

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Washington, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

AUG 2 4 2011

Daniel J. Jenkins Monsanto Company 1300 I Street, NW, Suite 450 East Washington, DC 20005

Subject:

Label Amendment (change well setback from 150 to 50 feet, PRN 2001-5, add Roundup Ready Plus language, incorporate supplemental labels, add use on Miscanthus and other non-food bioenergy crops, add instructions for rotation to non-food winter cover crops, revise

tank mix directions)

MON 58430 Herbicide EPA Reg. No. 524-496

Application Dated April 6, 2011 Resubmission Dated July 6, 2011

Dear Mr. Jenkins:

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

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this letter must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely,

Mindy on till, Acting for

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

MASTER LABEL FOR EPA REG. NO. 524-496

Registered Brand Names:

# MON 58430 Herbicide (primary)

Alternate Brands:
Degree Herbicide
MON 48593

<u> </u>	Main Label for Crop Uses	F. a. a		
		10 110 mm		
	,			

# ESUBMSSION

# [INSERT BRAND NAME]

[INSERT BRAND NAME] is an encapsulated herbicide for weed control in Field Corn, Production Seed Corn, Silage Corn, Sweet Corn, Popcorn, and Miscanthus or other non-food perennial bioenergy crops.

# Roundup Ready Plus™ Weed Management Solutions

**ACTIVE INGREDIENT:** 

\*Contains 454 grams/liter or 3.8 pounds/gallon of 2-chloro- N-ethoxymethyl-N-(2-ethyl-6-methylphenyl) acetamide.

Protected by U.S. Patent Nos. 5.225.570 and 5,925,595. Other patents pending. No license is granted under any non-U.S. patents.

GROUP 15 HERBICIDE

EPA Reg. No. 524-496

SHAKE WELL BEFORE USING

## COMPLETE DIRECTIONS FOR USE

Read the entire label before using this product.

ACCEPTED

AUG 2 4 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 524-496

[DATE]

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 REPACKAGING LIMITATIONS.

[Container Label Option]

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

[Non-refillable Container Label Option]

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

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**ACTIVE INGREDIENT:** 

\*Contains 454 grams/liter or 3.8 pounds/gallon of 2-chloro- N-ethoxymethyl-N-(2-ethyl-6-methylphenyl) acetamide.

Protected by U.S. Patent Nos. 5.225.570 and 5,925,595. Other patents pending. No license is granted under any non-U.S. patents.

#### **EPA EST. NO.:**

#### **NET CONTENTS:**

# 2.0 IMPORTANT PHONE NUMBERS

 FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,

# 1-800-332-3111

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

## 3.0 PRECAUTIONARY STATEMENTS

#### 3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

# **CAUTION!**

## HARMFUL IF INHALED.

MAY CAUSE ALLERGIC SKIN REACTION. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Avoid breathing vapor or spray mist.

Remove contaminated clothing and wash before reuse.

Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID: Call	a poison control center or doctor for treatment advice
IF ON SKIN OR	Take off contaminated clothing.
CLOTHING	Rinse skin immediately with plenty of water for 15-20 minutes.
	Sensitized persons should avoid further contact and reuse of contaminated clothing.
IF INHALED	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> </ul>
going for treatn  You may also of information	contact (314) 694-4000, collect day or night, for emergency medical treatment
<ul> <li>This product is</li> </ul>	identified as [INSERT BRAND NAME], EPA Registration No. 524-496.

# Personal Protective Equipment (PPE):

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

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride, and shoes plus socks.

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

Engineering Controls: When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) 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 PPE immediately after handling this product. Wash the outside of gloves before removing.
   As soon as possible, wash thoroughly and change into clean clothing.

#### 3,2 Environmental Hazards

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination.

Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental 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 requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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, are: coveralls, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

# 4.0 STORAGE AND DISPOSAL

Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE**: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state and local regulations and procedures.

[Alternate PESTICIDE DISPOSAL statement for transport vehicles only: To avoid wastes, empty as much product from this transport vehicle as possible for repackaging or use in accordance with label directions. If wastes cannot be avoided, offer remaining product or rinsate to a waste disposal facility or pesticide disposal program. All disposal must be in accordance with applicable federal, state, and local regulations and procedures.]

**CONTAINER HANDLING AND DISPOSAL**: See container label for container handling and disposal instructions and refilling limitations.

[OPTIONAL CONTAINER AND DISPOSAL STATEMENTS AND REFILLING LIMITATIONS FOR CONTAINER LABELS]

FOR NONREFILLABLE RIGID PLASTIC 2.5-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 1-GALLON BUT EQUAL TO OR LESS THAN 5-GALLON CAPACITY: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.

[Alternate container statement: Nonrefillable container.] Do not reuse or refill this container.]

