflower		3
tall		3
Purslane, common		3
Rocket, London		3
yellow		3
Smartweed, ladysthumb		3
Pennsylvania		3
Spurge, prostrate		3

\* Raptor controls non-ALS-resistant kochia only.

**Grass Weeds Controlled by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil]**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Blackgrass		3
Brome, cheat	3	3
downy	3	3
Japanese	3	3
Canarygrass, littleseed		3
Cereals, volunteer barley	3	3
oat	3	3
wheat (non-Clearfield®)	3	3

(continued)



**Grass Weeds Controlled by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil]**

(continued)

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
Corn, volunteer*		2 to 8
Darnel, Persian	3	3
Foxtail,		
giant	3	3
green	3	3
yellow	3	3
Jointed goatgrass	3	3
Oat, wild	3	3
Ryegrass, Italian		3
Shattercane	3	3

\*Except imidazolinone-tolerant corn

**Grass Weeds and Sedges Suppressed by Raptor® herbicide in Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil]**

	Raptor at 4 fl ozs/A + NIS	Raptor at 4 fl ozs/A + NIS or COC + nitrogen-based fertilizer + Basagran
	Maximum Weed Size (inches)	
<b>Grass Weeds</b>		
Barnyardgrass		3
Crabgrass,		
large	3	3
smooth	3	3
Johnsongrass, rhizome		3
<b>Sedges</b>		
Nutsedge,		
purple	3	3
yellow	3	3
Quackgrass	3	3

**Edamame (Vegetable Soybean)**

**Not for use on edamame in California.**

**Raptor** use on edamame may lead to crop injury or loss. Users or growers should evaluate **Raptor** for crop response on the varieties being grown to determine if **Raptor** use is acceptable.

**Use Rate**

**Early Postemergence Application.** Apply **Raptor** to edamame at the broadcast rate of 4 fl ozs/acre (0.031 lb imazamox ae/acre). Base application timing on weed size and crop growth stage. Apply to actively growing crop and weeds.

Apply **Raptor** after edamame emergence and before fourth trifoliolate when weeds are less than 3-inches tall.

**DO NOT** apply **Raptor** after edamame begins flowering.

Nonionic surfactant containing at least 80% active ingredient should be used at a rate of 1 quart per 100 gallons of spray solution.

For weeds controlled or suppressed in edamame, refer to **Weeds Controlled (Dry Beans and Dry Peas [other than English Pea, Lima Bean (Succulent), Snap Bean, and Clearfield® Lentil])** in **Crop-specific Information** section.

**Edamame Restrictions and Limitations**

- **DO NOT** apply **Raptor** after edamame begins flowering.
- **DO NOT** make more than one **Raptor** application to edamame per year (growing season).
- **DO NOT** apply more than 4 fl ozs **Raptor**/acre (0.031 lb imazamox ae/acre) to edamame per year (growing season).

**English Pea**

**Not for use on English pea in California.**

For postemergence use on English pea.

Use **Raptor ONLY** if proper agronomic practices have been used, including good soil fertility, proper crop rotation, disease and insect management, and tillage practices that eliminate compaction and hardpans.

Reduced crop growth, quality and yield, temporary yellowing and/or delayed maturity may result from a **Raptor** application to English peas. Because crop maturity may be delayed, timing of harvest may need to be adjusted accordingly. **DO NOT** apply **Raptor** if planting is delayed and a chance of frost before maturity is likely. Growers should check with the seed company regarding the safety of **Raptor** to their variety.

**THIS PRODUCT WHEN USED ON ENGLISH PEA MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

## Use Rate

**Early Postemergence Application.** Apply **Raptor® herbicide** to English pea at the broadcast rate of 3 fl ozs/acre (0.023 lb imazamox ae/acre). Base application timing on weed size and crop growth stage. Apply **Raptor** to actively growing crop and weeds.

Apply **Raptor** postemergence to English peas at least 3-inches tall but before 5 nodes before flowering. The use of trifluralin before **Raptor** application may increase the likelihood and severity of crop injury.

Nonionic surfactant **MUST** be added to the spray solution. NIS **MUST** contain at least 80% active ingredient and be used at 1 quart/100 gallons of spray solution.

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 English pea response.

When nitrogen-based fertilizer is added to the mixture, add **Basagran® herbicide** as a tank mix partner at 6 fl ozs to 16 fl ozs/acre to minimize crop response. Recommended nitrogen-based fertilizers include liquid fertilizers (such as 28% N, 32% N, or 10-34-0) at 2.5 gallons/100 gallons of spray solution.

