264-573 08/16/99

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG | 6 1999

Ms. Karen S. Shearer Senior Registration Manager RHONE-POULENC P.O. Box 12014 2 T.W. Alexander Drive Research Triangle Park, NC 27709-2014

SUBJECT: New Registration REASON ® Herbicide EPA Reg. No. 264-573 Your Application Dated May 4, 1999

Dear Ms. Shearer:

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PM

This product is conditionally registered in accordance with FIFRA Sec. 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
- 2. Make the following label changes:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 264-573".

			C	ONCURRENCES				
SYMBOL +	7505C							
SURNAME +	MINOR, E.							
DATE 🕨	Aug 16, 1999							
EPA Form 1320	0-1 (12-70)	<u> </u>	L	L	· · · · · · · · · · · · · · · · · · ·	4	OFFICIAL FIL	E COPY

"Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing. Wear long-sleeved shirt and long pants, socks and shoes and waterproof gloves."

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c. It is recommended that the "Statement of Practical Treatment" be changed to "First Aid". And the First Aid Statement be changed as follows:

"IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor."

"IF ON SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice."

d. Change the "User Safety Recommendation" as follows:

"Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse."

e. In the 'Restricted Use Pesticide" box please add the following:

"Users must read and follow......minimize potential for atrazine and isoxaflutole to reach......".

f. Under the "Environmental Hazards" section add the following:

"Do not contaminate water used for irrigation or domestic purposes."

g. Under "Restrictions and Precautions for Use on Field Corn" section add the following:

"Do not apply more than 3 pints of REASON Herbicide per acre in one season."

3. Submit the studies identified in Attachment #1 on or before corresponding deadlines identified in Attachment #2. These data requirements must be carried

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out in accordance with applicable provisions of the Good Laboratory Practices (40 CFR Part 160).

4. Submit the following studies on or before the corresponding deadlines in Attachment #2:

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a. Avian Dietary  $LC_{50}$  Study (§71-2) using the terminal metabolite RPA 203328.

b. Avian Reproduction Study [§71-4(a,b)] using the primary metabolite RPA 202248.

c. Acute Toxicity Study to Shrimp (§72-3) using the terminal metabolite RPA 203328.

- 5. This registration is time-limited and will terminate on November 1, 2001 unless renewed by EPA. This registration will permit sale and use only in the states of Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas (those counties north of or bisected by I-20) and Wyoming.
- 6. By September 1, 2000 or four months after receipt of data, whichever is later, EPA will make a determination as to whether the available information supports expansion of the geographical areas in which this product may be used, or warrants the addition or removal of label restrictions or mitigation measures.
- Product registrations of other registrants which include use of isoxaflutole will be required to meet the same label restrictions and limitations on support of FIFRA Sec. 18 and FIFRA Sec. 24<sup>©</sup> requests as EPA has imposed under this Notice of Pesticide Registration or as subsequently modified.
- 8. Prior to the end of a three year period after the initial registration, EPA will make a determination whether to renew or deny the registrations based on the available information. All information EPA is to consider in support of renewal of this registration must be submitted by August, 2001. Data submitted in support of this registration after that date will not be considered "available information" for purposes of a decision on renewal of this registration. If EPA does not make a determination by November 1, 2001, either to extend or deny this registration, EPA's inaction will constitute a denial of application for registration.
- 9. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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

A stamped copy of the label is enclosed for your records.

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

# **RESTRICTED USE PESTICIDE**

May injure (phytotoxic) susceptible non-target plants. This product is also a Restricted Use Pesticide due to ground and surface concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground water. For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial and certified applicators must ensure that all persons involved in these activities are informed of the precautionary statements.

# **REASON**<sup>®</sup> Herbicide

For weed control in field corn in the states of Arkansas, <del>Solorado,</del> Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas (those counties north of or bisected by I-20), and Wyoming. In the states of Colorado, Kansas and Missouri, there may be more restrictive conditions on the use of this product. You should check with your state regulatory authority prior to use.