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

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

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

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Monsanto at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local

regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Alternate container disposal statement: Then offer this container for recycling, if available. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.]

FOR NONREFILLABLE RIGID PLASTIC 30-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 5-GALLON CAPACITY: Nonrefillable container. Do not reuse or refill this container.

[Alternate container statement: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.]

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighen closures. Tip container on its side and roll it back and forth, ensuring at least one revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Monsanto at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Alternate container disposal statement: Then offer this container for recycling, if available. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.]

FOR ALL REFILLABLE CONTAINERS, EXCEPT TRANSPORT CONTAINERS: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning this container before refilling is the responsibility of the refiller. Cleaning this container before final disposal is the responsibility of the person disposing of the container.

To clean this container before final disposal, empty the remaining contents from this container into application equipment or a tank mix. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer this container for recycling, if available. To obtain information about recycling refillable containers, contact Monsanto Company at 1-800-768-6837.

[Optional container label statement: Return properly rinsed container to Monsanto for recycling. Contact Monsanto at 1-800-768-6387.]

FOR ALL TRANSPORT CONTAINERS AS DEFINED IN 40 CFR 156.3: Emptied container retains vapor and product residue. Observe all precautions stated on this label until the container is cleaned, reconditioned, or destroyed. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, and worn-out threads and closures. Clean thoroughly before reuse for transportation of a material of different composition or before retiring this transport vehicle from service.

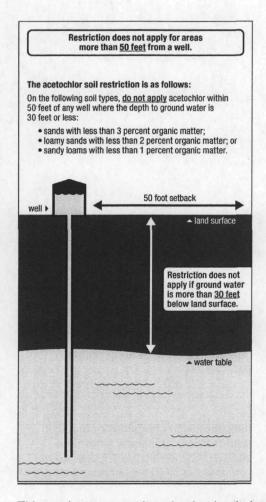
#### 5.0 PRODUCT INFORMATION

[INSERT BRAND NAME] is recommended for control of yellow nutsedge and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. This product will not control emerged seedlings. This product may be applied either as a surface application before or after planting, or after crop emergence. This product may also be shallowly incorporated prior to planting to blend the herbicide treatment into the upper 1 inch of soil. Except for minimum or conservation tillage systems, the seedbed should be fine, firm and free of clods and trash.

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

## 5.1 Use Restrictions

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination. On the following soil types, do not apply this product within 50 feet of any well where the depth to ground water is 30 feet or less: sands with less than 3 percent organic matter; loamy sands with less than 2 percent organic matter; or sandy loams with less than 1 percent organic matter. See the figure for additional clarification.



This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

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 washwater, and rainwater that may fall on 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 a minimum of 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 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 do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Do not flood irrigate to apply or incorporate this product.

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

Do not apply this product through any type of irrigation system, unless otherwise directed by approved supplemental labeling in possession of the user at the time of application.

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.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.

Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Do not apply this product using aerial application equipment, unless otherwise directed by approved supplemental labeling in possession of the user at the time of application.

Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:

Use low-pressure application equipment capable of producing a large droplet spray. Do not use nozzles that produce a fine droplet spray. Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.

Keep ground driven spray boom as low as possible above the target surface.

Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 miles per hour). Do not apply when wind velocity exceeds 15 miles per hour. Avoid application when gusts approach 15 miles per hour.

Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperatures. Do not apply during inversion conditions.

Use of this product not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

Flush sprayer with clean water after use.

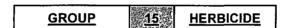
#### **ROTATIONAL CROPS:**

- 1) If a crop treated with this product is lost, field corn, seed corn, silage corn, popcorn, sweet corn or milo (sorghum) may be replanted immediately. When planting milo (sorghum), only use seed properly treated with seed protectant or safener. Do not exceed a total of 3.0 pounds per acre of active ingredient if additional product is applied.
- 2) Nongrass animal feeds such as alfalfa, clover, kudzu, lespedeza, lupin, sanfoin, trefoil, velvet beans, and Vetch spp. may be planted 9 months after application. Wheat may be planted 4 months after application.
- 3) Rotate the next season to the following crops: soybeans, corn (all types), cotton, milo (sorghum), tobacco, sugar beets, sunflowers, potatoes, <u>barley, buckwheat, millet (pearl and proso), oats, rye, teonsinte, triticale, wild rice, dried shelled bean group Lupinus spp. (including grain lupin, sweet lupin and white lupin); Phaseolius spp. (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean Vigna spp. (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea and urd bean); broad bean (dry) chickpea, guar, lablab bean, lentil, pea (Pisum spp., includes field pea); pigeon pea.</u>

# **ROTATION TO NON-FOOD WINTER COVER CROPS**

Following harvest of food crops treated with this product, only non-food or non-feed winter cover crops (with the exception of wheat) may be planted. Do not graze or harvest rotational cover crops for food or animal feed for 18 months following the last application of this product. This prohibition does not apply to wheat, which may be planted 4 months following the last application of this product, or to nongrass animal feeds, which may be planted 9 months after the last application of this product.

