	U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (H7505C) 401 "M" St., S.W. Washington, D.C. 20460	EPA Reg. Number: 524-329	Date of Issuance: JUN 30 2004
		Term of Issuance: Unconditional	
		Name of Pesticide Product: Lariat Herbicide	

NOTICE OF PESTICIDE:  
\_\_\_\_ Registration  
x Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):  
Monsanto Company  
1300 I. Street, N. W.  
Suite 450 East  
Washington, D.C. 20005

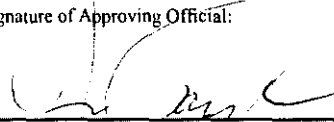
**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document, EPA has reregistered the product listed above provided you make the following changes, most of which are based on the atrazine component of your product, before you release the product for shipment.

1. The statement, "ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AIWC) to determine whether the use of this product is prohibited in your watershed. AIWC can be assessed through [[www.atrazine-watershed.info](http://www.atrazine-watershed.info)] or [1-866-365-3014]. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact [Monsanto Company] for a refund." must be added to the Directions for Use for this product.
2. Under Engineering Controls add the following statements.
  - a. Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240 (d) (6)]. Pilots must wear PPE required on this labeling for applicators, however, they need not wear chemical-resistant gloves when they are in an enclosed cockpit.
  - b. Flaggers supporting aerial applications must not use an enclosed cab that meets the definition on the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240 (d) (5)] for dermal protection.

Signature of Approving Official: 	Date: 6-30-04
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3. Incorporate the following statement into your Environmental Hazards section.

“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 very 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.”

4. Under “Application Restrictions: Mixing/Loading Setbacks” the phrases “This product may not be mixed or loaded ...”, “This product may not be stored, mixed, or loaded or used ...”, and “This product may not be applied aerially ...”, must be revised to read “This product **must** not be mixed or loaded ...”, “This product **must** not be stored, mixed, loaded, or used ...”, and “this product **must** not be applied aerially ...”, respectively.

5. Under Storage and Disposal, Container Disposal Options; incorporate the following statements for bulk containers. Alternatively, you may use statements previously approved under EPA Registration Nos. 524-537 and 524-539.

#### **Instructions for Users**

“When the container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase, or to an alternate location designated by the registrant at the time of purchase of this product. If not returned to the point of purchase or a designated location, triple rinse or pressure rinse the empty container and offer for recycling if available.

#### **Instructions for Users and Refillers**

This container must only be refilled with this pesticide product. **Do Not Reuse the Container for Any Other Purpose.** Do not transport if this container is damaged or leaking. If the container is damaged, leaking, or obsolete, or to obtain information about recycling refillable containers, contact [insert company name] at [insert telephone number]. Cleaning is not necessary prior to refilling with the same product. Clean container before final disposal of this container must be in compliance with state and local regulations.

#### **Instructions for Refillers**

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. If the container cannot be refilled, triple rinse or pressure rinse the empty container and offer for recycling if available.

6. Under “Application with Dry Bulk Fertilizers” incorporate the following statements.

–Impregnation of bulk fertilizer is restricted to commercial facilities. On-farm impregnation is prohibited.

–No more than 500 tons of dry bulk fertilizer (with atrazine) can be impregnated per day.

–No single facility may impregnate fertilizer with this product for more than 30 days per calendar year.

-The commercial facility impregnating the dry bulk fertilizer must inform, in writing, the user (applicator) of the dry bulk fertilizer that:

> Applicators must wear long sleeved shirt, long pants, shoes, and socks.

>The restricted -entry interval is 12 hours.”

7. The statement “Do not graze treated area or feed treated forage to livestock for 21 days following application” appearing on page 18 and 22 must be revised to read “Do not graze treated or feed treated forage to livestock for 60 days after application to field corn or 45 days after application to sweet corn.”

Enclosed is a copy of your label stamped “Accepted With Comments”. The actions taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended . Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain registration of your product.

Submit two (2) copies of final printed before you release the product for shipment.

4/34

**RESTRICTED USE PESTICIDE**

due to ground and surface water concerns. 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.

**LARIAT®  
FLOWABLE HERBICIDE  
BY MONSANTO**

Selective herbicide for preemergence weed control in corn (all types), and grain sorghum (milo).

Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water.

In case of an emergency involving this product or for user safety information on this product, Call Collect, day or night, (314) 694-4000.

SHAKE WELL BEFORE USING

**Complete Directions For Use**

Not for use in Suffolk and Nassau counties of New York.

**KEEP OUT OF REACH OF CHILDREN  
WARNING**

EPA Reg. No. 524-329

2003

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKGING LIMITATIONS.

**LIMIT OF WARRANTY AND LIABILITY**

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OF MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products

5/34

other than those set forth in the Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

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PRECAUTIONARY STATEMENTS

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Hazards to Humans  
and Domestic Animals

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Keep out of reach of children.

**WARNING! AVISO!**

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.)

**Causes substantial but temporary eye injury or skin irritation.** Harmful if swallowed. Do not get in eyes, on skin or on clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**

JUN 30 2004

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

524-329

**FIRST AID****If in eyes**

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

**If on skin or clothing**

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

**If swallowed**

- Call 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 do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

- **Have the product container or label with you when calling a poison control center or doctor, or going for treatment.**
- In case of an emergency involving this product, Call Collect, day or night **314) 694-4000.**
- This product is identified as **Lariat herbicide, EPA Registration No. 524-329.**

**NOTE TO PHYSICIAN**

- Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard. Contains petroleum distillate.

**Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are made of barrier laminate or vitron. If you want more options, follow the instruction for category H on an EPA chemical-resistance category selection chart.

Mixers and loaders using engineering controls and applicators must wear: long-sleeved shirt and long pants, shoes and socks, and goggles or face shield.

In addition to the above, mixers and loaders must wear: chemical resistant gloves and chemical resistant apron when cleaning equipment.

Mixers and loaders not using engineering controls and all other handlers exposed to the concentrate must wear: coveralls over short sleeved shirt and short pants, socks and chemical resistant footwear, goggles or face shield, chemical resistant gloves, and chemical resistant apron.

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.

#### **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 PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **Engineering Controls**

Mixers and loaders supporting aerial applications, or impregnation of dry bulk fertilizer are required to use a mechanical transfer system designed by the manufacturer to transfer liquid pesticide in a manner that prevents the liquid (but not necessarily any vapor) from contacting handlers or other people during the transfer. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS for agricultural pesticides [40 CFR 170.240(d)(4)]).

**IMPORTANT:** Mixers and loaders using closed systems must:

- 1) wear the PPE specified above for mixers and loaders using engineering controls,
- 2) must be provided and have immediately available for use in an emergence, such as a spill or an equipment breakdown, the following PPE: Coveralls, chemical resistant footwear.

In case of an emergency involving this product,  
or for user safety information on this product,  
Call Collect, day or night, (314) 694-4000.

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#### **Environmental Hazards**

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

Alachlor and atrazine and/or their metabolites are known to leach through soil into groundwater under certain conditions as a result of registered uses. Use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not apply to highly permeable soils (as classified by the USDA Natural Resources Conservation Service) where the depth to ground water is 30 feet or less.

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

#### **APPLICATION RESTRICTIONS: MIXING/LOADING SETBACKS**

This product may not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be stored, mixed or loaded or used

within 50 feet of all wells including abandoned wells (unless the well has been properly capped or plugged), 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 heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain water that may fall on the pad. Surface water shall not 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 material removal. An unroofed pad shall be of sufficient capacity to contain, at a minimum, 110 percent 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 percent 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 do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

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 set-back from runoff points must be planted to a crop or seeded with grass or other suitable crop. Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply.

Care must be taken when using this product to prevent back-siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

Check valves or anti-siphoning devices must be used on all mixing equipment. Disposal of excess pesticide, spray mixtures or rinsate should be according to label use instructions or according to the State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA regional office.