Instead of liquid fertilizer, spray-grade ammonium sulfate may be used at 12 to 15 pounds/100 gallons of spray solution.

For enhanced grass activity, add COC at 1 gallon/100 gallons instead of NIS. **ALWAYS** add **Basagran** at the rates indicated above when COC and/or nitrogen-based fertilizer are used in the spray mixture. **Basagran** application at rates higher than 16 fl ozs/acre may reduce grass control.

Apply **Raptor** a minimum of 1 hour before rainfall or overhead irrigation.

**For use in Delaware, Maryland, and New York:** **Raptor MUST** be applied with **Basagran** at 6 to 16 fl ozs/A to minimize crop response. Nonionic surfactant **MUST** be added to the spray solution. NIS **MUST** contain at least 80% active ingredient and be used at a rate of 1 quart/100 gallons of spray solution. **DO NOT** use COC; MSO, HSOC, or nitrogen-based fertilizer.

## English Pea Restrictions and Limitations

- **DO NOT** make more than one **Raptor** application to English pea per year (growing season).
- **DO NOT** apply more than 3 fl ozs **Raptor**/acre (0.023 lb imazamox ae/acre) to English pea per year (growing season).

## Weeds Controlled (English Pea)

**Raptor** will control listed weeds when applied postemergence at the specified rates listed as follows.

## Weeds Controlled by Raptor® herbicide in English Peas

	Raptor at 3 fl ozs/A	Raptor at 3 fl ozs/A + Basagran at 6 to 16 fl ozs/A
Maximum Weed Size (inches)		
Nightshade, black	3	3
Eastern black hairy	3	3
Mustard, black	3	3
tumble wild	3	3
Pennycress, field	3	3
Pigweed, redroot	3	3
smooth spiny	3	3
Shepherd's-purse	3	3

## Lima Bean (Succulent)

**Not for use on lima bean (succulent) in California.**

For postemergence use in lima bean (succulent).

Apply **Raptor ONLY** if proper agronomic practices have been used, including good soil fertility, proper crop rotation, disease and insect management and tillage practices that eliminate compaction and hardpans.

Occasionally, internode shortening and/or temporary yellowing of crop plants may occur following **Raptor** application in lima bean. 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 days.

**THIS PRODUCT WHEN USED ON LIMA BEAN (SUCCULENT) MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

## Use Rate

**Early Postemergence Application.** Apply **Raptor** to lima bean (succulent) at the broadcast rate of 4 fl ozs/acre (0.031 lb imazamox ae/acre) tank mixed with **Basagran** at 6 fl ozs to 16 fl ozs/acre. When used in lima beans, **Raptor** must be applied with **Basagran** to minimize crop response. **Basagran** application at rates higher than 16 fl ozs/acre may reduce grass control.

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Base application timing on weed size and crop growth stage. Apply to actively growing crop and weeds. Apply **Raptor® herbicide + Basagran® herbicide** postemergence to lima beans in the first to second trifoliolate leaf stage and to weeds that are less than 3-inches tall. Application before the first trifoliolate leaf stage may result in increased crop response. **DO NOT** apply **Raptor + Basagran** to lima beans during flowering.

Nonionic surfactant **MUST** be added to the spray solution. NIS **MUST** contain at least 80% active ingredient and be used at 1 quart/100 gallons of spray solution.

**Raptor** tank mixes with any pesticide other than **Basagran** are not recommended. Certain insecticide and herbicide tank mixes with **Raptor** in lima beans have shown unacceptable crop response.

Apply **Raptor** a minimum of 1 hour before rainfall or overhead irrigation.

### Lima Bean (Succulent) Restrictions and Limitations

- **DO NOT** make more than one **Raptor** application to lima bean (succulent) per year (growing season).
- **DO NOT** apply more than 4 fl ozs **Raptor**/acre (0.031 lb imazamox ae/acre) to lima bean (succulent) per year (growing season).