#### **6.0 WEED RESISTANCE MANAGEMENT**



Acetochlor, the active ingredient in this product, is a Group 15 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 15 herbicides. Weed species resistant to Group 15 herbicides may be effectively managed utilizing another herbicide from a different Group, or by using other cultural or mechanical practices.

# General principles of herbicide resistance management

- 1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
- 2. Use the full recommended herbicide rate and proper application timing for the hardest to control weed species present in the field.
- 3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- 4. Monitor site and clean equipment between sites.

# For annual cropping situations also consider the following:

- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness
- Use new commercial seed that is as free of weed seed as possible.

Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.

#### 7.0 SOIL TEXTURE

Applicators should evaluate soil conditions carefully to assure that they choose the correct label rate.

The recommended use rates of this product and the other herbicides labeled for use in tank mixtures with this product 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:

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.

#### 8.0 MIXING, SPRAYING AND HANDLING INSTRUCTIONS

**NOTE**: 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 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.

# 8.1 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.

# 8.2 Sprayer Compatibility

Always predetermine the compatibility of this product or labeled tank mixtures of this product with water carrier or sprayable fluid fertilizer carrier 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 or labeled tank mixture of this product with the 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 appropriate 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 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. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Continue agitation.
- 5. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when flowable is pre-mixed one part flowable with one part water and added to the tank in diluted form.
- Add this product slowly through the screen into the tank. Mixing and compatibility may be improved when this product is prediluted with two parts of water and added to the tank in diluted form.
- 7. Complete filling the sprayer tank with carrier. If a Roundup® agricultural herbicide or a Gramoxone brand herbicide is used, add the required amount near the end of the filling

process. Remove hose from tank immediately after filling 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. Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be 50-mesh. Carefully select proper nozzle to avoid spraying a fine mist. Check for even distribution of spray droplets. To reduce loss of the chemical due to drift of a fine mist, apply at nozzle pressures below 40 psi.

# 8.3 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. Sprayable fluid fertilizer to be tested.
- 4. The herbicide chemicals to be mixed.
- 5. A compatibility agent (the purpose of the adjuvant is to help keep the fertilizer and crop protection chemical in suspension, if this assistance is needed).

## **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".

l .	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 in one pint is the equivalent of two pints per 100 gallons of liquid fertilizer.)

	To Jar Marked "With"
	dd Compatibility Agent
	And Shake to Mix
WITH	WITHOUT

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

,	s) To Both Jars ke 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
Wettable	1 pound	=	1.5
Powders	2 pounds	1= 1	3.0
or	3 pounds	=	4.5
Dry Flowables	4 pounds	=	6.0
	5 pounds	=	7.5

HERBICIDE	RATE/Acre		Level TEAspoons		Milliliters
Emulsifiable	1 pint	=	0.5	o r	2.4
Concentrates or	1 quart	=	1.0	o r	4.7
Flowables or	2 quarts	=	2.0	o r	9.5
Liquids or	3 quarts	=	3.0	o r	14.2
Solutions	1 gallon	Н	4.0	o r	19.0
	5 quarts	=	5.0	o r	23.8

This compatibility test is designed for 25 gallons of spray per acre with the maximum labeled rate of herbicide. 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 the 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. An emulsifiable concentrate normally will go to the top after standing; 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 having to use a compatibility agent, fluid fertilizer may be used for the premixing. If it is not compatible without the compatibility agent, the herbicide(s) should be premixed with water before adding to the spray tank.

#### 9.0 Application Systems

#### 9.1 Ground Broadcast Treatment

Apply this product and the labeled tank mixtures in 10 or more gallons of solution per acre using broadcast boom equipment. The carrier may be either water or sprayable fluid fertilizer as specified for the crop to be treated in the "DIRECTIONS FOR USE" section of this label. Do not apply during periods of gusty winds, when winds are in excess of 15 miles per hour or when other conditions favoring drift exist.

#### 9.2 Ground Band Treatment

Apply a broadcast equivalent rate and volume per acre. To determine these:

Band width in inches Row width in inches	x	Broadcast RATE per acre	=	Band RATE per acre	
Band width_ in inches Row width in inches	х	Broadcast VOLUME per acre	=	Band VOLUME per acre	

# 10.0 APPLICATION TIMING AND METHODS

#### 10.1 Early Preplant Surface Application

This product and some labeled tank mixtures of this product may be applied in no-till and other conservation tillage systems before weeds emerge and up to 45 days before planting field corn or

silage corn. Split applications can be made 30 to 45 days prior to planting with 60 percent of the 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 as a single application. If weeds are present at the time of application, apply this product in tank mixture with an appropriate contact herbicide. Observe directions 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.