#### **ACTIVE INGREDIENT:**

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Isoxaflutole [5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethylbenzoyl) isoxazole]*	3.2%
Atrazine (2-chloro-4-ethylamino-6-isopropylamino-s-triazine)**	43.2%
'NERT INGREDIENTS:	53.6%
Contains 0.3 pounds of isoxaflutole per gallon.	

\*\*Contains 4.0 pounds of atrazine per gallon.

E.P.A. Reg. No. 264-XXX

E.P.A. Est. No.

# KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

For <u>MEDICAL</u> and <u>TRANSPORTATION</u> Emergencies <u>ONLY</u> Call 24 Hours A Day 1-800-334-7577 For <u>PRODUCT USE</u> Information Call 1-800-334-9745

# STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

.r ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

JTE TO PHYSICIAN: No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

# PRECAUTIONARY STATEMENTS

#### CAUTION HAZARD TO HUMANS AND DOMESTIC ANIMALS

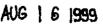
Harmful if swallowed, absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wasin thoroughly with soap and water after handling.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, socks, shoes, waterproof gloves and protective eye wear. When mixing/loading or cleaning equipment, wear a chemical resistant apron in addition to the other required PPE.

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

with COMMENTS In EPA Letter Dated



Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the positicide registered under EPA Reg. No. 264 - 573

#### ENGINEERING CONTROL STATEMENT

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

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

#### **ENVIRONMENTAL HAZARDS**

Drift or runoff may adversely affect non-target plants and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not use the same spray equipment for other purposes unless thoroughly cleaned. Do not contaminate water when disposing of equipment washwaters.

Use coarse sprays to minimize drift. Do not apply with hollow cone type insecticide or other nozzles that produce fine spray droplets.

This product has properties and characteristic associated with chemicals detected in ground water. Thus, the use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

soxaflutole residues can contaminate surface water through spray drift. Under some conditions, isoxaflutole residues may also have a nigh potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying tremely shallow ground water., areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips and areas over-laying tile drainage systems that drain to surface water.

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

In fields having sands, loamy sands and sandy loam soils, special care should be take not to over-irrigate since substantial over-irrigation promotes the leaching of chemicals.

J lsoxaflutole is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if the pesticide is allowed to drift from areas of application. Exposure to isoxaflutole residues may injure or kill susceptible plants. To prevent damage to crops and other desirable plants, read and follow all directions and precautions on this label before using.

This product may not be mixed, loaded or used within 50 feet of all wells including abandoned wells, drainage wells and sink holes. Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the

- eaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spill or equipment leaks, container or equipment rinse or wash water and rain water that may fall on the pad. Surface water shall be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate
- aterial removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities when delivering pesticide shipments to the mixing/loading sites. States may have in effect additional requirements regarding well-head setbacks and operational area containment.

This product may not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

#### DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only projected handlers may be in the same area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticides.

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#### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water, is coveralls over long-sleeved shirt and long pants, socks, shoes, waterproof gloves and protective eye wear.

#### STORAGE AND DISPOSAL

#### STORAGE

Do not contaminate water, food or feed by storage or disposal. Store in a cool, dry secured storage area. Do not store this product under wet conditions.

#### PESTICIDE DISPOSAL

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

#### CONTAINER DISPOSAL

riple rinse or equivalent. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **GENERAL INFORMATION**

REASON® herbicide is formulated as a flowable liquid with a concentration of 4.3 lbs per gallon of combined active ingredients.

REASON<sup>®</sup> is a selective herbicide for control of important broadleaf and grass weeds infesting field corn when used as a preplant (surfaced-applied or incorporated) or preemergence herbicide.

Environmental extremes may increase the potential for crop response.

Do not apply this product through any type of irrigation system.

Do not apply this product using aerial application equipment.

Do not use flood irrigation to apply or incorporate this product.

For use in the states of Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Montana, Nebraska, North Dakota, Thio, Oklahoma, South Dakota, Tennessee, Texas (those counties north of or bisected by 1-20), and Wyoming In the states of Jolorado, Kansas and Missouri, there may be more restrictive conditions on the use of this product. You should check with your state regulatory authority prior to use.

