83979-8

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U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460	EPA Reg. Number: 83979-8	Date of Issuance: 6/29/18	
NOTICE OF PESTICIDE: <u>X</u> Registration Reregistration	Term of Issuance: Unconditional		
(under FIFRA, as amended)	Name of Pesticide Proc Salvus	Name of Pesticide Product: Salvus	
Name and Address of Registrant (include ZIP Code): Rotam North America, Inc. c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707			
Note: Changes in labeling differing in substance from that accepted in connection with this regi Registration Division prior to use of the label in commerce. In any correspondence on this prod			
On the basis of information furnished by the registrant, the above under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or re Agency. In order to protect health and the environment, the Adre time suspend or cancel the registration of a pesticide in accordan name in connection with the registration of a product under this registrant a right to exclusive use of the name or to its use if it h This product is unconditionally registered in accordance with FI 1. Submit and/or cite all data required for registration/rereg product when the Agency requires all registrants of simi 2. Make the following label changes before you release the - Revise the EPA Registration Number to read, "E	recommendation of the ninistrator, on his mo- nce with the Act. The Act is not to be cons- as been covered by o IFRA section 3(c)(5) gistration/registration lar products to submi- e product for shipmer PA Reg. No. 83979-	his product by the otion, may at any e acceptance of any trued as giving the thers. provided that you: review of your it such data.	
Signature of Approving Official: Palitum V. Montzoto for	Date:		
Reuben Baris, Product Manager 25	6/29/1	8	
Herbicide Branch, Registration Division (7505P)		to other stands	

Registration Notice Unconditional v. 20150320

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3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

• Basic CSF dated 01/17/2018

If you have any questions, please contact Kathryn Montague by phone at 703-305-1243, or via email at montague.kathryn@epa.gov

Enclosure

83979-XX.20180117.V1

[Master Label]



Salvus is an emulsifiable herbicide for weed control in Field Corn, Production Seed Corn, Silage Corn, Sweet Corn, Popcorn, Miscanthus and other non-food perennial bioenergy crops.

[Roundup Ready Plus<sup>™</sup>Weed Management Solutions]

**Complete Directions For Use** 

ACTIVE INGREDIENT:	BY WT.
*Acetochlor	
OTHER INGREDIENTS:	
TOTAL:	100.00/

\*Contains 839 grams/liter or 7.0 pounds/gallon of 2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide.

U.S. Patent No. 5,225,570. Other patents pending. No license is granted under any non-U.S. patents.

# 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.

	FIRST AID
end the states of	Call a poison control center or doctor for treatment advice.
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>
IF ON SKIN OR CLOTHING	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Sensitized persons should avoid further contact and reuse of contaminated clothing.</li> </ul>
IF SWALLOWED	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
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>

• This product is identified as Salvus, EPA Registration No. 83979-XX.

Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

[container label optional statements Carefully follow detailed instructions in label booklet. See label booklet for complete Directions For Use]

Use only according to label instructions.

Read the entire label before using this product

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

# [Alternate language for Confidence brand:

THIS IS AN END-USE PRODUCT. THE REGISTRANT DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.]

# [Refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. THE REGISTRANT 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.]

[Non-refillable Container Label Statement:

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

Manufactured For: Rotam North America, Inc. 4900 Koger Blvd., Suite 140 Greensboro, NC 27407 EPA Reg. No.: 83979-XX EPA Est. No.:

# PRODUCT INFORMATION

# 1.0 INGREDIENTS

ACTIVE INGREDIENT:	BY WT.
*Acetochlor	
OTHER INGREDIENTS:	
TOTAL:	100.0%

\*Contains 839 grams/liter or 7.0 pounds/gallon of 2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide.

U.S. Patent No. 5,225,570. Other patents pending. No license is granted under any non-U.S. patents.

# 2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-866-927-6826.

# **3.0 PRECAUTIONARY STATEMENTS**

#### 3.1 Hazards to Humans and Domestic Animals

Causes substantial but temporary eye and skin irritation. Harmful if swallowed or inhaled. May cause allergic skin reaction. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

#### **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:** Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing, or loading.

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

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.

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 regulations.

# Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

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 over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material, chemical-resistant footwear plus socks, protective eyewear, and chemical-resistant headgear for overhead exposure.

# 4.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and 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 ¼ 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 your Rotam North America, Inc. representative. 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 ¼ full with water. Replace and tighten 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. Turn the container over onto its other 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 your Rotam North America, Inc. representative. 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.