This product is toxic to terrestrial and aquatic plants, fish, and aquatic invertebrates. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high-water mark. Runoff and drift may be hazardous to aquatic organisms in neighboring areas.

Do not contaminate water when disposing of equipment wash water or rinsate.

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

Do not apply this product in a greenhouse.

#### TILE-TERRACED FIELDS CONTAINING STANDPIPES

To ensure protection of surface water from runoff through standpipes and tile outlets in terraced fields, one of the following options may be used:

1. Do not apply this product within 66 feet of standpipes in tile-outletted fields.
2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire tile-outletted terraced field.
3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when high crop residue management practices are used. High crop residue management practice is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.



9/34

**COMBUSTIBLE.**

Do not use or store near heat or flame.

Use only with adequate ventilation.

In case of: FIRE, use water spray, foam, dry chemical or CO<sub>2</sub>.

SPILL or LEAK, soak up, remove and keep away from humans and domestic animals.

**ACTIVE INGREDIENTS:\***

Alachlor, 2-chloro-2',6'-diethyl-N-(methoxymethyl)acetanilide .....	27.2%
Atrazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)-s-triazine .....	16.0%
Related atrazine compounds .....	0.3%
OTHER INGREDIENTS:.....	56.5%
	100.0%

Contains petroleum distillates.

\*Contains 300 grams/litre or 2.5 pounds/gallon of alachlor and 180 grams/litre or 1.5 pounds/gallon of atrazine and related compounds.

**DIRECTIONS FOR USE**

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

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

**Agricultural Use Requirements**

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. 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 or made of any waterproof material; and shoes plus socks.

For more product information, call toll-free 1-800-332-3111.

**Storage and Disposal**

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

**PESTICIDE STORAGE: STORE ABOVE 40°F.**

10/34

Below 32°F this product may freeze. If frozen, place in a warm room and roll and/or shake the container frequently to redissolve before using. For bulk containers, see the container label for alternate storage information.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Wastes of this pesticide may cause eye and skin irritation and may be dangerous. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label use instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER DISPOSAL OPTIONS:

##### (FOR REFILLABLE PORTABLE CONTAINERS)

Do not reuse this container except for refill in accordance with a valid Monsanto Repackaging or Toll Repackaging Agreement. If not refilled or returned to the authorized repackaging facility, triple rinse containers, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

##### (FOR BULK CONTAINERS)

Triple rinse emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities.

##### (FOR PLASTIC 1-WAY CONTAINERS & BOTTLES)

Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

##### (FOR DRUMS)

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### GENERAL INFORMATION

**The rotation to crops not specified on this label is prohibited. Rotational crops include: corn (all types), grain sorghum (milo), soybeans, peanut and dry beans. If soybeans, peanuts or dry beans are planted the following year, there is the possibility of crop injury due to carryover of atrazine.**

Do not apply more than 4 pounds of alachlor active ingredient per acre per year. This is equivalent to 6.4 quarts of this product per acre per year.

Lariat flowable herbicide is recommended for the control of many annual grasses and broadleaf weeds. The seed bed should be fine, firm and free of clods when tillage is performed.

Performance is improved when moisture occurs within one week after application. The amount required depends primarily upon the amount of soil moisture in the weed germination zone at the time of application, soil type and organic matter content, but 1/3 to 3/4 inch is generally sufficient for performance.

of this product. High intensity or excessive rainfall, or excessive irrigation after application may reduce control.

This product and all tank mixtures listed for corn and grain sorghum in the "DIRECTIONS FOR USE" section may be applied in water or sprayable fluid fertilizer solution prior to crop emergence. Post emergence application to corn is not allowed.

Read and carefully observe the cautionary statements and all other information appearing on this label and on the labeling of all products used in mixtures and sequential treatments.

Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

Do not apply when conditions favor drift.

Flush sprayer with clean water after use.

**NOTE:** Use this product for weed control in corn and grain sorghum (milo) only. CORN, PEANUTS, SORGHUM (MILO) OR SOYBEANS CAN BE PLANTED THE YEAR FOLLOWING THE USE OF THIS MIXTURE. IF SOYBEANS, PEANUTS, OR DRY BEANS ARE PLANTED THE FOLLOWING YEAR, THERE IS THE POSSIBILITY OF CROP INJURY DUE TO CARRYOVER OF ATRAZINE. Do not plant soybeans in areas where furrow irrigation is practiced.

### SOIL TEXTURE

Applicators should evaluate soil and weed conditions carefully to assure that they choose the lowest effective label rate.

The recommended use rates of this product and the other herbicides labeled for use in tank mixtures with this product generally vary with soil texture. Unless soil texture is specifically named, rate tables throughout this label refer to only three soil textural groups: coarse, medium and fine. The following is a complete listing of soil textures included in each of these three soil textural groups:

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SOIL TEXTURAL GROUP	SOIL TEXTURE
COARSE:	sand, loamy sand, sandy loam
MEDIUM:	loam, silt loam, silt, sandy clay loam
FINE:	silty clay loam, clay loam, sandy clay, silty clay, clay

Refer to the above table to determine the corresponding soil textural group for the soil to be treated.

### MIXING, SPRAYING AND HANDLING INSTRUCTIONS

Direct contact or exposure to this product or spray mixtures of this product should be minimized. The following instructions for transfer, mixing, cleaning or repairing equipment should be followed in order to minimize this exposure. Review the protective clothing requirements as listed in the Precautionary

12/34

Statements section of this label and do not use this product until you have the necessary protective clothing.

#### 2.5 Gallon Containers

Open pouring from these containers can result in exposure from splashing or spilling. Special care in lifting and pouring are strongly recommended.

#### Bulk Containers

Open pouring from these containers can result in exposure from splashing or spilling and is not recommended. This product should be transferred from these containers to the mix or spray tank using pumps or transfer probes. The probe or pump should not be removed from the container or disconnected until the container is emptied and rinsed. Use the pump or probe system to rinse the empty container and transfer the rinsate directly to the mix or spray tank.

#### Equipment Cleaning & Repair

Cleaning and repair of transfer systems and application equipment is a source of exposure to this product. Care should be taken to minimize exposure during cleaning and repair of transfer systems and application equipment. Whenever possible, these systems or equipment should be rinsed before being cleaned or repaired. When repairs must be made during transfer or application, the equipment should be shut down, and special care taken to avoid contact with the pesticide.

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### **Mixing Instructions**

Always predetermine the compatibility of this product with water carrier or sprayable fluid fertilizer or other labeled herbicides by mixing small proportional quantities in advance. See the "STANDARD SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST" section in this label to determine the compatibility of this product and the labeled tank mixtures recommended for use with sprayable fluid fertilizer carrier.

Mix this product with appropriate carrier as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with the carrier.
3. If a compatibility agent is necessary to improve mixing or to prevent the formation of undesirable and unsprayable gels or precipitates, while agitating add it to the carrier already in the tank. Use only compatibility agents cleared by the FDA for this use. Read and follow all directions for use, cautionary statements and all other information appearing on the selected compatibility agent label. Check for adequate agitation.
4. Premix one part of this product with one part water. Add diluted mixture SLOWLY through the screen into the tank. When necessary, this product may be diluted with a fertilizer carrier instead of water, after compatibility has been confirmed.
5. With minimum tillage systems, add the required amounts of Roundup® UltraMAX™, other Roundup agricultural herbicides or Gramoxone™ Extra near the end of the filling process.
6. Complete filling the sprayer tank with carrier. Remove hose from tank immediately to avoid siphoning back into the carrier source. Maintain good agitation at all times until the contents of the tank are sprayed. **NOTE:** If spray mixture is allowed to settle at any time, thorough agitation is required to resuspend the mixture before spraying is resumed.

**NOTE:** If the spray mixture is expected to set unagitated for 8 hours or more (overnight), add a resuspendability agent prior to shutdown (i.e., Hold-Up™) at 8 ounces per 100 gallons of spray solution or nitrogen liquid fertilizer solution (i.e., 28 percent) at 4 gallons per 100 gallons of spray solution. Allow resuspendability agent to mix with spray mixture before shutting off agitation. Agitate the spray mixture thoroughly to resuspend settled product before resuming spraying.