### Weeds Controlled [Lima Bean (Succulent)]

**Raptor** will control or suppress listed weeds when applied postemergence at the specified rates listed as follows.

#### Broadleaf Weeds Controlled by Raptor® herbicide in Lima Bean (Succulent)

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Bedstraw	3
Beet, wild	3
Buttercup	3
Chickweed, common	3
Jimsonweed	3
Mustard,	
black	3
tumble	3
wild	3

(continued)

#### Broadleaf Weeds Controlled by Raptor® herbicide in Lima Bean (Succulent) (continued)

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Nightshade,	
black	3
Eastern black	3
hairy	3
Pennycress, field	3
Pigweed,	
redroot	3
smooth	3
spiny	3
Puncturevine	3
Radish, wild	3
Shepherd's-purse	3
Tansymustard, green	3

#### Broadleaf Weeds Suppressed by Raptor® herbicide in Lima Bean (Succulent)

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Buckwheat, wild	3
Chickweed, common	3
Cocklebur, common	3
Knotweed, prostrate	3
Kochia*	3
Lambsquarters, common	3
Lettuce, miner's	3
Morningglory,	
entireleaf	3
ivyleaf	3
smallflower	3
tall	3
Purslane, common	3
Rocket, London	3
Smartweed,	
ladysthumb	3
Pennsylvania	3
Spurge, prostrate	3

\***Raptor** controls non-ALS-resistant kochia only.

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**Grass Weeds Controlled by Raptor® herbicide in Lima Bean (Succulent)**

<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>	
<b>Maximum Weed Size (inches)</b>	
Barnyardgrass	3
Blackgrass	3
Brome, cheat	3
downy	3
Japanese	3
Canarygrass, littleseed	3
Cereals, volunteer	
barley	3
oat	3
wheat (non-Clearfield®)	3
Corn, volunteer*	2 to 3
Darnel, Persian	3
Foxtail, giant	3
green	3
yellow	3
Jointed goatgrass	3
Oat, wild	3
Ryegrass, Italian	3
Shattercane	3

\*Except imidazolinone-tolerant corn

**Grass Weeds and Sedges Suppressed by Raptor® herbicide in Lima Bean (Succulent)**

<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>	
<b>Maximum Weed Size (inches)</b>	
<b>Grass Weeds</b>	
Crabgrass, large	3
smooth	3
Johnsongrass, rhizome	3
<b>Sedges</b>	
Nutsedge, purple	3
yellow	3
Quackgrass	3

**Snap Bean**

**Not for use on snap bean in California.**

**Raptor** may be applied to snap bean. Occasionally, internode shortening and/or temporary yellowing of snap beans may occur following **Raptor** application. These effects can be more pronounced if snap beans are growing under stressful environmental or hot and humid conditions. These effects occur infrequently and are temporary. Normal growth and appearance should resume within days.

Apply **Raptor ONLY** if proper agronomic practices have been used, including good soil fertility, proper crop rotation, disease and insect management and tillage practices that eliminate compaction and hardpans. **DO NOT** apply to snap beans that have been injured from application of soil-applied herbicides.

Apply **Raptor** postemergence to snap bean with at least one fully expanded trifoliolate leaf and before the bloom stage. **For use in Idaho, Oregon and Washington**, apply **Raptor** to snap bean at first or second trifoliolate leaf stage. Delay application until the majority of the weeds are at the specified growth stage. Base application timing on weed size and crop growth stage. Apply **Raptor** to actively growing crop and weeds.

**DO NOT apply Raptor to snap bean during flowering.**

**THIS PRODUCT WHEN USED ON SNAP BEAN MAY LEAD TO CROP INJURY, LOSS, OR DAMAGE. BASF RECOMMENDS THAT THE USER AND/OR GROWER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

**Use Rate**

Apply **Raptor** to snap bean at the broadcast rate of 4 fl ozs/acre (0.031 lb imazamox ae/acre) tank mixed with **Basagran® herbicide** at 6 fl ozs to 16 fl ozs/acre. **When used in snap beans, Raptor must be applied with Basagran to minimize crop response.** **Basagran** application at rates higher than 16 fl ozs/acre may reduce grass control.

**Additional Mixing Instructions for Snap Bean**

**For use in Delaware, Florida, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, New York, Pennsylvania, Virginia, and Wisconsin.** Nonionic surfactant **MUST** be added to the spray solution. NIS **MUST** contain at least 80% active ingredient and be used at 1 quart/100 gallons of spray solution. **DO NOT** use COC, MSO, or HSOC.

**For use in Idaho, Oregon and Washington.** Nonionic surfactant and nitrogen fertilizer **MUST** be added to the spray solution. NIS **MUST** contain at least 80% active ingredient and be used at 1 quart/100 gallons of spray solution. Alternatively, COC (1 gallon/100 gallons of spray solution), MSO (1 to 2 gallons/100 gallons of spray solution), or HSOC (0.5 gallon/100 gallons of spray solution) can be used.