# 10.2 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 mixture, soil type and percent organic matter content, but 1/2 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.

# 10.3 Preplant Incorporation Application

This product and many of the labeled tank mixtures may be mixed into the upper 1-inch of soil using shallow incorporation equipment any time within 14 days prior to planting. Apply the specified treatment rate to the soil surface as a broadcast application. Either existing soil moisture or subsequent precipitation or irrigation is required to bring incorporated herbicide treatments into contact with germinating weed seedlings. If weeds emerge after treatment, rotary hoe or shallowly cultivate immediately to improve performance, but only cultivate if rainfall or irrigation does not occur within 10 to 14 days after application.

# 10.4 Postemergence Surface Application

This product and certain tank mixtures may be applied postemergence until corn reaches 11 inches in height. Application must be made prior to weed seedling emergence or in a tank mixture that controls emerged weeds. Read and follow all restrictions and directions on tank-mix product labels. Refer to the specific treatment intended in the "DIRECTIONS FOR USE" section of the label to determine if postemergence applications to corn are recommended and determine the proper weed and corn growth stage limitations. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone to control unemerged weeds. The amount of precipitation or irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/2 to 3/4 inch is normally adequate. If weeds emerge after treatment, rotary hoe or shallowly cultivate to improve performance.

#### DO NOT apply postemergence to sweet corn.

**NOTE:** Postemergence surface applications of this product in sprayable fluid fertilizer as the carrier may result in crop injury.

#### 10.5 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.

# 11.0 WEEDS CONTROLLED

When applied as directed under conditions described, this product and tank mixtures of this product will control or reduce competition from the weeds listed.

NOTE: C = Control R = Reduced Competition

## 11.1 Annual Grasses

	[INSERT	Atrazine	Banvel	Dringen	- "
	BRAND NAME]		or Clarity	Princep	Pursuit
Barnyardgrass	Note: Total				
Echinocloa crus-galli	С	С	С	С	C
Crabgrass		N THE WORLD			
Digitaria ischaemum	С	С	С	С	С
Digitaria sanguinalis					
Crowfootgrass					
Dactyloctenium	С	С	С	С	С
aegyptium (L.) Willd.		THE WEST OF THE STATE OF			
Cupgrass,	С	С	C	С	C
orairie Eriochloa contracta Hitchc					W. 12
woolly <sup>1</sup> Eriochloa villosa					
Foxtail:	С	С	С	С	С
giant Setaria faberi					
green robust purple, robust		1000			
white Setaria viridis		是一块一条		1111	
yellow Setaria lutescens		PARENTE IN		N / SEAL	1000000
Goosegrass					
Eleusine indica	С	С	С	С	C
Johnsongrass, seedling	Now Ship I had				
Sorghum halepense	R	R	R	R	С
Millet: foxtail Setaria italica	R	R	R	R	R
proso <sup>2</sup> Panicum miliaceum					
Oat, wild		10001	12-3-21		HE TO THE
Avena fatua	R	С	R	С	R
Panicum:	С	С	С	С	С
browntop, Panicum fasciculatum fall, Panicum dichotomiflorum					

Panicum texanum	R	R	R	R	R
Rice, red				III Flakes	
Oryza sativa	С	С		С	С
Sandbur; Grassbur				OF THE	Mark Harris
Cenchrus incertus	R	R		R	R
Shattercane; Wild cane <sup>2</sup>		Lan April			
Sorghum bicolor	R	R		R	R
Signalgrass, broadleaf	A MARKET CHARLES				
Brachiaria platyphylla	С	С	С	С	С
Sprangletop, red					
Leptochloa filiformis	С	С	С	С	С
Wheat, volunteer					
Triticum aestivum	R	С	R	С	R
Witchgrass		E DESCRIPTION OF THE PROPERTY			
Panicum capillare L.	С	С	С	С	С

Use 5.5 to 6.25 pints per acre of this product applied alone or in tank-mix combinations for best results. Control can be erratic especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide. Contact the local Monsanto representative for details regarding a complete woolly cupgrass management program.

program.
Use 5.5 to 6.25 pints per acre of this product to reduce competition from this weed on medium- and fine-textured soils.