#### **JIXING INSTRUCTIONS**

Fill spray tank with 1/4 to 1/2 of the required volume of water prior to the addition of REASON® herbicide. Add REASON® slowly to the tank and agitate by hydraulic or mechanical means. If REASON® is applied in tank mixture with other pesticides, add REASON® to the spray tank water first and ensure that it is thoroughly dispersed before adding other pesticides. Continue to fill the tank with water to the desired volume while agitating. Continue agitation when applying to ensure a uniform spray mixture.

Application with water or liquid fertilizer as a diluent carrier: Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence or preplant surface ground application. Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as described below. If REASON<sup>®</sup> is applied with a nitrogen solution or other liquid fertilizer, add REASON<sup>®</sup> to the spray tank water first and ensure that it is thoroughly dispersed before adding fertilizer solution. Continue to fill the tank with water to the desired volume while agitating. Continue agitation when applying to ensure a uniform spray mixture.

Sprayer Cleanup: To avoid injury or exposure to non-target crops, thoroughly clean all mixing and spray equipment on an proved rinse pad or on the field site where an approved crop is to be grown. Do this immediately after application and prior to use on crops other than those registered for use on this label.

#### TANK MIXTURES

REASON® Herbicide can be applied in tank mixture with many other pesticides registered for use on approved crops. Refer to specific crop section for rate recommendations and other restrictions.

#### COMPATIBILITY

If REASON® herbicide is to be tank mixed with liquid fertilizers or other pesticides, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt) of spray, combining all ingredients in the same ratio as

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the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5-15 minutes after mixing. Read and follow the label of each tank-mix product used for precautionary statements, directions for use, geographic and other restrictions.

#### **APPLICATION PROCEDURES**

#### APPLICATION TIMING

REASON<sup>®</sup> may be used in either conventional, conservation tillage, or no-till crop management systems and may be applied either preplant, preplant incorporated or preemergence for use in field corn production. Do not apply after corn emerges or crop injury may occur.

**Preplant Surface-Applied:** REASON® alone and certain REASON® tank mixtures may be applied up to 14 days before planting field corn. REASON® may be applied up to 30 days prior to planting when used on Roundup Ready or Liberty Link corn where a sequential application of glyphosate or Liberty is planned. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be reduced.

**Preplant Incorporated:** REASON<sup>®</sup> alone and certain REASON<sup>®</sup> tank mixtures may be applied up to 14 days before planting field corn. REASON<sup>®</sup> may be applied up to 30 days prior to planting when used on Roundup Ready or Liberty Link corn where a sequential application of glyphosate or Liberty is planned. Apply to the soil and incorporate in the top two inches of soil before planting using a finishing disc harrow, rolling cultivator or similar implement capable of providing uniform two inch incorporation.

REASON<sup>®</sup> treatments are most effective in controlling weeds when adequate rainfall is received within 14 days after application. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain occurs, use shallow tillage such as rotary hoe to lightly incorporate REASON<sup>®</sup> and make certain corn seeds are below the tilled area. If treated soil is moved during tillage ractices in such a way that the herbicide barrier is no longer intact, weeds may emerge in those areas from which treated soil has been moved.

**Preemergence:** Apply REASON<sup>®</sup> during planting (behind the planter after furrow closure) or after planting, but before weeds or cops emerge. Failure to close the seed furrow may allow herbicide spray to directly contact the seed which can cause injury.

Preplant/Preemerge Burndown: When weeds are present at the time of treatment, a tank mixture of REASON<sup>®</sup> with crop oil concentrate or methylated seed oil is recommended for burndown of labeled weeds less than 3" in height. When weeds are greater than 3" in height or weeds not controlled by REASON<sup>®</sup> are present, the addition of a burndown herbicide (e.g., Gramoxone<sup>®</sup> Extra, Roundup Ultra<sup>™</sup> or WEEDONE<sup>®</sup> 638) is recommended. Observe directions for use and precautions and restrictions on the label of the burndown herbicide.

#### **GROUND APPLICATION**

Apply REASON<sup>®</sup> alone or in tank mixtures by ground equipment in a minimum of 10 gallons of spray mixture per acre. Do not apply with hollow cone nozzles or with other application equipment which does not provide uniform coverage. Use sprayers that provide accurate and uniform application.