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

**Raptor® herbicide** tank mixes with any pesticide other than **Basagran® herbicide** are not recommended. Certain insecticide and herbicide tank mixes with **Raptor** in snap bean have shown unacceptable crop response.

### Snap Bean Restrictions and Limitations

- **Raptor application must be made before snap bean bloom.**
- **DO NOT** make more than one **Raptor** application to snap bean per year (growing season).
- **DO NOT** apply more than 4 fl ozs **Raptor**/acre (0.031 lb imazamox ae/acre) to snap bean per year (growing season).

### Weeds Controlled (Snap Bean)

**Raptor** will control or suppress listed weeds when applied postemergence to 1-inch to 3-inch weeds (unless otherwise indicated) at the specified rates listed as follows.

#### Broadleaf Weeds Controlled by Raptor® herbicide in Snap Bean

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Bedstraw	3
Beet, wild	3
Buttercup	3
Chickweed, common	3
Jimsonweed	3
Mustard,	
black	3
tumble	3
wild	3
Nightshade,	
black	3
Eastern black	3
hairy	3
Pennycress, field	3
Pigweed,	
redroot	3
smooth	3
spiny	3
Puncturevine	3
Radish, wild	3
Shepherd's-purse	3
Tansymustard, green	3

#### Broadleaf Weeds Suppressed by Raptor® herbicide in Snap Bean

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Buckwheat, wild	3
Chickweed, common	3
Cocklebur, common	3
Knotweed, prostrate	3
Kochia*	3
Lambsquarters, common	3
Lettuce, miner's	3
Morningglory,	
entireleaf	3
ivyleaf	3
smallflower	3
tall	3
Purslane, common	3
Rocket, London	3
Smartweed,	
ladysthumb	3
Pennsylvania	3
Spurge, prostrate	3

\***Raptor** controls non-ALS-resistant kochia only.

#### Grass Weeds Controlled by Raptor® herbicide in Snap Bean

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Barnyardgrass	3
Blackgrass	3
Brome,	
cheat	3
downy	3
Japanese	3
Canarygrass, littleseed	3
Cereals, volunteer	
barley	3
oat	3
wheat (non- <b>Clearfield</b> ®)	3
Corn, volunteer*	2 to 8
Darnel, Persian	3
Foxtail,	
giant	3
green	3
yellow	3

(continued)

**Grass Weeds Controlled by Raptor® herbicide in Snap Bean** *(continued)*

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
Jointed goatgrass	3
Oat, wild	3
Ryegrass, Italian	3
Shattercane	3

\*Except imidazolinone-tolerant corn

**Grass Weeds and Sedges Suppressed by Raptor® herbicide in Snap Bean**

	<b>Raptor at 4 fl ozs/A + Basagran at 6 to 16 fl ozs/A</b>
	<b>Maximum Weed Size (inches)</b>
<b>Grass Weeds</b>	
Crabgrass, large	3
smooth	3
Johnsongrass, rhizome	3
<b>Sedges</b>	
Nutsedge, purple	3
yellow	3
Quackgrass	3

**Soybean**

**Not for use on soybean in California.**

**Raptor** is effective in controlling weeds in conservation tillage and conventional tillage 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** 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** 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 **Weeds Controlled (Soybean)** tables for weeds controlled and specified weed size.

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

Before planting or emergence of soybeans, any glyphosate-containing product registered for that use may be applied to control emerged weeds. See specific product label for rates, use directions, precautions, and restrictions.

**Use Rate**

Apply 4 fl ozs **Raptor**/acre (0.031 lb imazamox ae/acre) to soybean when preceded by a full rate of a registered soil-applied grass herbicide like **Prowl® 3.3 EC herbicide** or **Prowl® H<sub>2</sub>O herbicide**.

**OR**

Apply 5 fl ozs **Raptor**/acre (0.040 lb imazamox ae/acre) to soybean in a total postemergence herbicide program.

**Raptor** may be applied postemergence at a broadcast rate of 4 fl ozs/acre when it is preceded with a full labeled rate of a soil-applied grass herbicide such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**. At this rate, 1 gallon of **Raptor** will treat 32 acres of soybeans. **Raptor** may be applied postemergence at a broadcast rate of 5 fl ozs/acre (including minimum-till and no-till). At this broadcast rate, one gallon of **Raptor** will treat 25.6 acres of soybeans.