Keep by-pass line on or near the bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be 50 mesh. Carefully select the correct nozzle to avoid spraying a fine mist. For best results, use flat fan or flood jet nozzles. Check for even distribution of spray droplets. To reduce loss of the chemical due to drift of a fine mist, apply at pressures from 20 to 40 psi.

### **Spray Drift Requirements**

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.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

- For **ground boom applications**, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.
- For **aerial applications**, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 – 10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.
- The applicator also must use all other measures necessary to control drift.

### **STANDARD SPRAYABLE FLUID FERTILIZER COMPATIBILITY TEST**

Herbicides may not always mix evenly throughout a sprayable fluid fertilizer or the components may separate too quickly to make their combined use of practical value. This may be due to certain characteristics of the different fluid fertilizers. A simple test using small quantities of the components is suggested to provide compatibility potential.

The test follows:

#### **A. Materials Required For A Compatibility Test**

1. Two one-quart jars with lid or stopper (marked "with" and "without").
2. TEAspoons (for a more exacting test, a five to ten milliliter (mL.) pipette or graduated cylinder is desirable.
3. A minimum of one quart of the sprayable fluid fertilizer to be tested.
4. The herbicide(s) to be mixed.
5. A compatibility agent (the purpose of the adjuvant is to help keep the fertilizer and herbicide(s) in suspension, if this assistance is needed).

14/34

**B. Procedure**

1. Add one pint of the sprayable fluid fertilizer that will be used or other herbicide carrier to each jar marked "with" and "without".

Add One Pint Liquid Fertilizer  
To Two Quart Jars

WITH    WITHOUT

2. To the jar marked "with", add 1/4 TEAspoon or 1.2 milliliters of a suitable compatibility agent; shake gently for five to ten seconds to mix. (1/4 TEAspoon is the equivalent of two pints per 100 gallons of liquid fertilizer.)

To Jar Marked "With"  
Add Compatibility Agent  
And Shake to Mix

WITH    WITHOUT

3. To each jar add the appropriate amount of herbicide(s) listed in the following table. If more than one is used, add them separately with the wettable powders added first, flowables second and liquid last. Shake gently five to ten seconds after each addition.

Add Herbicide(s) To Both Jars  
And Shake to Mix

WITH    WITHOUT

		Amount to Be Added Per Pint of Sprayable Fluid Fertilizer (Assuming Volume is 25 Gallons/Acre)		
HERBICIDE	RATE/ACRE	Level TEAspoons		Milliliters
This Product	3 quarts =	2.9	or	14.2
	3.5 quarts =	3.4	or	16.6
	4 quarts =	3.8	or	19
	4.5 quarts =	4.3	or	21.4
	5 quarts =	4.8	or	23.8

This compatibility test is designed for 25 gallons of spray per acre. For changes in spray volume or herbicide rate, make appropriate changes in the ingredients of the test. Regardless of spray volume, the amount of compatibility agent should be equal to two or three pints (two pints = 1/4 TEAspoon or 1.2 milliliters, three pints = 3/8 TEAspoon or 1.8 milliliters per pint of sprayable fluid fertilizer) per 100 gallons of liquid fertilizer.

**C. Observations and Decisions**

1. If the herbicide(s) and the sprayable fluid fertilizer are compatible.
2. If a compatibility agent is necessary.

Five minutes after the final addition and mixing, observe both jars for the formation of large flakes, sludge, gels or other precipitates. Observe if the herbicide(s) cannot be physically mixed with the liquid fertilizer but remains as small oily particles in the solution.

If incompatibility in any form described above occurs in the jar "with" the compatibility agent added, the liquid fertilizer and herbicide(s) should not be used together in the same spray tank.

If incompatibility as described above occurs in the jar "without" the adjuvant but not in the jar "with" adjuvant, the use of a compatibility adjuvant is recommended.

Both jars should be allowed to stand and be observed periodically for one-half hour. If the separate layers of liquid fertilizer and additives can be resuspended by shaking, commercial application is possible. Wettable powders will either settle to the bottom of the tank or jar, or float to the top, depending upon the density of the fertilizers.

If the herbicide(s) is compatible with fluid fertilizer in the foregoing test without using a compatibility agent, fluid fertilizer may be used for the premixing. If it is not compatible, the herbicide(s) should be premixed with water before adding to the spray tank.

### APPLICATION INFORMATION APPLICATION SYSTEMS

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

**Aerial-Fixed wing; Helicopter--**Apply the recommended rates of this product or approved tank mixtures in 3 to 10 gallons of water per acre. AVOID DRIFT. DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY, OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW DRIFT.

Mixers and loaders supporting aerial applications are required to use a mechanical transfer system designed by the manufacturer to transfer liquid pesticide in a manner that prevents the liquid (but not necessarily any vapor) from contacting handlers or other people during the transfer. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS for agricultural pesticides [40 CFR 170.240 (d)(4)]).

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Ensure uniform application. To avoid streaked, uneven or overlapped application, use mechanical marking systems.

**Ground Broadcast Treatment--**Apply the recommended rates of this product or approved tank mixtures in 10 or more gallons of water or sprayable fluid fertilizer per acre. Do not apply during periods of gusty winds or winds in excess of 15 miles per hour.

**Band Treatment--**Apply a broadcast equivalent rate and volume per acre to determine these:

Band width in inches					
Row width	X	Broadcast		=	Band
in inches		RATE			RATE
		per acre			per acre
Band width in inches		Broadcast			Band
Row width	X	VOLUME		=	VOLUME
in inches		per acre			per acre

16/34

Mount spray equipment on the planter with nozzles behind press wheel and apply this product at planting time.

### Application with Dry Bulk Fertilizer

For dry-bulk fertilizer impregnation operations, the maximum amount of alachlor that an individual worker can handle in a single day is 4000 pounds of alachlor active ingredient which is equivalent to 1600 gallons of this product.

Mixers and loaders supporting impregnation of dry bulk fertilizer are required to use a mechanical transfer system designed by the manufacturer to transfer liquid pesticide in a manner that prevents the liquid (but not necessarily any vapor) from contacting handlers or other people during the transfer. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS for agricultural pesticides [40 CFR 170.240 (d)(4)]).

The herbicide-fertilizer impregnation process (In-Plant and On-Board systems) must be completed only by commercial fertilizer or chemical dealerships properly equipped for this procedure. Contact Monsanto Company for additional information regarding recommended equipment and methods for herbicide-fertilizer impregnation applications.

Dry bulk fertilizer may be impregnated with this product for use on corn and grain sorghum (milo). This product must be applied with 200 or 450 pounds of dry bulk fertilizer per acre and shallowly incorporated within 7 days prior to planting. On medium and fine textured soils in areas where soil incorporation is not planned; i.e., reduced tillage situations or in some conventional till situations, applications can be made up to 30 days before planting to allow moisture to move the herbicide-fertilizer mixture into the soil. On coarse textured soils, applications can be made up to 14 days prior to planting. This herbicide must be applied as recommended in this label for the crop, weed and soil type treated. Refer to the table for broadcast rate per acre in the "EARLY PREPLANT, PREPLANT INCORPORATED OR PREEMERGENCE SURFACE APPLICATION" section of this label to determine the recommended broadcast rate per acre for the herbicide treatment to be applied.