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**

This product is for control of yellow nutsedge and the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. This product alone 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 to 2 inches of soil. Except for minimum or conservation tillage systems, the seedbed should be fine, firm and free of clods and trash.

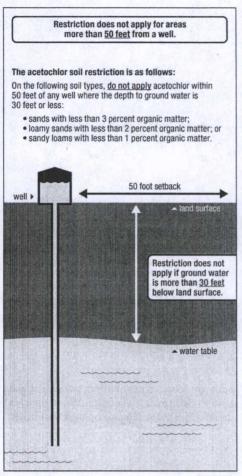
Read and carefully observe precautionary statements and all other information appearing on the labeling of all products used in mixtures and sequential treatments. Use according to the most restrictive label directions in the mixture.

# **5.1 Use Restrictions**

Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.

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.

#### Rotam North America, Inc. Salvus - Draft Label Page 5 of 19



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 offsite 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 ½ 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:**

- 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) Non-grass animal feeds such as alfalfa, clover, kudzu, lespedeza, lupin, sainfoin, trefoil, 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, barley, buckwheat, , millet (pearl and proso), oats, rye, teosinte triticale, wild rice, dried shelled bean group *Lupinus* spp. (including grain lupin, sweet lupin and white lupin); *Phaseolus* 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.

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

Following harvest of food crops treated with **Salvus**, 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 **Salvus**. This prohibition does not apply to wheat, which may be planted 4 months following the last application of **Salvus**, or to non-grass animal feeds, which may be planted 9 months after the last application of **Salvus**.

#### 6.0 WEED RESISTANCE MANAGEMENT

CROUR	4.5	LIEBBIOIDE
GROUP	15	HERBICIDE

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 specified herbicide rate and proper application timing for the hardest to control weed species present in the field.
- 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 pre-emergence 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 Rotam North America, Inc. 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 specified 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 is 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 or 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 and 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 to transfer systems 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 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 specified 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 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 slurry with water, and add it slowly through the screen into the tank. Continue agitation.
- 5. If a flowable formation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when flowable is premixed one part flowable with one part water and added slowly to the tank in diluted form.
- 6. 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 back into the water 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 bypass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50mesh. Carefully select proper nozzle to avoid spraying a fine mist. Check for even distribution of spray droplets. For best results with ground application, use flat-fan or whirl-chamber nozzle. To reduce loss of chemical due to drift of a fine mist, apply at pressures less than 40 psi.

# 8.3 Standard Sprayable Fluid Fertilizer Compatibility Test

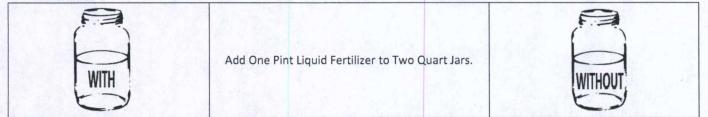
Herbicides may not always mix evenly throughout a sprayable fluid fertilizer or the components may separate too quickly to make their combined use of practical value. This may be due to certain characteristics of the different fluid fertilizers. A simple test using small quantities of the components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

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



2. To the jar marked "with", add ¼ TEAspoon or 1.2 milliliters of a suitable compatibility agent; shake gently for five to ten seconds to mix. (¼ TEAspoon in one pint is the equivalent of two pints per 100 gallons of liquid fertilizer.)

WITH	To Jar Marked "WITH" Add Compatibility Agent and Shake to Mix	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.

WITH	Add Herbicide(s) to Both Jars and Shake to Mix	WITHOUT
5		E

HERBICIDE	RATE/ACRE		Amount to be Added per Pint of Sprayable Fluid Fertilizer (Assuming Volume is 25 Gallons/Acre)			
		196.5	Level TEAspoons			
	1 pound	=	1.5			
Wettable Powders	2 pounds	=	3.0			
or Dev Flowables	3 pounds	=	4.5			
Dry Flowables	4 pounds	=	6.0			
	5 pounds	=	7.5			
HERBICIDE	RATE/ACRE		Level TEAspoons	evel TEAspoons MILLILI		
Emulsifiable Concentrates	1 pint	=	0.5	or	2.4	
or	1 quart	=	1.0	or	4.7	
Flowables	2 quarts	=	2.0	or	9.5	
or	3 quarts	=	3.0	or	14.2	
Liquids	1 gallon	=	4.0	or	19.0	
or Solutions	5 quarts	=	5.0	or	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 = ¼ TEAspoon or 1.2 milliliters, three pints = ¾ 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.