**Soybean Restrictions and Limitations**

- **Raptor** application must be made before soybean bloom.
- **DO NOT** make more than one **Raptor** application to soybean per year (growing season).
- **DO NOT** apply more than 5 fl ozs **Raptor**/acre (0.04 lb imazamox ae/acre) to soybean per year (growing season).
- If soybeans are furrow irrigated, till the soil before planting winter wheat or barley. Break up the beds and mix soil with tillage equipment set to cut 4-inches to 6-inches deep.

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## Weeds Controlled (Soybean)

When applied as directed, **Raptor® herbicide** will control or suppress listed weeds as follows. Refer to **Application Information** section for use directions when weeds are at the maximum specified growth stage or are under stress.

### Broadleaf Weeds Controlled by Raptor® herbicide Alone or in a Sequential\* Program in Soybean

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	
Artichoke, Jerusalem	3 to 8	3 to 8
Carpetweed		2 to 4
Chickweed, common	2 to 5	2 to 5
Cocklebur, common	2 to 8	2 to 8
Jimsonweed	2 to 6	2 to 6
Kochia**	1 to 4	1 to 4
Lambsquarters, common	2 to 5	2 to 5
Mallow, Venice	1 to 4	
Marshelder	2 to 4	2 to 4
Morningglory, entireleaf	2 to 4	
ivyleaf	2 to 4	
smallflower	2 to 4	
tall	2 to 4	
Mustard spp.	2 to 8	2 to 8
Nightshade, black	2 to 5	2 to 5
Eastern black	2 to 5	2 to 5
hairy	2 to 5	2 to 5
Pigweed, Palmer amaranth***	2 to 4	2 to 4
prostrate	2 to 5	2 to 5
redroot	2 to 8	2 to 8
smooth	2 to 8	2 to 8
spiny	2 to 5	2 to 5
Puncturevine	1 to 3	
Purslane, common	1 to 3	1 to 3
Pusley, Florida		2 to 4
Radish, wild	2 to 4	2 to 4
Ragweed, common***	2 to 5	
giant***	2 to 5	2 to 5

(continued)

### Broadleaf Weeds Controlled by Raptor® herbicide Alone or in a Sequential\* Program in Soybean

(continued)

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	
Smartweed, ladysthumb	2 to 5	2 to 5
Pennsylvania	2 to 5	2 to 5
Spurge, annual		2 to 4
Sunflower	2 to 8	2 to 8
Velvetleaf	2 to 8	2 to 8

\*Soil-applied grass herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, is followed by a postemergence application of Raptor at a broadcast rate of 4 fl ozs/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 **Tank Mix Herbicides** following in the **Soybean** section.

### Broadleaf Weeds Suppressed by Raptor® herbicide Alone or in a Sequential\* Program in Soybean

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	
Bindweed, field (seedling)	2 to 4	2 to 4
hedge (seedling)	2 to 4	2 to 4
Buckwheat, wild	1 to 3	1 to 3
Mallow, Venice**		1 to 4
Morningglory, entireleaf**		2 to 4
ivyleaf**		2 to 4
pitted	2 to 4	2 to 4
smallflower**		2 to 4
tall**		2 to 4
Ragweed, common**		2 to 5

(continued)

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**Broadleaf Weeds Suppressed by Raptor® herbicide Alone or in a Sequential\* Program in Soybean**

(continued)

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	

Sida, prickly	2 to 4	2 to 4
Sowthistle, annual	2 to 4	2 to 4
Thistle, Canada	2 to 5	2 to 5

\*Soil-applied grass herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, is followed by a postemergence application of **Raptor** at a broadcast rate of 4 fl ozs per acre.

\*\* For control, see the 5 fl ozs rate and **Tank Mix Herbicides** following in the **Soybean** section.

**Grass Weeds Controlled by Raptor® herbicide Alone or in a Sequential\* Program in Soybean**

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	

Barley, wild	2 to 4	2 to 4
Barnyardgrass	2 to 5**	2 to 5
Corn, volunteer***	2 to 8	2 to 8
Crabgrass, large		2 to 4
smooth		2 to 4
Crowfoot grass		2 to 5
Cupgrass, woolly		2 to 4
Foxtail, giant	2 to 6	2 to 6
green	2 to 6	2 to 6
yellow	2 to 6	2 to 6
Goosegrass		2 to 5
Johnsongrass, seedling	4 to 8	4 to 8
Millet, wild proso	2 to 4**	2 to 4
Oat, wild	2 to 6	2 to 6
Panicum, fall	2 to 6	2 to 6
Texas		2 to 6
Sandbur, field****		2 to 5
Shattercane	2 to 8	2 to 8

(continued)

**Grass Weeds Controlled by Raptor® herbicide Alone or in a Sequential\* Program in Soybean (continued)**

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	

Signalgrass, broadleaf	2 to 5**	2 to 5
Wheat, volunteer (non- <b>Clearfield</b> ®)	2 to 4****	2 to 4
Witchgrass		2 to 5

\*Soil-applied grass herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, is followed by a postemergence application of **Raptor** at a broadcast rate of 4 fl ozs 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.