The following table provides a reference to determine the amount of LIQUID herbicide to be mixed per ton of dry bulk fertilizer for a range of herbicide recommendations for fertilizer per acre:

Fertilizer Rate (pounds/acre)	Acres Covered (per ton)	RECOMMENDED QUARTS LIQUID HERBICIDE/ACRE			
		3 (quarts of herbicide/ton dry bulk fertilizer)	3.5	4	4.5
200	10	30	35	40	45
250	8	24	28	32	36
300	6.7	20	23.3	26.6	30
350	5.7	17.1	20	22.8	25.7
400	5	15	17.5	20	22.5
450	4.5	13.3	15.6	17.8	20

To determine the amount of herbicide needed for rates not included in the preceding table, use the following formula:

$$\frac{\text{Recommended herbicide rate (pounds or quarts)/acre} \times 2000}{\text{pounds fertilizer/acre}} = \text{Pounds or quarts of herbicide per ton of dry bulk fertilizers}$$

With the In-Plant system, mix and blend the dry fertilizer and herbicide mixture in a closed rotary-drum-type mixer allowing sufficient time to ensure uniform coverage. Use at least one ton of dry fertilizer per mixing operation. Inject the herbicide into the drum over a minimum of a 2-minute period and allow at least



17/34

2 additional minutes mixing time to ensure uniformity. The nozzle used to spray the herbicide treatment must be placed inside the mixer to provide uniform spray coverage of the tumbling fertilizer.

If the dry fertilizer used has inadequate adsorptive capacity, a highly adsorptive material such as Agsorb™ or Microcel™ can be added to provide a free-flowing mixture. Contact Monsanto Company for specific guidelines with regard to the sequence of addition of the various components and the amount of drying agent to add to the herbicide-fertilizer mixture to insure a free flowing mixture.

The following is a partial list of dry fertilizers which may be impregnated with this product.

Ammonium sulfate	21-0-0
Ammonium phosphate-sulfate	16-20-0
Diammonium phosphate	18-46-0
Potassium chloride	0-0-60
Potassium sulfate	0-0-52
*Urea	46-0-0

\*Some ureas may be phytotoxic when applied on corn. Use only ureas known to be safe to corn.

**NOTE:** DO NOT impregnate tank mixtures of this product with other herbicides or fertilizers containing ammonium nitrate, potassium nitrate or sodium nitrate.

Spread the herbicide-fertilizer mixture with a properly calibrated dribble, pneumatic (air flow) or spin applicator. Be certain the material is applied uniformly to the soil surface. When using spin spreaders, a 100 percent overlap is recommended to ensure even distribution. Spin applicators should be calibrated to apply one-half the desired rate per acre and application overlapped by doubling back to cover one-half of the previous swath. Dribble spreaders must be calibrated with the herbicide-fertilizer mixture since the flow pattern for the herbicide-coated fertilizer will generally be slower than straight dry fertilizer. Nonuniform spreading of the herbicide-fertilizer mixture may result in unsatisfactory weed control or crop injury.

### APPLICATION TIMING AND METHODS

**Early Preplant Surface-**This product and some labeled tank mixtures of this product may be applied to no-till and other conservation tillage systems before weeds emerge and up to 45 days before planting. Split applications can be made 30 to 45 days prior to planting, with 60 percent of the recommended broadcast rate applied initially and the remaining 40 percent applied at planting. Applications made less than 30 days prior to planting can be made either as a split or single application. If weeds are present at the time of application, apply this product in tank mixture with an appropriate contact herbicide. Observe direction for use, precautions and restrictions on the label of the contact herbicide. During the planting operation, be careful not to move untreated soil to the surface or move treated soil out of the row, as weed control may be reduced.

**Preplant Incorporation-**This product and many of the labeled tank mixtures may be mixed into the soil using shallow incorporation equipment any time within 7 days prior to planting. Refer to the crop to be treated in the "DIRECTIONS FOR USE" section of this label to determine if preplant incorporation is recommended. Apply the recommended treatment rate to the soil surface as a broadcast application. Precipitation or irrigation is required to bring incorporated herbicide treatments into contact with germinating weed seedlings.

The amount of precipitation or irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/3 to 3/4 inch is normally adequate. If weeds emerge after treatment, rotary hoe or shallowly cultivate immediately to improve performance.

18/34

**NOTE:** Do not incorporate unless specifically recommended in this label for the crop and herbicide treatment selected. Incorporation of this product and its labeled tank mixtures on coarse soil types may reduce length of weed control due to leaching with rainfall or irrigation. Incorporation is not recommended on coarse soils in the southeastern states.

**1-Pass Incorporation:** Shallowly incorporate (surface blend) the treatment into the upper 1 to 2 inches of the soil. Equipment should be operated at manufacturer's designed speed for incorporation to ensure adequate mixing and distribution of the herbicide treatment in the soil. Equipment design including any drag attachments must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Soil conditions, including moisture content and crop residue levels, must be suitable to allow thorough and uniform mixing with the equipment used for 1-pass incorporation.

**2-Pass Incorporation:** When 2-pass incorporation is used, shallowly incorporate the herbicide treatment into the upper 1 to 2 inches of the soil with equipment set to work the soil **NO DEEPER THAN 4 INCHES**. The second pass must be made at an angle to and no deeper than the first pass to ensure proper distribution of the herbicide treatment in the soil.

**Preemergence Surface Application**—This product and all labeled tank mixtures may be applied to the soil surface after planting and prior to either crop or weed emergence, apply within 5 days of last preplant tillage. If weeds emerge after treatment, or if treatment is applied more than 5 days after last preplant tillage, rotary hoe or shallowly cultivate immediately to improve performance. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone. The amount of precipitation or overhead sprinkler irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/3 to 3/4 inch is normally adequate. Performance is improved when moisture is received within 7 days after application and prior to weed emergence. High intensity or excessive rainfall or excessive irrigation after application may reduce control.

## **CULTIVATION INFORMATION**

**Cultivation Information**—Delay cultivation after application for as long as possible unless weeds or grasses emerge. Shallowly cultivate or rotary hoe immediately if weeds or grasses emerge. If cultivation is necessary because of soil crusting or compaction, set equipment shallow and minimize lateral soil movement to avoid dilution or displacement of the herbicide treatment. If a band application is used and weeds have emerged in the treated band, set cultivator to throw soil into the row, covering the band.

## **CONSERVATION OR MINIMUM TILLAGE SYSTEMS TANK MIXTURES**

### **At-Planting Applications**

When applied as directed under the conditions described, the recommended tank mixtures control many emerged annual weeds, suppress many emerged perennial weeds and give preemergence control of many annual grasses and broadleaf weeds when corn or grain sorghum will be planted directly into a cover crop, stale seedbed, established sod, or in previous crop residues. Consult the **WEEDS CONTROLLED** section of this label to determine the weeds that are controlled or reduced prior to their emergence, and the **WEEDS CONTROLLED** section of the Roundup agricultural herbicide, Gramoxone or 2,4-D label to determine the weeds that are controlled or reduced following postemergence treatment by these products. **USE OF THESE MIXTURES FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IS NOT RECOMMENDED.**

Apply the recommended tank mixtures **BEFORE CROP EMERGENCE**. As density of stubble, crop residue or weeds increases, spray volume and rate should be increased within the recommended ranges to ensure complete coverage. In the absence of emerged vegetation, delete the Roundup agricultural herbicide; 2,4-D or Gramoxone Extra portion of these tank mixtures. Follow the recommendations in the

preceding sections of this label and also the label of the contact herbicide that is included in the tank mixture to provide postemergence control of weeds.

**APPLY ONLY BY GROUND APPLICATION SYSTEMS. DO NOT APPLY BY AIR.**

#### **Attention**

**AVOID DRIFT - EXTREME CARE MUST BE USED WHEN APPLYING THESE TANK MIXTURES TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.** Do not allow spray mist to drift because even minute quantities of spray can cause severe damage or destruction to nearby crops, plants or other areas on which treatment is not intended. Do not apply when winds are gusty or in excess of 5 mph or when other conditions, including lesser wind velocities, will allow drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in fine particles (mist) that are more likely to drift.

**Ammonium Sulfate**—The addition of ammonium sulfate in the spray solution may increase the performance of Roundup agricultural herbicide tank mixtures on emerged annual weeds under adverse growing conditions. When using ammonium sulfate, add 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water. Ammonium sulfate should be added to the water in the spray tank and completely dissolved prior to adding the herbicide or surfactant. Do not mix ammonium sulfate in fluid fertilizer solutions.