Do not exceed the maximum labeled rate for any type soil. Spray overlaps produce areas of over application and increase the potential for crop response.

With the exception of minimum or no-tillage systems, plant into a seed bed that is firm and free of clods and trash. Use only where dequate tillage is practiced to provide good soil coverage of the corn seed. PLANT CORN AT LEAST 1<sup>1</sup>/<sub>2</sub> INCHES DEEP. CORN SEED MUST BE COMPLETELY COVERED WITH SOIL AND FURROW FIRMED.

'n minimum or no-tillage systems, PLANT CORN AT LEAST 1½ INCHES DEEP. CORN SEED MUST BE COMPLETELY COVERED , ITH SOIL AND SOIL FIRMED. The use of no-till planters under conditions which do not allow good soil coverage of the corn seed can result in reduced crop stand or injury if REASON<sup>®</sup> contacts the germinating corn seed. Check equipment to ensure good seed coverage.



## SPECIFIC USE DIRECTIONS REASON® APPLIED ALONE

APPLICATION TIMING	AMOUNT OF REASON® PER ACRE						
	Medium and Fine Soils including Loam, Silt Ioam, Silt, Silty clay Ioam, Silty clay, Clay, Clay Ioam, Sandy clay Ioams and Sandy clays		Coarse Soils including Sands, Loamy sands and San loams				
	Conventional tillage	No-till	Conventional tillage	No-till			
PREPLANT (SURFACE-APPLIED or INCORPORATED)	2.5 to 3 pints	3 pints	1.25 to 1.5 pints	1.5 pints			
7 to 14* days prior to planting							
PREPLANT (SURFACE-APPLIED or INCORPORATED)	2 to 2.5 pints	2.5 pints	1 to 1.25 pints	1.25 pints			
0 to 7 days prior to planting							
PREEMERGENCE	2 to 2.5 pints	2.5 pints	1 to 1.25 pints	1.25 pints			
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\* REASON<sup>®</sup> may be applied up to 30 days prior to planting when used on Roundup Ready<sup>®</sup> or Liberty Link<sup>™</sup> corn where a sequential application of glyphosate or Liberty<sup>™</sup> is planned.

#### **RESTRICTIONS AND PRECAUTIONS FOR USE ON FIELD CORN**

Do not plant rotational crops until the following use season.

Do not graze or feed forage from treated area for 21 days following application.

In the States of CO, KS, KY, MO and TN, if the water table (i.e., level of saturation) is less than 25 feet below the ground surface, do not use on loamy sand or sand surface and subsoils with an average organic matter (in the upper 12 inches) of less than 2% by weight.

In the States of IA, IL, IN, MT, ND, NE, OH, SD and WY, if the water table (i.e., level of saturation) is less than 25 feet below the ground surface, do not use on sandy loam, loamy sand or sand surface soils and subsoils with an average organic matter (in the upper 12 inches) of less than 2% by weight.

Vhere there are state/local requirements regarding atrazine use (including lower maximum rates and/or greater setbacks) which are different from the label, the more restrictive/protective requirements must be followed.

#### TANK MIX COMBINATIONS

Lank mix combinations may be used in either conventional, conservation tillage, or no-till cropping systems and be applied at the same timings as REASON® Herbicide unless otherwise specified in the tank mix label. Multiple tank mixtures are allowed unless otherwise specified by the respective product labels. Check all tank mix product labels for proper rates and compatibilities for multiple tank mixes.