\*\*\* Except imidazolinone-tolerant corn

\*\*\*\* For control, a dinitroaniline (DNA) herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, must be soil-applied at a full labeled rate.

**Grass Weeds and Sedges Suppressed by Raptor® herbicide Alone or in a Sequential\* Program in Soybean**

	Raptor Alone Postemergence	Prowl 3.3 EC or Prowl H <sub>2</sub> O Soil-applied followed by Raptor* Postemergence
	5 fl ozs/A	4 fl ozs/A
	Weed Size (inches)	

**Grass Weeds**

Crabgrass, large	2 to 4	
smooth	2 to 4	
Cupgrass, woolly	2 to 4	
Goosegrass	2 to 4	
Itchgrass		2 to 5
Johnsongrass, rhizome	6 to 12	6 to 12
Quackgrass		4 to 8
Red rice		2 to 5
Stinkgrass	2 to 4	

**Sedges**

Nutsedge, purple	1 to 3	1 to 3
yellow	1 to 3	1 to 3

\*Soil-applied grass herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, is followed by a postemergence application of **Raptor** at a broadcast rate of 4 fl ozs/acre.



## Tank Mix Herbicides

### Grass Weeds

Use a soil-applied grass herbicide (such as **Prowl® 3.3 EC herbicide** or **Prowl® H<sub>2</sub>O 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**, **Prowl H<sub>2</sub>O**, or other grass herbicide label for specific use directions, rates, and precautions.

Glyphosate may be tank mixed with **Raptor** to aid in control of certain grass weeds only in **Roundup Ready®** soybeans. **DO NOT** tank mix **Raptor** with **Extreme® herbicide**. If a selective postemergence grass herbicide, such as **Poast® herbicide**, is mixed with **Raptor** to control species that are not controlled with **Raptor** alone, include MSO or COC (1 to 2 gallons/100 gallons) or an HSOC at 0.5 gallon/100 gallons **AND** add liquid fertilizer (2.5 gallons/100 gallons) 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 application of the postemergence grass herbicide 7 days following 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 specific application rate, weed size, and restrictions.

### Broadleaf Weeds

Glyphosate may be tank mixed with **Raptor** to aid in control of certain broadleaf weeds only in **Roundup Ready** soybeans.

Tank mixing **Raptor** and certain broadleaf herbicides (e.g. diphenylethers and **Basagran® herbicide**) can reduce grass control; therefore, a sequential program including a soil-applied grass herbicide, such as **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O**, is recommended for optimal control.

**Enhanced Control of Kochia, Palmer Amaranth, Ragweed Species, and Waterhemp.** Use a soil application of **Prowl 3.3 EC** or **Prowl H<sub>2</sub>O** followed by a postemergence application of **Raptor** at a broadcast rate of 4 fl ozs to 5 fl ozs/acre plus a diphenylether, such as **Ultra Blazer® herbicide** (acifluorfen), or glyphosate for enhanced control of kochia, Palmer amaranth, ragweed, and waterhemp. Refer to the **Prowl 3.3 EC**, **Prowl H<sub>2</sub>O**, or **Ultra Blazer** labels for specific use directions, rates, restrictions, and precautions.

When tank mixing **Raptor** and **Ultra Blazer**, apply **Raptor** at a broadcast rate of 5 fl ozs/acre or 4 fl ozs/acre when preceded by a full rate of a registered soil-applied grass herbicide. Apply **Ultra Blazer** at the following rates depending on weed height.

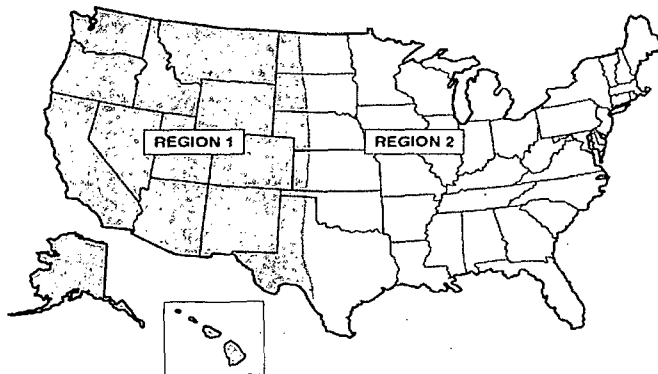
Ultra Blazer® herbicide Rate* (fl ozs/Acre)			
Weed	8 to 10	12 to 14	16 to 20
	Weed Size (inches)		
Kochia	2 to 4	4 to 6	6 to 8
Palmer amaranth			
Ragweed spp.			
Waterhemp spp.			