If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet lines. Nozzle tip plugging may result from the use of low-quality ammonium sulfate. To determine quality, perform a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for one minute. If undissolved sediment is observed, predissolve the ammonium sulfate in water and filter prior to adding to the spray tank.

Following use of ammonium sulfate, thoroughly rinse the spray system with clean water to reduce corrosion.

**Surfactants**—Nonionic surfactants which are labeled for use with herbicides may be used with some Roundup agricultural herbicides. Check specific label for restrictions. When allowed, do not reduce rates of the Roundup agricultural herbicide when adding surfactant. Use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 50 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 50 percent active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

## **WEEDS CONTROLLED**

When applied as directed under the conditions described, this product and tank mixtures of this product will control or reduce competition from the weeds listed. Refer to the appropriate crop section of this label to determine the rates and tank mixtures recommended.

### **ANNUAL GRASSES**

#### **Barneygrass**

*Echinochloa crus-galli*

#### **Crabgrass**

*Digitaria ischaemum*

*Digitaria sanguinalis*

#### **Panicum, browntop**

*Panicum fasciculatum*

#### **Panicum, fall**

*Panicum*

*dichotomiflorum*

**Foxtail, giant**  
*Setaria faberi*

**Foxtail green**  
*Setaria viridis*

**Foxtail, yellow**  
*Setaria lutescens*

**Goosegrass**  
*Eleusine indica*

**Sandbur, Grassbur<sup>1</sup>**  
*Cenchrus incertus*

**Signalgrass, broadleaf**  
*Brachiaria spp.*

**Sprangletop, red**  
*Leptochloa filiformis*

**Witchgrass**  
*Panicum capillare*

### ANNUAL BROADLEAVES

**Beggarweed, Florida**  
*Desmodium tortuosum*

**Carpetweed**  
*Mollugo verticillata*

**Cocklebur<sup>3</sup>**  
*Xanthium strumarium*

**Galinsoga**  
*Galinsoga spp.*

**Groundcherry, annual**  
*Physalis spp.*

**Groundcherry, cutleaf**  
*Physalis angulata*

**Jimsonweed**  
*Datura stramonium*

**Kochia**  
*Kochia scoparia*

**Lambsquarters**  
*Chenopodium album*

**Marestail, Horseweed**  
*Conyza canadensis*

**Morningglory, annual<sup>3</sup>**  
*Ipomoea purpurea*

**Mustard**  
*Brassica spp.*

**Nightshade, black**  
*Solanum nigrum*

**Nightshade, hairy**  
*Solanum sarrachoides*

**Pigweed, Carelessweed**  
*Amaranthus spp.*

**Purslane**  
*Portulaca oleracea*

**Pusley, Florida**  
*Richardia scabra*

**Ragweed, common**  
*Ambrosia artemisiifolia*

**Sida, spiny; Teaweed**  
*Sida spinosa*

**Smartweed**  
*Polygonum*  
*pensylvanicum*  
*Polygonum persicaria*

**Velvetleaf, Buttonweed<sup>3</sup>**  
*Abutilon theophrasti*

**Waterhemp**  
*Amaranthus*  
*tuberculatos*

### SEDGE

**Nutsedge, yellow<sup>4</sup>**  
*Cyperus esculentus*

- 1 When applied at 4 to 5 quarts per acre this product controls this weed. . Preemergence surface applications should be applied to a freshly prepared seedbed. Rotary hoe or initiate overhead irrigation (0.33 to 0.55 inch) within 24 hours of application for best control.
- 2 When applied at 5 quarts per acre this product on medium and fine textured soils and preplant incorporate only this product controls this weed. The 5- quart per acre rate is limited to soils not highly erodible and highly erodible soils with more than 30 percent plant residue cover.
- 3 When applied at 4 to 5 quarts per acre this product controls these weeds. Use the higher rate in coarse textured soils or medium and fine textured soils with organic matter content greater than 3 percent.
4. When applied at rates of 4 to 5 quarts per acre on a broadcast basis preplant incorporated or immediately after planting and within 5 days of last tillage, this product will reduce competition from the following HARD-TO-CONTROL weeds:

#### ANNUAL GRASSES

**Johnsongrass, seedling**  
*Sorghum halepense*

**Rice, red**  
*Oryza sativa*

**Shattercane, wild cane**  
*Sorghum bicolor*

**Sorghum, Volunteer**  
*Sorghum bicolor*

#### ANNUAL BROADLEAVES

**Sicklepod**  
*Cassia obtusifolia*

#### **CORN CONTAINING THE ROUNDUP READY® GENE**

This product may be used in Roundup Ready corn, or corn that contains the Roundup Ready gene. A minimum of 1.5 quarts per acre of this product is required. Use the full labeled rate of this product when the application is 14 days or more prior to planting or when the following grasses may be expected: barnyardgrass, shattercane, seedling johnsongrass or sandbur.

#### **Preemergence Sequential Program**

This product may be used at a reduced rate preemergence in a sequential program with Roundup UltraMAX, or other Roundup agricultural herbicide in Roundup Ready corn. Use 50% to 100% of the labeled rate of this product for the appropriate soil texture and organic matter, per the Application Rate Table. Apply a sequential application of Roundup UltraMAX, or other Roundup agricultural herbicide in Roundup Ready corn, per the label instructions.

If weeds are present at the time of preemergence application, tankmix Roundup UltraMAX or other Roundup agricultural herbicide, to control emerged vegetation.

## CORN—CONVENTIONAL TILLAGE (All Types)

**NOTE:** Each crop section of this label provides recommended treatment rates for this product and tank mixtures including this product. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control, injury to crops, persons or animals, or other unintended consequences. Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures, including precautions on soil pH, sensitive varieties, minimum re-cropping interval and rotational guidelines.

Use the higher rates in the recommended ranges in areas of heavy weed infestation or where otherwise specified. If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds. Do not apply when conditions favor drift.

Detailed information regarding Application Systems and Application Timings and Methods appears in the General Information section and should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the General Information, the specific information should control.

Do not make more than two applications per year or exceed a total of 6.4 quarts of this product per acre per year. If there has been a previous application of a product containing atrazine, do not exceed a total of 2.5 pounds of atrazine active ingredient per acre per calendar year.

Do not make more than one application of this product per year on sweet corn.

**For preemergence weed control on highly erodible soils (as defined by the Soil Conservation Service) with less than 30 percent plant residue cover, the maximum rate is 4.25 quarts of this product per acre (1.6 pounds of atrazine active ingredient per acre). On soils not highly erodible or on highly erodible soils with more than 30 percent plant residue cover, the maximum rate is 5.3 quarts of this product per acre (2 pounds atrazine active ingredient per acre).**

DO NOT graze treated area or feed treated forage to livestock for 21 days following application.

## LARIAT

### APPROVED APPLICATION SYSTEMS

**Ground: Broadcast boom, banded; Aerial: Fixed wing, helicopter; Dry Bulk Fertilizer Impregnation**

### APPROVED APPLICATION METHODS

**Preplant Incorporated, Preemergence Surface**

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)*	
	Less than 3% organic matter	3% or more organic matter
Coarse	2.50	3.00
Medium	3.00	3.75
Fine	3.75	3.75 to 4.5

\*Use 4 to 5 quarts of this product per acre in areas of heavy weed infestations. Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**NOTE:** When applied under sprinkler irrigation systems on coarse soils, use a minimum of 3 quarts of this product per acre.

**NOTE:** For hard-to-control weeds, additional amounts of Lasso herbicide and/or atrazine may be added to the recommended treatment rates for this product to provide improved control. For more consistent control of common cocklebur, annual morningglory or velvetleaf, additional atrazine may be applied so the total atrazine rate is at least 1.5 quarts per acre on medium soil with less than 3 percent organic matter, and 1.5 to 2 quarts on medium and fine soils with 3 percent or greater organic matter content.