#### TANK MIX USE DIRECTIONS

#### PREPLANT SURFACE-APPLIED AND PREPLANT INCORPORATED APPLICATIONS 7 TO 14 DAYS PRIOR TO PLANTING

TANK MIX PARTNER	USE RATE PER ACRE FOR TANK MIX PARTNER	USE RATE PER ACRE FOR REASON <sup>®</sup> Medium and Fine Soils including Loam, Silt Ioam, Silt, Silty clay Ioam, Silty clay, Clay, Clay Ioam, Sandy clay Ioams and Sandy clays	USE RATE PER ACRE FOR REASON <sup>®</sup> Coarse Soils including Sands, Loamy sands and Sandy loams
DUAL®/DUAL® II	1 to 1.25 pints		
SURPASS	1 to 1.25 pints		
HARNESS	0.9 to 1.15 pints		
Micro-Tech®	2.5 to 3.2 pints	2.5 to 3 pints	1.25 to 1.5 pints
FRONTIER	0.6 to 0.8 pint		
TOPNOTCH®	2 to 2.5 pints		
PROWL®	1.8 to 2.4 pints		

Use the higher rate when heavier weed infestation pressure is present. Consult the product labels for allowable use rate according to soil type.

#### PREPLANT SURFACED-APPLIED AND PREPLANT INCORPORATED APPLICATIONS 0 TO 7 DAYS PRIOR TO PLANTING

TANK MIX PARTNER	USE RATE PER ACRE FOR TANK MIX PARTNER	USE RATE PER ACRE FOR REASON <sup>®</sup> Medium and Fine Soils including Loam, Silt Ioam, Silt, Silty clay Ioam, Silty clay, Clay, Clay Ioam, Sandy clay Ioams and Sandy clays	USE RATE PER ACRE FOR REASON <sup>®</sup> Coarse Soils including Sands, Loamy sands and Sandy loams
DUAL®/DUAL® II	1 to 1.25 pints		
SURPASS <sup>®</sup>	1 to 1.25 pints		
HARNESS	0.9 to 1.15 pints		
Micro-Tech	2.5 to 3.2 pints	2 to 2.5 pints	1 to 1.25 pints
RONTIER	0.6 to 0.8 pint		
TOPNOTCH®	2 to 2.5 pints		
ROWL®	1.8 to 2.4 pints		

Use the higher rate when heavier weed infestation pressure is present.

#### **PREEMERGENCE APPLICATIONS**

TANK MIX PARTNER	USE RATE PER ACRE FOR TANK MIX PARTNER	USE RATE PER ACRE FOR REASON <sup>®</sup> Medium and Fine Soils including Loam, Silt Ioam, Silt, Silty clay Ioam, Silty clay, Clay, Clay Ioam, Sandy clay Ioams and Sandy clays	USE RATE PER ACRE FOR REASON® Coarse Soils including Sands, Loamy sands and Sandy loams
DUAL®/DUAL® II	1 to 1.25 pints		
SURPASS	1 to 1.25 pints		
HARNESS	0.9 to 1.15 pints		
Micro-Tech <sup>®</sup>	2.5 to 3.2 pints	2 to 2.5 pints	1 to 1.25 pints
FRONTIER	0.6 to 0.8 pint		
TOPNOTCH®	2 to 2.5 pints		
PROWL®	1.8 to 2.4 pints		٠

Use the higher rate when heavier weed infestation pressure is present.

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BROADLEAF WEEDS CONTROLLED BY REASON® ALONE AND IN TANK MIXTURES FOR **FIELD CORN** 

Tank mixes with REASON<sup>®</sup> Herbicide are not limited to the tank mix partners mentioned in this table. Refer and follow the label of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