#### 9.1 Ground Broadcast Treatment

# 9.0 APPLICATION SYSTEMS

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	~	Broadcast RATE per Acre	Pand PATE non Anna
Row Width in Inches	^	broadcast KATE per Acre	Band RATE per Acre
Band Width in Inches	~	Prophest VOLUME per Acro	Pand VOLUME por Acro
Row Width in Inches	^	Broadcast VOLUME per Acre	Band VOLUME per Acre

# 9.3 Application With Dry Bulk Fertilizer

The herbicide-fertilizer impregnation process must be completed only by commercial fertilizer or chemical dealerships properly equipped for this procedure. Dry bulk fertilizer may be impregnated with this product or the tank mixtures of this product plus atrazine on corn. This product and these tank mixtures must be applied with 200 to 450 pounds of dry bulk fertilizer per acre and shallowly incorporated within 14 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 tillage 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. The herbicide must be applied as specified in this label for the crop, weed and soil type treated. Refer to the table for broadcast rate per acre to determine the application 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 rates per acre:

		(Pints of Herbicide/Ton Dry Bulk Fertilizer)		
Fertilizer Rate (Pounds/Acre)	Acres Covered (per Ton)	2.0 (Pints)	2.25 (Pints)	2.75 (Pints)
200	10.0	20.0	22.5	27.5
250	8.0	16.0	18.0	22.0
300	6.7	13.4	15.0	18.4
350	5.7	11.4	12.8	15.7
400	5.0	10.0	11.3	13.8
450	4.5	9.0	10.1	12.4

# Quarts of Liquid Herbicide/Acre

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

# **Herbicide Rate**

Pints/Acre X 2,000 Pounds Fertilizer/Acre

Pints of Herbicide per Ton of Dry Bulk Fertilizer

Mix and blend the dry fertilizer and herbicide mixture in a closed rotary drum-type mixture 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 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 absorptive capacity, use a higher absorptive material such as Agsorb or Micro-Cel, to provide a free-flowing mixture.

The following table provides a partial list of approved dry fertilizers which may be impregnated with this product or tank mixtures of this product with other herbicides.

Fertilizer	Salvus	Salvus + Atrazine
Ammonium sulfate (21-0-0)	Yes	Yes
Ammonium phosphate-sulfate (16-20-0)	Yes	Yes
Diammonium phosphate (18-46-0)	Yes	Yes
Potassium chloride (0-0-60)	Yes	Yes
Potassium sulfate (0-0-52)	Yes	Yes
Single super-phosphate (0-20-0)	Yes	No
Treble super-phosphate (0-46-0)	Yes	No
*Urea (46-0-0)	Yes	Yes

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

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

Spread the herbicide-dry fertilizer mixture uniformly with a properly calibrated applicator: dribble, pneumatic (air flow), or spin. When using spin applicators, fertilizers impregnated with this product or tank mixtures of this product with other herbicides must be spread at half-rate and overlapped 100 percent to obtain full rate and uniform distribution. Non-uniform spreading of the fertilizer-herbicide mixture may result in unsatisfactory weed control or crop injury.

#### 9.3.1 Pneumatic (Compressed Air) Application (this product alone)

High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause herbicide-fertilizer mixture to build up or plug the distributor head, air tubes, or deflector plates. To minimize buildup, premix this product with Exxon Aromatic 200 at a rate of 1 to 4 pints per gallon of this product. Aromatic 200 may be used in either fertilizer blender or through direct injection systems. Drying agents should not be used when using Aromatic 200.

**NOTES:** Mixtures of this product and Aromatic 200 must be used on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. When impregnating this product in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. The use of Agsorb or a drying agent of 6/30 particle size are recommended.

# **10.0 APPLICATION TIMING AND METHODS**

#### **10.1 Early Pre-Plant 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 specified 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 a single application. If weeds are present at the time of application, apply this product in a 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 Pre-Plant Incorporation Application**

This product and many of the labeled tank mixtures may be mixed into the 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 weed emerge after treatment, rotary hoe or shallowly cultivate immediately to improve performance.

Shallowly incorporate 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. Equipment should be set to work the soil NO DEEPER THAN 4 INCHES. Soil conditions, including moisture content and crop residue levels, must be suitable to allow thorough and uniform mixing.