APPLICATION RATE (quarts)	ADDITIONAL PRODUCT (quarts)	
LARIAT	LASSO (maximum)	ATRAZINE
2.5	1.25 to 2.25	1.1
3.0	1.00 to 2.00	0.9
3.5	0.75 to 1.75	0.7
4.0	0.50 to 1.50	0.5

**LARIAT plus BALANCE PRO  
(TANK MIXTURE)**

FOR USE IN FIELD CORN AND SILAGE CORN

**APPROVED APPLICATION SYSTEMS**

**Ground – Broadcast boom; banded.**

**APPROVED APPLICATION METHODS**

**Preplant Incorporated, Preemergence Surface**

Balance PRO is not registered in all states. Follow all Restrictions and Precautions on the Balance PRO label including planting depth, environmental precautions, and soil type restrictions.

Follow the Balance PRO Technical Bulletins, 24(c) labels and 2(ee) recommendations for additional **use rate restrictions** based on soil textures and depth to groundwater in various states.

24/34

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (quarts of Lariat and ounces of Balance PRO)					
	< 3% ORGANIC MATTER			> 3% ORGANIC MATTER		
	Lariat (quarts)	+	Balance PRO (ounces)	Lariat (quarts)	+	Balance PRO (ounces)
COARSE *	2.00 to 2.50	+	1.0 to 1.88	2.75 to 3.00	+	1.0 to 1.88
MEDIUM	2.75 to 3.00	+	1.0 to 2.50	3.50 to 3.75	+	1.5 to 3.00
FINE	3.00 to 3.75	+	1.5 to 2.75	3.50 to 4.00	+	2.0 to 3.50

\* It is not recommended to use Balance PRO on coarse soils < 1.5% organic matter.

**LARIAT plus PROWL™  
(TANK MIXTURE)**

**APPROVED APPLICATION SYSTEMS**

**Ground: Broadcast boom, banded; Aerial: Fixed wing, helicopter**

**APPROVED APPLICATION METHOD**

**Preemergence Surface**

DO NOT preplant incorporate this tank mixture as serious crop injury can result.

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)*					
	Less than 3% organic matter			3% or more organic matter		
	Lariat	+	Prowl	Lariat	+	Prowl
Coarse	2.50		0.75	3.00		0.75 to 1
Medium	3.00		0.75 to 1	3.75		1.00
Fine	3.75		1.00	3.75 to 4.5		1.00

\*Use 4 to 5 quarts of this product per acre in areas of heavy weed infestations. Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**LARIAT plus LINURON  
(TANK MIXTURE)**

FOR USE ONLY EAST OF THE ROCKY MOUNTAINS.

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25/34

## APPROVED APPLICATION SYSTEMS

Ground: Broadcast boom, banded

## APPROVED APPLICATION METHOD

Preemergence Surface

## APPLICATION RATES:

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)*			
	Less than 3% organic matter		3% or more organic matter	
	Lariat + linuron 4L		Lariat + linuron 4L	
Coarse—sandy loam only	2.50	0.33	3.00	0.50
Medium	3.00	0.50	3.75	0.50
Fine	3.75	0.50	3.75 to 4.5	0.50

Use the rates listed in this label when using linuron 4L. Use equivalent rates when using 50 WP or 50% dry flowable formulations. One quart of linuron 4L equals 2 pounds of linuron 50 WP or 2 pounds of linuron 50% dry flowable.

\* Use 4 to 5 quarts of this product per acre in areas of heavy weed infestations. Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

## CORN--CONSERVATION OR MINIMUM TILLAGE

(All Types)

**NOTE:** Important information regarding Conservation or Minimum Tillage appears in the Application Information section at the front of this label and should be carefully reviewed in conjunction with the information in this section.

Each crop section of this label provides recommended treatment rates for this product and tank mixtures including this product. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control, injury to crops, persons or animals, or other unintended consequences. Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures, including precautions on soil pH, sensitive varieties, minimum re-cropping interval and rotational guidelines.

Use the higher rates in the recommended ranges in areas of heavy weed infestation or where otherwise specified. If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds. Do not apply when conditions favor drift.

Detailed information regarding Application Systems and Application Timings and Methods appears in the General Information section and should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the General Information, the specific information should control. This product and the following tank mixtures can be tank mixed with Roundup agricultural herbicides, Gramoxone Extra and/or 2, 4-D.

26/34

DO NOT APPLY BY AIR.

Do not make more than two applications per year or exceed a total of 6.4 quarts of this product per acre per year. If there has been a previous application of a product containing atrazine, do not exceed a total of 2.5 pounds of atrazine active ingredient per acre per calendar year.

Do not make more than one application of this product per year on sweet corn.

**For preemergence weed control on highly erodible soils (as defined by the Soil Conservation Service) with less than 30 percent plant residue cover, the maximum rate is 4.25 quarts of this product per acre (1.6 pounds of atrazine active ingredient per acre). On soils not highly erodible or on highly erodible soils with more than 30 percent plant residue cover, the maximum rate is 5.3 quarts of this product per acre (2 pounds atrazine active ingredient per acre).**

DO NOT graze treated area or feed treated forage to livestock for 21 days following application.

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### CONTROL OR SUPPRESSION OF EMERGED WEEDS - BURNDOWN PRIOR TO CROP

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#### ROUNDUP UltraMAX

**Annual Weeds**—Apply 13 to 20 ounces of Roundup UltraMAX per acre, or equivalent rates of other Roundup agricultural herbicides, in these tank mixtures when weeds are less than 6 inches tall. Use 26 ounces of Roundup UltraMAX per acre, or equivalent rates of other Roundup agricultural herbicides, for control of fall panicum, barnyardgrass, crabgrass and shattercane up to 2 inches tall; Pennsylvania smartweed up to 6 inches tall; other annual weeds 6 to 12 inches tall.

**Perennial Weeds**—At normal application dates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. Use of 1.6 to 3.25 quarts of Roundup UltraMAX per acre, or equivalent rates of other Roundup agricultural herbicides, in the above mixtures under these conditions provides top kill and reduces competition from many emerged perennial grasses and broadleaf weeds.

**NOTE:** When using these tank mixtures, do not exceed 3.25 quarts of Roundup UltraMAX per acre.

#### GRAMOXONE EXTRA

**Broadcast Treatment**—Apply 1.5 to 3 pints of Gramoxone Extra in these tank mixtures immediately before, during or after planting. Use 1.5 to 2 pints when weeds are 1 to 3 inches tall; 2 to 2.5 pints when weeds are 3 to 6 inches tall and 2.5 to 3 pints when weeds are 6 inches tall. This mixture may not control weeds taller than 6 inches. Add a nonionic spreader surfactant (approved for use on crops) containing at least 75 percent surfactant active agent at 8 ounces per 100 gallons of diluted spray.

#### 2,4-D

**Broadcast Treatment**—Apply 1 to 2 pints of 2,4-D (amine or low-volatile ester) in these tank mixtures. DO NOT use 2,4-D on light, sandy soils, or where soil moisture is inadequate for normal weed growth.

#### APPROVED APPLICATION SYSTEMS

**Ground: Broadcast boom**

#### PREEMERGENCE WEED CONTROL

#### LARIAT

#### APPLICATION RATES:

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BROADCAST RATE PER ACRE (QUARTS)\*

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27/34

SOIL TEXTURE	Lariat
Coarse	3.00
Medium	3.75
Fine	3.75 to 4.50

\*Use 4 to 5 quarts of this product per acre in areas of heavy weed infestations. Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**NOTE:** For hard-to-control weeds, additional amounts of Lasso and/or atrazine may be added to the recommended treatment rates for this product to provide improved control. For more consistent control of common cocklebur, annual morningglory or velvetleaf, additional atrazine may be applied so the total atrazine rate is at least 1.5 quarts per acre on medium soil with less than 3 percent organic matter, and 1.5 to 2 quarts on medium and fine soils with 3 percent or greater organic matter content.