Broadleaf Weeds {C = Weeds Controlled}	REASON <sup>®</sup> Alone	REASON <sup>®</sup> plus Dual/Dual Il <sup>®</sup>	REASON <sup>®</sup> plus Surpass <sup>®</sup>	REASON <sup>®</sup> plus Harness <sup>®</sup>	REASON <sup>®</sup> plus Micro- Tech <sup>®</sup>	REASON <sup>®</sup> plus Frontier <sup>®</sup>	REASON <sup>®</sup> plus Topnotch <sup>®</sup>	REASON <sup>®</sup> plus Prowl <sup>®</sup>
Amaranth, Palmer	с	С	С	С	С	<u>с</u>	C	C
Buckwheat, wild	c	С	C	С	С	С	C	C
Buffalobur	С	C	С	С	С	С	C	с О
Carpetweed		C	С	C	С	С	C	С
Chamomile spp.	С	С	С	С	С	С	С	С
Chickweed, common	С	С	С	С	С	c	С	С
Cocklebur	С	C	C	С	C	C	C	C
Dandelion (seedling)	С	С	С	С	С	С	C	С
Groundcherry, seedling	с	с	с	С	С	С	с	С
Galinsoga	С	c	С	С	С	С	С	c
imsonweed	С	C C	С	с	c	c	c	C
Kochia	С	c	с	С	С	c	С	C
Lambsquarters	С	с	с	с	С	С	c	C
Mallow, Venice	С	c	с	с	с	с	c	C
Marestail	c	c	с	с	с	с	С	С
Morningglory, annual	С	c	с	С	c	c	С	С
Wild mustard	С	С	С	С	С	С	С	C
Nightshade, black	С	с	с	С	с	с	с	С
Nightshade, eastern black	с	с	C	с	с	c	c	С
Nightshade, hairy		<u> </u>	С	С	c	c	С	
Pennycress, field	c	c	С	С	с	с	c	С
Plantain, broadleaf	с	ċ	с	с	с	с	c	С
Pigweed, prostrate	С	С	c	с	с	c	C	С
Pigweed, redroot	С	С	c	С	C	C	c	С
Pigweed, smooth	С	С	c	с	c	c	C	С
urslane, common	С	c	С	с	С	с	С	С
Radish, wild	с	с	с	с	с	с	c	С
`зgweed, common	с	c	с	С	С	с	С	C.
.xagweed, giant*	С	с	C	с	С	c	C	С
Shepherds-purse	с	c	С	c	с	c	c	С
Smartweed, Pennsylvania	с	С	С	с	с	c	С	С
Sunflower, wild	С	c	С	с	С	С	C	C
Velvetleaf	с	c	с	с	с	С	С	С
Waterhemp, common	с	с	с	с	с	c	С	<u>C</u> · · · ·
Waterhemp, tall	С	С	C	С	c	C	c	Ċ.

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\*These weeds may require a postemergence application of BUCTRIL® or other appropriate postemergence herbicides for control of late secon escapes.

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#### GRASS WEEDS CONTROLLED BY REASON® ALONE AND IN TANK MIXTURES FOR FIELD CORN

Tank mixes with REASON® Herbicide are not limited to the tank mix partners mentioned in this table. Refer and follow the label of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

		•		•	•	_		
Grassy Weeds (C = Weeds Contro!led)	REASON <sup>®</sup> Alone	REASON <sup>®</sup> plus Dual/Dual II <sup>®</sup>	REASON <sup>®</sup> plus Surpass <sup>®</sup>	REASON <sup>®</sup> plus Harness <sup>®</sup>	REASON <sup>®</sup> plus Micro- Tech <sup>®</sup>	REASON <sup>®</sup> plus Frontier <sup>®</sup>	REASON <sup>®</sup> plus Topnotch <sup>®</sup>	REASON <sup>®</sup> plus Prowl <sup>®</sup>
Barnyardgrass	С	С	C	Ċ	С	С	С	С
Crabgrass, large	С	c	С	С	C	С	С	С
Crabgrass, smooth	С	С	С	С	С	С	С	С
Cupgrass, southwestern		с	с			с	с	
Cupgrass, woolly*	С	С	С	С	С	С	С	С
Foxtail, giant	С	С	С	С	С	С	С	С
Foxtail, green	С	С	С	С	C	С	С	С
Foxtail, robust purple	······································		С	с	С		С	
Foxtail, robust white			С	с	С		С	
Foxtail, yellow	C	С	c	С	c	С	С	С
Goosegrass	С	с	С	с	С	С	с	С
Johnsongrass, edling	с.	- C	с	с	с	с	с	С
Millet, wild proso*	С	С	с	С	С	С	С	С
Panicum, fall	С	с	c	с	C	С	С	с
.ice, red		с	С	c	C	4-**	1	
Sanbur, field	С	с	c	с	c	С	С	С
Signalgrass, broadleaf	С	С	с	с	С	С	С	С
Witchgrass		с	С	с	С	1	c	С

\*These weeds may require an appropriate postemergence herbicide application for control of late season escapes.

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#### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants that this product conforms to the chemical description on the label; that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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