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

**Enhanced Control of Common Ragweed and Giant Ragweed.** **FirstRate® herbicide** 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 fl oz/acre of **FirstRate**. Use the higher rate when weeds approach maximum labeled size. See the **FirstRate** label for specific rates and precautions.

### Rotational Crop Restrictions

Rotational crops may be planted after applying the specified rate of **Raptor** in **Region 1** and **Region 2**, as indicated on the map.



**Region 1** - States and parts of states WEST of US Highway 83 (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, and western parts of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas)

**Region 2** - States and parts of states EAST of US Highway 83 (includes the eastern parts of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas, and the states east of these states)

**Rotational Interval (months) following Raptor® herbicide Application**

<b>Plant-back Interval (months)</b>	<b>Region 1</b>	<b>Region 2</b>		
<b>Anytime</b>	<b>Clearfield®</b> canola <b>Clearfield</b> corn (field and seed) <b>Clearfield</b> lentil <b>Clearfield</b> rice <b>Clearfield</b> and <b>Clearfield® Plus</b> sunflower <b>Clearfield</b> and <b>Clearfield Plus</b> wheat Dry beans and dry peas except non- <b>Clearfield</b> lentil Edamame English peas Lima beans (succulent) Snap beans Soybeans	<b>Clearfield</b> canola <b>Clearfield</b> corn (field and seed) <b>Clearfield</b> lentil <b>Clearfield</b> rice <b>Clearfield</b> and <b>Clearfield Plus</b> sunflower <b>Clearfield</b> and <b>Clearfield Plus</b> wheat Dry beans and dry peas except non- <b>Clearfield</b> lentil Edamame English peas Lima beans (succulent) Snap beans Soybeans		
<b>3</b>	Alfalfa <sup>1,4</sup> Wheat (non- <b>Clearfield</b> )	Alfalfa <sup>4</sup> Wheat (non- <b>Clearfield</b> )		
<b>4</b>	Rye	Rye		
<b>8-1/2</b>	Corn (non- <b>Clearfield</b> field, seed, sweet, and popcorn)	Corn (non- <b>Clearfield</b> field, seed, sweet, and popcorn)		
<b>9</b>	<sup>1</sup> Barley Cantaloupe Cotton Grain sorghum <sup>5</sup> Lentil (non- <b>Clearfield</b> ) Lettuce Millet Oat Onion	Peanut Pumpkin Rice Squash Sunflower Tobacco Watermelon	<sup>1</sup> Barley Broccoli Cabbage Cantaloupe Carrot Cotton Cucumber Grain sorghum <sup>5</sup> Lentil (non- <b>Clearfield</b> ) Lettuce Millet Oat Onion	Onion Peanut Pepper <sup>1</sup> Potato Pumpkin Rice Squash Sunflower Tobacco Tomato Turnip Watermelon
<b>18</b>	<sup>1</sup> Barley Broccoli Cabbage Carrot Cucumber Lentil (non- <b>Clearfield</b> )  <b>All other crops not listed in the Rotational Crop Restrictions</b>	Pepper Potato Tomato Turnip	<sup>1</sup> Barley Canola (non- <b>Clearfield</b> ) Condiment mustard Lentil (non- <b>Clearfield</b> )  <b>All other crops not listed in the Rotational Crop Restrictions</b>	<sup>2</sup> Sugar beet <sup>2</sup> Table beet
<b>26</b>	Canola (non- <b>Clearfield</b> ) Condiment mustard	<sup>3</sup> Sugar beet Table beet	<sup>2</sup> Sugar beet <sup>2</sup> Table beet	

<sup>1</sup> Refer to the following tables for rotational intervals for planting following **Raptor** application.

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

<sup>3</sup> For sugar beets grown in parts of Nebraska west of Highway 83, and Platte, Goshen, and Laramie counties in Wyoming, follow the sugar beet rotational crop restrictions for **Region 2** for sprinkler-irrigated fields only. If fields are dryland, flood or furrow irrigated, follow restrictions for **Region 1**. A minimum of 10 inches of overhead irrigation must be applied each season to qualify for **Region 2** guidelines.