APPLICATION RATES (quarts)	ADDITIONAL PRODUCT (quarts)	
LARIAT	LASSO (maximum)	ATRAZINE
2.5	1.25 to 2.25	1.10
3.0	1.00 to 2.00	0.90
3.5	0.75 to 1.75	0.70
4.0	0.50 to 1.50	0.50

#### LARIAT plus BALANCE PRO (TANK MIXTURE)

FOR USE IN FIELD CORN AND SILAGE CORN

#### APPROVED APPLICATION SYSTEMS

Ground – Broadcast boom; banded.

#### APPROVED APPLICATION METHODS

#### Preplant Incorporated, Preemergence Surface

Balance PRO is not registered in all states. Follow all Restrictions and Precautions on the Balance PRO label including planting depth, environmental precautions, and soil type restrictions.

Follow the Balance PRO Technical Bulletins, 24(c) labels and 2(ee) Recommendations for additional use rate restrictions based on soil textures and depth to groundwater in various states.

#### APPLICATION RATES

SOIL TEXTURE	BROADCAST RATE PER ACRE (quarts of Lariat and ounces of Balance PRO)			
	< 3% ORGANIC MATTER		> 3% ORGANIC MATTER	
	Lariat (quarts)	+ Balance PRO (ounces)	Lariat (quarts)	+ Balance PRO (ounces)
COARSE *	2.00 to 2.50	+ 1.0 to 1.88	2.75 to 3.00	+ 1.0 to 1.88
MEDIUM	2.75 to 3.00	+ 1.0 to 2.50	3.50 to 3.75	+ 1.5 to 3.00
FINE	3.50 to 3.75	+ 1.5 to 2.75	3.50 to 4.00	+ 2.0 to 3.50

28/34

\* It is not recommended to use Balance PRO on coarse soils < 1.5% organic matter.

### **LARIAT plus PRINCEP™ 4L**

#### **APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)		
	Lariat	+	Princep 4L*
Coarse	3.00		0.75 to 1.00
Medium	3.75		1.00 to 1.50
Fine	3.75 to 4.5		1.00 to 1.50

Use equivalent rates when using 90% dry flowable formulations. One quart of 4L formulation equals 1.1 pounds of the 90% dry flowable formulations.

**NOTE:** LAND TREATED WITH PRINCEP SHOULD NOT BE PLANTED TO ANY CROP EXCEPT CORN FOR ONE YEAR FOLLOWING TREATMENT AS CROP INJURY MAY OCCUR. AFTER HARVEST OF TREATED CROP, PLOW AND THOROUGHLY TILL THE SOIL IN THE FALL OR SPRING TO MINIMIZE POSSIBLE INJURY TO SPRING SEEDED ROTATIONAL CROPS.

#### **EARLY PREPLANT APPLICATION**

For use in no-till and other conservation tillage systems in CONNECTICUT, DELAWARE, ILLINOIS, INDIANA, IOWA, KANSAS, KENTUCKY, MARYLAND, MASSACHUSETTS, MICHIGAN, MINNESOTA, MISSOURI, NEBRASKA, NEW JERSEY, NEW YORK, NORTH CAROLINA, OHIO, PENNSYLVANIA, SOUTH DAKOTA, VERMONT, VIRGINIA, AND WISCONSIN.

This product, when applied in a single application (alone or in a tank mix combination with Princep), split application or as a sequential application to Princep in early preplant programs, will provide preemergence control or reduced competition of listed annual grasses and broadleaf weeds.

If emerged weeds are present at the time of treatment, Roundup agricultural herbicides, Gramoxone Extra or 2,4-D should be added to the product according to the directions for use on their respective product labels. If unsatisfactory weed control occurs (due to excessively dry or excessively wet conditions) following the earlier application, a postemergence application of an appropriate labeled grass and/or broadleaf weed herbicide may be used. If a postemergence treatment includes the herbicide used early preplant, do not exceed the labeled rate for corn on a given soil texture. Observe all precautions and limitations on the labels for Lariat, Roundup agricultural herbicides, Gramoxone Extra, 2,4-D and other postemergence herbicides before use of these products.

**DO NOT** apply tank mixtures containing Roundup agricultural herbicides, Gramoxone Extra or other contact herbicides by air.

**RECOMMENDED RATE AND TIMING OF APPLICATION:**

**Single application-**Application of this product should be made less than 30 days before planting but prior to weed emergence.

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)*
	Lariat
Coarse	3.50 to 4.00
Medium	3.75 to 4.75
Fine	4.75 to 5.30

This product may also be tank mixed with 1.25 quarts per acre of Princep to provide improved control of fall panicum and crabgrass.

**NOTE:** Applications on coarse soils should NOT be made more than 2 weeks prior to planting.

\*Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**Split application-**Apply 60 percent of the recommended rate as a split treatment prior to weed emergence and no more than 45 days prior to planting and the remaining 40 percent at or immediately following planting.

FOR CONTROL OF FALL PANICUM, CRABGRASS OR BROADLEAF SIGNALGRASS USE THE SEQUENTIAL APPLICATION OF THIS PRODUCT FOLLOWING PRINCEP.

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)*
	Lariat
Coarse	3.50 to 4.00
Medium	3.75 to 4.75
Fine	4.75 to 5.30

\*Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**Sequential application-**Application of this product following Princep should be utilized for the control of fall panicum, crabgrass or broadleaf signalgrass. Apply 1 to 1.25 quarts per acre of Princep prior to weed emergence and no more than 45 days prior to planting. At or immediately following planting apply the recommended rate of this product.

**APPLICATION RATES:**

BROADCAST RATE PER ACRE (QUARTS)	
SOIL TEXTURE	Lariat
Coarse	3.00 to 4.00
Medium	3.50 to 4.50
Fine	3.75 to 4.75

When using Princep 90 use equivalent rates. One quart of Princep 4L equals 1.1 pounds of Princep 90.

**NOTE:** Soil treated with Princep should not be planted to any crop except corn for one year following treatment as crop injury may occur. After harvest of the treated crop, plow and thoroughly till the soil in the fall or spring to minimize possible injury to spring seeded rotational crops.

#### GRAIN SORGHUM (MILO) – CONVENTIONAL TILLAGE

**NOTE:** Each crop section of this label provides recommended treatment rates for this product and tank mixtures including this product. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control, injury to crops, persons or animals, or other unintended consequences. Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures, including precautions on soil pH, sensitive varieties, minimum re-cropping interval and rotational guidelines.

Use the higher rates in the recommended ranges in areas of heavy weed infestation or where otherwise specified. If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds. Do not apply when conditions favor drift.

Detailed information regarding Application Systems and Application Timings and Methods appears in the General Information section and should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the General Information, the specific information should control.

When making applications on grain sorghum, do not make more than two applications per year or exceed a total of 6.4 quarts of this product per acre per year. If there has been a previous application of a product containing atrazine, do not exceed a total of 2.5 pounds of atrazine active ingredient per acre per calendar year.

**For preemergence weed control on highly erodible soils (as defined by the Soil Conservation Service) with less than 30 percent plant residue cover, the maximum rate is 4.25 quarts of this product per acre (1.6 pounds of atrazine active ingredient per acre). On soils not highly erodible or on highly erodible soils with more than 30 percent plant residue cover, the maximum rate is 5.3 quarts of this product per acre (2 pounds atrazine active ingredient per acre).**

Do not graze or harvest forage for 70 days following application of this product or tank mixtures of this product.

In Texas, use only in the Panhandle area and the fine textured soils of the Gulf Coast and Blacklands. In the Texas Panhandle and Oklahoma Panhandle, apply this product as a preemergence surface application only. In the Texas Panhandle, Oklahoma Panhandle and the fine textured soils of the Gulf

Coast and Blacklands of Texas DO NOT exceed 3.25 quarts of this product per acre as crop injury may result due to atrazine.