# 11.2 Annual Broadleaves

		[INSERT BRAND NAME] plus:			
	[INSERT BRAND NAME]	Atrazine	Banvel or Clarity		Pursuit
Beggarweed, Florida					
Desmodium tortuosum	R	С	•	•	R
Carpetweed	Manual Property Services			STANK AND	CALL SELECT
Mollugo verticillata	С	С	C	С	С
Cocklebur <sup>1</sup>					
Xanthium strumarium	•	С	С	R	R
Galinsoga					
Galinsoga spp.	С	C	С	С	С
Groundcherry, annual					
Physalis spp.	•	С	•	•	•
Groundcherry, cutleaf					
Physalis angulata	R	С	С	С	R
Henbit					
Lamium amplexicaule	С	С	С	С	С
Jimsonweed <sup>2</sup>		E-nite.			

Datura stramonium	R	С	•	R	С
Kochia <sup>3</sup>	THE STATE OF STATE	THE WA			
Kochia scoparia	R	С	•	С	С
Lambsquarters <sup>4</sup>		The state of the			
Chenopodium album	С	С	С	С	С
Morningglory <sup>1</sup> :	•	C	R	C	R
tall Ipomoea purpurea					
pitted, Ipomoea lacunose			100		
ivyleaf, Ipomoea hederacea		10 50			Carlo Marian
var.intergriuscula					
smallflower, Jacquemontia					
tamnifolia		The state of the s			
Mustard		1549 /	113 73%		
Brassica spp	•	С	С	С	С
Nightshade,	С	С	С	С	С
black, Solanum					
nigrum					
hairy, Solanum		100	THE WAY		
sarrachoides					
Pigweed: Carelessweed <sup>4</sup>					
Amaranthus spp.	С	С	С	С	С
Purslane					
Portulaca oleracea	С	С	С	С	С
Pusley, Florida					
Richardia scabra	С	С	С	С	С
Ragweed, common <sup>4</sup>					
Ambrosia	С	С	С	С	С
artemisiifolia					
Ragweed, giant <sup>1</sup>					
Ambrosia trifida L.		С	С	С	R
Sicklepod			THE RESERVE	7. 72.533	
Cassia obtusifolia	•	С	•	R	•
Sida, prickly; Teaweed					
Sida spinosa	R	С	•	С	С
Smartweed		ADEX STATE			
Polygonum pensylvanicum	R	С	С	С	С
Polygonum persicaria	SULL BUILDING				
Starbur, bristly	CT 2 7 2 30 1			100 27 100	
Acanthospermum hispidum	R	С	•	R	•
Sunflower, common <sup>1,2</sup>					
Helianthus annuus	•	С	R	R	С
Velvetleaf; Buttonweed <sup>2,5</sup>				THE COLLAR	
Abutilon theophrasti	R	С	С	R	С
Waterhemp					
Amaranthus tuberculatus	С	С	С	С	С
Amarantinas tuberculatus					
Sedge					

Nutsedge, yellow <sup>6</sup>					
Cyperus esculentus	С	С	•	С	С

- Use a minimum of 1.5 quarts atrazine 4L per acre in tank mixture combinations to control this weed. Control can be erratic especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide.
- When using a tank mixture of [INSERT BRAND NAME] plus Pursuit, these weeds are more consistently controlled by preplant incorporated treatments.
- If triazine-resistant biotypes are suspected, tank mixtures with triazine herbicides may require a post sequential application of a non-triazine herbicide for control.
- <sup>4</sup> Use the higher rate in the application rate range for [INSERT BRAND NAME] alone and in tank mixtures with triazine herbicides if triazine-resistant biotypes are suspected.
- Use a minimum of 1.5 quarts atrazine per acre in tank mixture combinations to control this weed. In areas restricted to 1 pound atrazine per acre (1 quart atrazine 4L) or where less atrazine per acre is desired, on medium- and fine-textured soils, use 5.0 pints of [INSERT BRAND NAME] in a tank mixture with 1 quart atrazine 4L per acre for control of this weed. Control can be erratic especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide.
- Use 4.5 to 6.25 pints per acre of this product applied alone or in tank mixtures and apply preplant incorporated only for control on medium- and fine-textured soils.

Certain tank mixtures of this product and broadleaf herbicides may be combined with applications of Roundup agricultural herbicides or Gramoxone brand herbicides for control of many emerged weeds prior to corn emergence. Refer to the specific Roundup agricultural herbicide or Gramoxone brand herbicide label for a list of emerged weeds controlled by tank mixtures with these products.

#### 12.0 CONSERVATION OR MINIMUM TILLAGE SYSTEMS

**NOTE**: Each section of this label provides specified 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 recropping interval and rotational guidelines.

Use the higher rates in the application rate 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 TIMING AND METHODS" should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the "PRODUCT INFORMATION", the specific information should control.

The tank mix recommendations in the Conventional Tillage Section of this label may also be followed when using Conservation or Minimum Tillage Systems. Follow all label precautions, directions and restrictions of tank-mix partners.