<sup>4</sup> Planting non-**Clearfield** spring or winter wheat in areas receiving less than 10 inches of precipitation from the time of **Raptor** application up until wheat planting may result in wheat injury. The possibility of injury increases if less than normal precipitation occurs from the time of application to planting and/or within the first 2 months after **Raptor** application.

<sup>5</sup> In **Region 1** and **Region 2**, non-**Clearfield** lentil may be planted 9 months following an application of **Raptor** if no more than 5 fl ozs/A of **Raptor** has been applied and the soil pH is uniformly greater than 6.2.

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Barley Rotational Interval based on pH, Moisture, and Tillage		Moldboard Plowing	
Region 1 and Region 2		NO	YES
pH and Rainfall requirements	>18 inches R+I <b>AND</b> pH >6.2	9 months	
	<18 inches R+I <b>OR</b> pH <6.2	18 months	9 months

Potato Rotational Interval based on pH and Moisture		
Region 2		
pH and Rainfall requirements	>18 inches R+I <b>AND</b> pH >6.2	9 months
	<18 inches R+I <b>OR</b> pH <6.2	18 months

Non-Clearfield® Wheat Rotational Interval based on pH, Moisture, and Tillage		Moldboard Plowing	
Region 1		NO	YES
pH and Rainfall requirements	>10 inches R+I <b>AND</b> pH >6.2	3 months	
	<10 inches R+I <b>OR</b> pH <6.2	15 months	3 months

Non-Clearfield Wheat Rotational Interval based on pH and Moisture		
Washington and selected counties in Idaho* and Oregon**		
pH and Rainfall requirements	>16 inches R+I <b>AND</b> pH >6.2	3 months
	<16 inches R+I <b>OR</b> pH <6.2	15 months
* Selected counties in Idaho - Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone		
** Selected counties in Oregon - All but Malheur		

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

**R+I** = Rainfall and overhead irrigation from the time of **Raptor® herbicide** application up until time of barley, potato, or non-**Clearfield** wheat planting. **Does not include furrow or flood irrigation.**

If the rainfall or pH requirements are not fully met, and barley or non-**Clearfield** wheat is planted before the specified rotation interval, injury may be reduced by tillage, such as deep disking (greater than 6-inches deep) after crop harvest but before November 1.

The possibility of injury to barley or non-**Clearfield** wheat planted the next season increases **if less than normal precipitation occurs from the time of application to planting and/or within the first two months after Raptor application.**

### Furrow-irrigated and Flood-irrigated Crops

Following harvest of furrow-irrigated or flood-irrigated crops, thoroughly mix soil by plowing or deep disking to minimize the potential for herbicide carryover to the following crop.

Use of **Raptor** 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.

USE PRECAUTIONS
In the event of a crop loss due to weather, dry beans, dry peas, <b>Clearfield</b> canola, <b>Clearfield</b> corn, <b>Clearfield</b> lentil, <b>Clearfield</b> and <b>Clearfield® Plus</b> sunflower, <b>Clearfield</b> and <b>Clearfield Plus</b> wheat, edamame, peas (English), lima beans (succulent), snap beans, or soybeans can be replanted. <b>DO NOT</b> make an additional application of <b>Raptor</b> .
Application of products containing chlorimuron ethyl ( <b>Canopy® herbicide</b> ), metsulfuron-methyl ( <b>Harmony® Extra herbicide</b> ), imazaquin ( <b>Scepter® 70 DG herbicide</b> ), or imazethapyr ( <b>Pursuit® herbicide, Pursuit® Plus EC herbicide</b> ) the same year as <b>Raptor</b> may increase the risk of injury to sensitive rotational crops. Consult all pertinent labels for use of these products in combinations.
If arid conditions occur during the year of application, rotational crop injury may occur.

### Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, 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 THE PRODUCT.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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### Uses with Other Products (Tank Mixes)

If this product is used in combination with any other product except as specifically instructed in writing by BASF, then to the extent consistent with applicable law, BASF shall have no liability for any loss, damage or injury arising out of its use in any such combination not so specifically specified. If used in combination as instructed by BASF, to the extent consistent with applicable law, 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, to the extent consistent with applicable law, shall be limited to return of the amount of the purchase price of the BASF product.

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000241-00379.20140908.NVA 2014-04-133-0219  
Supersedes: NVA 2014-04-133-0137

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