### **10.3 Pre-Emergence 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 pre-plant tillage. If weeds emerge after treatment, or if treatment is applied more than 5 days after last pre-plant 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 1/4 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.

# **10.4 Post-Emergence Surface Application**

This product and certain tank mixtures may be applied post-emergence 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 post-emergence 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 ¼ to ¾ inch is normally adequate. If weeds emerge after treatment, rotary hoe or shallowly cultivate to improve performance.

DO NOT apply post-emergence to sweet corn.

DO NOT make post-emergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

#### **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 alone will CONTROL the following weeds:

### 11.1 Annual Grasses

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

			Salvu plus		
	Salvus	Atrazine	Banvel or Clarity	Princep	Pursuit
Barnyardgrass Echinochloa crus-galli	С	С	С	С	ç
<b>Crabgrass</b> Digitaria ischaemum Digitaria sanguinalis	С	с	С	с	с
Crowfootgrass Dactyloctenium aegyptium	С	С	С	С	с
Cupgrass, prairie Eriochloa contracta	С	с	С	С	С
Cupgrass, woolly <sup>1</sup> Eriochloa villosa	С	с	С	С	С
Foxtail, giant Setaria faberi	С	С	С	С	с
Foxtail: green, robust purple, robust white Setaria viridis	с	с	С	С	С
Foxtail, yellow Setaria lutescens	С	С	С	С	С
Goosegrass Eleusine indica	С	С	С	С	С
Johnsongrass, seedling Sorghum halepense	R	R	R	R	С
Millet, foxtail Setaria italica	R,	R	R	R	R
Millet, proso <sup>2</sup> Panicum miliaceum	R	R	R	R	R
Oats, wild Avena fatua	R	С	R	С	R
Panicum, browntop Panicum fasciculatum Panicum, fall Panicum dichotomiflorum	с	с	С	с	с
Panicum, Texas	R	R	R	R	R

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Panicum texanum					
Rice, red Oryza sativa	С	С	•	С	С
Sandbur; Grassbur Cenchrus incertus	R	R	•	R	R
Shattercane; Wild cane <sup>2</sup> Sorghum bicolor	R	R	•	R	R
Signalgrass, broadleaf Brachiaria platyphylla	С	С	С	С	С
Sprangletop, red Leptochloa filiformis	С	с	С	С	С
Wheat, volunteer Triticum aestivum	R	C	R	С	R
Witchgrass Panicum capillare	С	С	С	C	С

<sup>1</sup>Use 3 to 3.4 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 post-emergence herbicide. Contact the local Rotam North America, Inc. [*retailer*] representative for details regarding a complete woolly cupgrass management program.

<sup>2</sup>Use 3 to 3.4 pints per acre of this product to reduce competition from this weed.

#### **11.2 Annual Broadleaves**

**NOTE:** C = Control R = Reduced Competition

			Salvus plus		
	Salvus	Atrazine	Banvel or Clarity	Princep	Pursuit
Beggarweed, Florida Desmodium tortuosum	R	с	•	•	R
Carpetweed · · · · · · · · · · · · · · · · · ·	С	С	с	С	С
Cocklebur <sup>1</sup> Xanthium strumarium	•	С	С	R	R
Galinsoga Galinsoga spp.	с	с	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>8</sup> Datura stramonium	R	С	1980 - AN	R	С
Kochia² Kochia scoparia	R	С	•	С	С
Lambsquarters <sup>3</sup> Chenopodium album	С	С	С	С	С
Morningglory: <sup>1</sup> Tall Ipomoea purpurea Pitted Ipomoea lacunosa Ivyleaf Ipomoea hederacea Entireleaf Ipomoea hederacea var. integriuscula Smallflower Jacquemontia tamnifolia	•	с	R	с	R
Mustard Brassica spp.	•	С	С	С	С
Nightshade, black Solanum nigrum hairy Solanum sarrachoides	с	с	с	С	с
Pigweed; Carelessweed <sup>5</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>3</sup> Ambrosia artemisiifolia	С	С	С	С	С
Ragweed, giant <sup>1</sup> Ambrosia trifida	•	С	С	С	R

		A. A. A. A.			Page 13 of 19
Sicklepod Cassia obtusifolia	•	с		R	•
Sida, prickly; Teaweed Sida spinosa	R	с	•	С	с
Smartweed Polygonum pensylvanicum Polygonum persicaria	R	с	С	с	с
Starbur, bristly Acanthospermum hispidum	R	С		R	
Sunflower, common <sup>1,6</sup> Helianthus annuus	•	с	R	R	С
Velvetleaf; Buttonweed <sup>4,6</sup> Abutilon theophrasti	R	с	С	R	С
Waterhemp Amaranthus tuberculatus	С	с	С	с	с
SEDGE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Nutsedge, yellow <sup>5</sup> Cyperus esculentus	С	с	1	с	С

<sup>1</sup>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 post-emergence herbicide.