# 12.1 At-Planting Applications

When applied as directed under the conditions described, these tank mixtures control many emerged annual weeds, suppress many emerged perennial weeds and give preemergence control of many annual grasses and weeds when corn will be planted directly into a cover crop, established sod or in previous crop residues. These tank mixtures will not control regrowth from perennial weeds.

Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures.

For mixing instructions, see the "MIXING AND SPRAYING INSTRUCTIONS" section of this label.

# 12.1.1 Additional Preemergence Control

This product and tank mixtures with atrazine, Princep, or Pursuit can be tank mixed with Roundup agricultural herbicides, Gramoxone brand herbicides and/or 2,4-D.

Apply these tank mixtures with a Roundup agricultural herbicide or 2,4-D (amine or low volatile ester) in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre, or the tank mixtures with Gramoxone brand herbicide in 20 to 60 gallons of water or clear liquid fertilizer per acre immediately before, during or after planting, but BEFORE CROP EMERGENCE. As density of stubble, crop residue or weeds increase, spray gallonage and rate should be increased within the application rate ranges to ensure complete coverage. In the absence of emerged vegetation, delete the Roundup agricultural herbicide, Gramoxone brand herbicide or 2,4-D portion of these tank mixtures.

# **Approved Application Systems**

Ground: Broadcast boom

# 12.2 Control or Suppression of Emerged Weeds

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 since 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 miles per hour 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) which are more likely to drift.

# 12.2.1 Roundup Agricultural Herbicides

#### **Annual Weeds**

Apply Roundup agricultural herbicides in these tank mixtures at the proper rate for the weed per the specific label instructions.

#### **Perennial Weeds**

At normal application dates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. Use full labeled rates of Roundup agricultural herbicides in the mixtures above and under these conditions to provide top kill and reduce competition from many emerged perennial grasses and broadleaf weeds.

DO NOT USE THIS MIXTURE FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL.

#### **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.

## **Surfactants**

Nonionic surfactants which are labeled for use with herbicides may be used with some Roundup agricultural herbicides. Do not reduce rates of the Roundup agricultural herbicides 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.

#### 12.2.2 Gramoxone Brand Herbicides

When used as directed, Gramoxone brand herbicides in a labeled tank mixture, controls many emerged annual weeds and suppresses many emerged perennial weeds.

#### **Broadcast Treatment**

Apply Gramoxone brand herbicides in these tank mixtures immediately before, during or after planting but BEFORE CROP EMERGENCE. Use the application rates and timing of application listed in the specific product label. As density of stubble, crop residue or weeds increases, spray gallonage should be increased within the application rate range for complete coverage. 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. REFER TO THE SPECIFIC GRAMOXONE BRAND HERBICIDE LABEL FOR PRECAUTIONARY STATEMENTS.

#### 12.2.3 2,4-D

When used as directed, 2,4-D in labeled tank mixtures controls many emerged annual and perennial broadleaf weeds. For emerged weeds controlled, see the "WEEDS CONTROLLED" section of the label for 2.4-D.

# **Broadcast Treatment**

Apply 1 to 2 pints of 2,4-D (amine or low volatile ester) in these tank mixtures. Applications should be made 7 to 14 days before planting or 3 to 5 days after planting but BEFORE CORN EMERGES. As density of stubble, crop residue or weeds increase, spray gallonage should be increased within the application rate range for complete coverage.

DO NOT use 2,4-D on light, sandy soils, or where soil moisture is inadequate for normal weed growth. Observe all precautions and limitations on the 2,4-D label booklet.

# 12.3 Early Preplant Application

For use in no-till and other conservation tillage systems.

If emerged weeds are present at the time of treatment, a Roundup agricultural herbicide, a Gramoxone brand herbicide or 2,4-D should be added to this 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 [INSERT BRAND NAME], Roundup agricultural herbicides, Gramoxone brand herbicides, 2,4-D and other postemergence herbicides before use of these products.

DO NOT apply tank mixture containing a Roundup agricultural herbicide, Gramoxone brand herbicide or other contact herbicides by air.

# 12.3.1 [INSERT BRAND NAME]

This product, when applied in a single application or split application will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. If weeds are emerged at time of application, apply a labeled contact herbicide with this product. Observe the directions for use, precautions and restrictions on the label of the contact herbicide.

# **Approved Application Systems**

Ground: Broadcast boom

APPLICATION 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.

NOTE: Application on coarse soils should not be made more than two weeks prior to planting.

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

See the following table for broadcast rates per acre for single and split applications.

# **Application Rates**

BROADCAST RATE PER ACRE				
SOIL TEXTURAL GROUP	[INSERT E	BRAND pints)	NAME]	
Coarse	2.75	to	3.75	
Medium	4.25	to	5.00	
Fine	5.00	to	5.50	

In order to provide broad-spectrum weed control, both single and split applications of this product must be followed with a planned postemergence application of a labeled broadleaf and/or grass herbicide. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide before use of these products.