Applications made to grain sorghum (milo) growing on alkali soils or where cuts, fills or erosion have exposed calcareous or alkali subsoils may result in crop injury.

### LARIAT

Applications must be made ONLY to grain sorghum planted with seed that has been properly treated with a seed protectant or safener.

### APPROVED APPLICATION SYSTEMS

Ground-Broadcast boom; banded

Aerial-Fixed wing; helicopter

Dry Bulk Fertilizer Impregnation

### APPROVED APPLICATION METHODS

**Preplant Incorporated, Preemergence Surface**

**NOTE:** Applications made to grain sorghum (milo) growing on alkali soils or where cuts, fills or erosion have exposed calcareous or alkali subsoils may result in crop injury.

### APPLICATION RATES:

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)	
	Less than 1.5% organic matter	1.5% or more organic matter
Coarse**	2.50	2.75
Medium	2.75	2.75 to 3.75
Fine	3.00	3.00 to 4.00

Use 4 to 5 quarts of this product per acre in areas of heavy weed infestations. Do not exceed 4.25 quarts of Lariat per acre on highly erodible soils with less than 30 percent plant residue cover.

**NOTE:** For hard-to-control weeds, additional amounts of Lasso and/or atrazine may be added to the recommended treatment rates for this product to provide improved control. For more consistent control of common cocklebur, annual morningglory or velvetleaf, additional atrazine may be applied so the total atrazine rate is at least 1.5 quarts per acre on medium soil with less than 3 percent organic matter, and 1.5 to 2 quarts on medium and fine soils with 3 percent or greater organic matter content.

APPLICATION RATE (quarts)	ADDITIONAL PRODUCT (quarts)	
LARIAT	LASSO (maximum)	ATRAZINE
2.5	1.25 to 2.25	1.10

3.0	1.00 to 2.00	0.90
3.5	0.75 to 1.75	0.70
4.0	0.50 to 1.50	0.50

**NOTE:** When applied under sprinkler irrigation systems on coarse soils, use a minimum of 3 quarts of this product per acre.

**\*\*DO NOT** use this product for preplant incorporated application in coarse soils.

### GRAIN SORGHUM (MILO)—CONSERVATION OR MINIMUM TILLAGE

**NOTE:** Important information regarding Conservation or Minimum Tillage appears in the Application Information section at the front of this label and should be carefully reviewed in conjunction with the information in this section.

Each crop section of this label provides recommended treatment rates for this product and tank mixtures including this product. Applications which are not consistent with recommendations in this label may result in unsatisfactory weed control, injury to crops, persons or animals, or other unintended consequences. Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures, including precautions on soil pH, sensitive varieties, minimum re-cropping interval and rotational guidelines.

Use the higher rates in the recommended ranges in areas of heavy weed infestation or where otherwise specified. If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds. Do not apply when conditions favor drift.

Detailed information regarding Application Systems and Application Timings and Methods appears in the General Information section and should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the General Information, the specific information should control.

This product and the following tank mixtures can be tank mixed with Roundup agricultural herbicides or Gramoxone Extra.

Do not make more than two applications per year or exceed a total of 6.4 quarts of this product per acre per year. If there has been a previous application of a product containing atrazine, do not exceed a total of 2.5 pounds of atrazine active ingredient per acre per calendar year.

**For preemergence weed control on highly erodible soils (as defined by the Soil Conservation Service) with less than 30 percent plant residue cover, the maximum rate is 4.25 quarts of this product per acre (1.6 pounds of atrazine active ingredient per acre). On soils not highly erodible or on highly erodible soils with more than 30 percent plant residue cover, the maximum rate is 5.3 quarts of this product per acre (2 pounds atrazine active ingredient per acre).**

Do not graze or harvest forage for 70 days following application of this product or tank mixtures of this product.

### APPROVED APPLICATION SYSTEMS

**Ground: Broadcast boom**

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### CONTROL OR SUPPRESSION OF EMERGED WEEDS - BURNDOWN PRIOR TO CROP

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**ROUNDUP UltraMAX**

**Annual Weeds**—Apply 13 to 20 ounces of Roundup UltraMAX per acre, or equivalent rates of other Roundup agricultural herbicides, in these tank mixtures when weeds are less than 6 inches tall. Use 26 ounces of Roundup UltraMAX per acre, or equivalent rates of other Roundup agricultural herbicides, for control of fall panicum, barnyardgrass, crabgrass and shattercane up to 2 inches tall; Pennsylvania smartweed up to 6 inches tall; other annual weeds 6 to 12 inches tall.

**Perennial Weeds**—At normal application dates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. Use of 1.6 to 3.25 quarts of Roundup UltraMAX per acre, or equivalent Roundup agricultural herbicides, in the above mixtures under these conditions provides top kill and reduces competition from many emerged perennial grasses and broadleaf weeds.

**NOTE:** When using these tank mixtures, do not exceed 3.25 quarts of Roundup UltraMAX per acre.

**GRAMOXONE EXTRA**

**Broadcast Treatment**—Apply 1.5 to 3 pints of Gramoxone Extra per acre in these tank mixtures immediately before, during or after planting. Use 1.5 to 2 pints when weeds are 1 to 3 inches tall, 2 to 2.5 pints when weeds are 3 to 6 inches tall and 2.5 to 3 pints when weeds are 6 inches tall. These mixtures may not control weeds taller than 6 inches. Add a nonionic spreader surfactant (approved for use on crops) containing at least 75 percent surfactant active agent at 8 fluid ounces per 100 gallons of diluted spray.

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**PREEMERGENCE WEED CONTROL**


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**PREEMERGENCE WEED CONTROL****LARIAT**

Applications must be made **ONLY** to grain sorghum planted with seed that has been properly treated with a seed protectant or safener.

**APPLICATION RATES:**

SOIL TEXTURE	BROADCAST RATE PER ACRE (QUARTS)
	Lariat
Coarse-sandy loam only	2.75 to 3.00
Medium	3.00 to 3.75
Fine	3.25 to 4.00

Use the higher rate of this product in the recommended ranges when organic matter content is 1.5 percent or more.

**NOTE:** For hard-to-control weeds, additional amounts of Lariat and/or atrazine may be added to the recommended treatment rates for this product to provide improved control. For more consistent control of common cocklebur, annual morningglory or velvetleaf, additional atrazine may be applied so the total atrazine rate is at least 1.5 quarts per acre on medium soil with less than 3 percent organic matter, and 1.5 to 2 quarts on medium and fine soils with 3 percent or greater organic matter content.

APPLICATION RATES (quarts)	ADDITIONAL PRODUCT (quarts)	
	LARIAT	LASSO (maximum)      ATRAZINE
2.5	1.25 to 2.25	1.10
3.0	1.00 to 2.00	0.90
3.5	0.75 to 1.75	0.70
4.0	0.50 to 1.50	0.50

### EARLY PREPLANT APPLICATION

Applications must be made ONLY to grain sorghum planted with seed that has been properly treated with a seed protectant or safener.

Apply 3.75 to 5 quarts of this product per acre in 10 or more gallons of water or sprayable fluid fertilizer as a single application within 30 days prior to planting. When making split applications, apply 2.75 to 3 quarts of this product no more than 45 days prior to planting, followed by 1 to 2 quarts of this product per acre at planting. Use the lower rate where light weed infestation is expected and the higher rate where heavy weed infestation is expected. On coarse textured soils, apply 3 to 4 quarts per acre not more than 2 weeks prior to planting. If emerged weeds are present at the time of the early preplant application or at-planting application, a labeled contact herbicide or tillage should be used. The at-planting application should be made before crop or weed emergence. Minimize movement of treated soil out of the row or untreated soil to the surface during planting or weed control may be reduced.

THIS PRODUCT IS NOT APPROVED FOR USE IN CALIFORNIA.

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In case of an emergency involving this product, or for user safety information on this product, Call Collect, day or night, (314) 694-4000.

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