If emerged weeds exist at planting, the application of a contact herbicide or tillage is recommended when possible to eliminate existing weeds.

# 12.3.2. [INSERT BRAND NAME] Plus Atrazine

For weeds controlled preemergence, see the "WEEDS CONTROLLED" section of this label for [INSERT BRAND NAME] plus atrazine.

See the following table for application rates of [INSERT BRAND NAME] plus atrazine in this tank mixture on various soil types.

Maximum broadcast rates for corn must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 pounds active
  ingredient per acre broadcast. If a postemergence treatment is required following an earlier
  herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient per
  calendar year.
- Apply a maximum of 2.0 pounds active ingredient per acre as a single postemergence broadcast application on soils that are not highly erodible or on highly erodible soils (as defined by the Natural Resources Conservation Service) if at least 30 percent of the soil is covered with plant residues, or
- Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergent broadcast
  application on highly erodible soils (as defined by the Natural Resources Conservation Service) if
  less than 30 percent of the soil surface is covered with plant residues at planting; or 2.0 pounds
  active ingredient per acre if only applied postemergence.

CORN, SOYBEANS\* OR MILO (SORGHUM) can be planted the year following use of this mixture.

\* There is a possibility of injury due to carryover of atrazine if soybeans or other nonlabeled crops are planted the following year. DO NOT plant soybeans the year following use of this tank mixture on furrow-irrigated corn.

DO NOT graze treated area or feed treated forage to livestock for 60 days following application of this tank mixture.

# **Application Rates:**

	BROADCAST RATES PER ACRE*					
SOIL TEXTURAL	[INSERT BRAND		ATRAZINE 4L**			
GROUP	NAME] +			(quarts)		
	(pints)					
Coarse	3.25		1.25	to	1.5	
Medium	3.25 To 4.25			1.50	to	2.0
Fine	3.75	То	4.50	1.50	to	2.0

- \* Use the higher rates in the application rate ranges in areas of heavy weed infestation or when the organic matter content is 3 percent or more.
- \*\* Use rates listed in this label when using atrazine 4L. Use equivalent rates when using atrazine 90 percent dry flowable formulations. One quart of atrazine 4L equals 1.1 pounds of atrazine 90 percent dry flowable.

#### 13.0 CONVENTIONAL TILLAGE

Use the higher rates in the application rate 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 TIMING AND METHODS" should be carefully reviewed in conjunction with the information in this section. If the specific information in this section differs from the "PRODUCT INFORMATION", the specific information should control.

# 13.1 [INSERT BRAND NAME]

Apply this product in water or sprayable fluid fertilizer solution for control of yellow nutsedge and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

# **Approved Application Systems**

Ground - Broadcast boom; banded

# **Approved Application Methods**

# **Preplant Incorporated**

Apply this product within 14 days prior to planting and shallowly incorporate into the upper 1-inch of soil. Irrigation within 10 days following planting may improve weed control.

# Preemergence Surface

Apply this product after planting, before crop and weed emergence and within 5 days after last preplant tillage operation.

# **Postemergence Surface**

Apply this product prior to weed emergence and before corn reaches 11 inches in height. Do not exceed 6.25 pints per acre. Weeds emerged at the time of application are not controlled by this product. If weeds are emerged at application, shallowly cultivate or rotary hoe to improve performance. DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

## **Application Rates**

	BROADCAST RATE PER ACRE *					
SOIL TEXTURAL GROUP	Less tha	Less than 3% Organic Matter (pints)		3% or More Organic Matter** (pints)		
Coarse	2.25	to	3.25	3.25		
Medium	3.25	to	4.25	3.25	to	4.25
Fine	3.25	to	4.25	4.25	to	5.0

- \* In areas of heavy weed infestation use up to 2.7 quarts per acre on medium- and fine-textured soils. Use the higher rate in the application rate range in areas of heavy weed infestation.
- \*\* On soils with 6 to 10 percent organic matter use 4.5 to 6.25 pints per acre. On soils with more than 10 percent organic matter, use 6.25 pints per acre.

# 13.2 [INSERT BRAND NAME] plus Roundup Agricultural Herbicides on Corn containing Roundup Ready® 2 Technology including Roundup Ready Corn 2

This program may be used preemergence and postemergence to corn containing Roundup Ready 2 Technology including Roundup Ready Corn 2 from seedling emergence until the corn reaches 11 inches in height. Refer to other Roundup agricultural herbicide labels for specific weeds controlled postemergence.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.

# **Approved Application Systems**

Ground: Broadcast boom

# **Approved Application Methods**

# **Preemergence Surface**

**Sequential Program -** This product may be applied preemergence to corn containing Roundup Ready 2 Technology including Roundup Ready Corn 2 at the ROUNDUP READY RATE of 3.0 pints per acre in a planned preemergence followed by a Roundup agricultural herbicide postemergence sequential program.

# **Postemergence Surface**

This product may be applied postemergence to corn containing Roundup Ready 2 Technology or Roundup Ready Corn 2 from seedling emergence until the corn is 11 inches in height. The ROUNDUP READY RATE for this product is 3.0 pints per acre. Labeled use rates for this tank-mix are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. This tank mix should be applied when weeds are 2 to 4 inches in height and before the weed height and/or density become competitive with the crop.

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane, broadleaf signalgrass and Pennsylvania smartweed use the higher rates of Roundup agricultural herbicides.

# ROUNDUP READY RATE - [INSERT BRAND NAME] at 3.0 pints per acre.

#### Application Rates (minimum and maximum range)

	BROADCAST RATE PER ACRE				
SOIL TEXTURAL GROUP	[INSERT BRAND NAME] (pints)	ROUNDUP AGRICULTURAL HERBICIDES			
Coarse	3.0 to 3.25	Per Labeled Rate			
Medium	3.0 to 4.25	Per Labeled Rate			
Fine	3.0 to 5.0	Per Labeled Rate			

# 14.0 TANK-MIXTURES

# 14.1 [INSERT BRAND NAME] Tank-Mixtures for Preemergence Use in Corn

This product may be tank-mixed with the following products for preemergence use in corn.

Ensure that the specific product being used in the tank mixture is registered for application preemergence to corn. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use preemergence in corn:

2,4-D, atrazine, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, flumetsulam, flumiclorac pentyl ester, glyphosate, isoxaflutole, linuron, mesotrione, metribuzin, pendimethalin, rimsulfuron

Aim, Aim EC, Axiom, Balance, Banvel, Callisto, Clarity, Define, Distinct, Epic, Hornet, Linex, Lorox, Marksman, Prowl, Python, Python II, Resource, Shark]

# 14.2 [INSERT BRAND NAME] Tank-Mixtures for Postemergence Use in Corn

This product may be tank-mixed with the following products for postemergence use in corn.

Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to corn. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use postemergence to corn:

2,4-D, atrazine, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, flumetsulam, flumiclorac pentyl ester, glyphosate, isoxaflutole, linuron, mesotrione, metribuzin, pendimethalin, rimsulfuron, topramezone

Aim, Aim EC, Axiom, Balance, Banvel, Callisto, Clarity, Define, Distinct, Epic, Hornet, Impact, Linex, Lorox, Marksman, Prowl, Python, Python II, Resource, Shark]

## 15.0 MISCANTHUS AND OTHER NON-FOOD PERENNIAL BIOENERGY CROPS

For weed control in Miscanthus and other non-food perennial bioenergy crops, apply [INSERT BRAND NAME] at 2.4-3.2 pints per acre after the crop has been transplanted or after fully emerged to a height of at least 2-3 inches.

<u>Up to two applications of [INSERT BRAND NAME] may be made each year. The total amount of this product applied each year must not exceed 6.4 pints per acre.</u>

# **RESTRICTIONS:**

Do not allow the Miscanthus or other non-food perennial bioenergy crop treated with [INSERT BRAND NAME] to be grazed or used as animal feed.

#### **16.0 FALL APPLICATIONS**

Geographic Restriction on Fall Applications: only in Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, north of Route 91 in Nebraska and north of Route 136 in Illinois

Following soybean harvest, apply to soybean stubble after September 30, when the sustained soil temperature at 4-inch depth is less that 55°F, but before ground freezes. Use on medium- and fine-textured soils with greater than 2.5% organic matter. Only corn may be planted the following spring. Ground may be tilled before or after application. Do not exceed 2-inch incorporation depth if tilled after application.

If a spring application is made, the total rate of the fall plus spring application must not exceed the maximum labeled rate for corn grown on that soil.

#### 17.0 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. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, 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 to the extent consistent with applicable law, including, but not limited to, incompatibility with products 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.

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

APPLICABLE LAW, 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.

Degree, Roundup, and Roundup Ready, are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

EPA Reg. No. 524-496

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

Packed For: MONSANTO COMPANY 800 N. LINDBERGH BLVD. ST. LOUIS, MISSOURI 63167 USA <sup>©</sup>[date]

# Changes in this submission

Group number, WRM language
Add ingredients to front of label
Roll-in Miscanthus use from approved supplemental
Well set-back
Winter cover crops
Add cotton as rotational crop
Remove detailed tank-mix tables
Insert "perennial or" in mix/load setback