<sup>2</sup>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>3</sup>Use the higher rate in the application rate range for **Salvus** alone and in tank mixtures with triazine herbicides if triazine-resistant biotypes are suspected.

<sup>4</sup>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 2.75 pints of **Salvus** 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 post-emergence herbicide.

<sup>5</sup>Use 2.5 to 3.4 pints per acre of this product applied alone or in tank mixtures and apply pre-plant incorporated only for control on medium- and fine-textured soils.

<sup>6</sup>When using a tank mixture of **Salvus** plus Pursuit, these weeds are more consistently controlled by pre-plant incorporated treatments.

# **12.0 CONSERVATION OR MINIMUM TILLAGE SYSTEMS**

**NOTE:** Each section of this label provides 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 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, the specified tank mixtures control many emerged annual weeds, suppress many emerged perennial weeds and give pre-emergence 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, SPRAYING, AND HANDLING INSTRUCTIONS" section of this label.

This product and tank mixtures with atrazine, Princep, Pursuit or atrazine plus Princep 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 these tank mixtures with a 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

**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 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 label instructions.

#### **Perennial Weeds**

At normal application rates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. Use of full labeled rates of Roundup Agricultural Herbicides, in the mixtures above and under these conditions will provide top kill and reduce competition from 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. The equivalent rate of ammonium sulfate in a liquid formulation may also be used.

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 ½ cup of ammonium sulfate to 1 gallon of water and agitate for one minute. If undissolved sediment is observed, pre-dissolve the ammonium sulfate in water and filter prior to adding to the spray tank.

# Surfactants

Nonionic surfactants that are labeled for use with herbicides may be used with some Roundup Agricultural Herbicides. Check specific label for restrictions. Do not reduce rates of Roundup Agricultural Herbicides when adding surfactant. Use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants that 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 the specified 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 ADDITIONAL 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 the specified 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 Pre-Plant Application

If emerged weeds are present at the time of treatment, a Roundup Agricultural Herbicide, 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 post-emergence application of an appropriate labeled grass and/or broadleaf weed herbicide may be used. If a post-emergence treatment includes the herbicide used early pre-plant, do not exceed the labeled rate for corn on a given soil texture. Observe all precautions and limitations on the labels for **Salvus**, Roundup Agricultural Herbicides, Gramoxone brand herbicide, 2,4-D and other post-emergence herbicides before use of these products.

DO NOT apply tank mixtures containing a Roundup Agricultural Herbicide, Gramoxone brand herbicide or other contact herbicides by air.

### 12.3.1 Salvus Herbicide

This product, when applied in a single application or split application will provide pre-emergence 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 Dry Bulk Fertilizer Impregnation

#### **Approved Application Methods**

#### **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 specified broadcast rates per acre for single and split applications.

#### **Application Rates**

BRO	ADCAST RATE PER ACRE	
Soil Textural Group	Salvus (Pints)	
Coarse	1.50 to 2.00	
Medium	2.25 to 2.75	
Fine	2.75 to 3.00	

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

This tank mixture, when applied in a single application (alone or in a 3-way combination with Princep), split application or as a sequential application to Princep in early pre-plant programs, will provide pre-emergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

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

The maximum atrazine broadcast application rates for corn:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2 pounds active ingredient per acre broadcast. If a post-emergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient per acre per calendar year.
- Apply a maximum of 2.0 pounds active ingredient per acre as a single pre-emergence 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 pre-emergence application on highly erodible soils (as defined by the Natural Resources Conservation Service) if less than 30 percent of the surface is covered with plant residues; or 2.0 pounds active ingredient per acre if only applied post-emergence.

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 are planted the following year. DO NOT plant soybeans the year following use of this tank mixture on furrow-irrigated corn.

Approved Application Systems

Ground: Broadcast boom

Dry Bulk Fertilizer Impregnation

#### **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 specified broadcast rates per acre for single and split applications.

# **Application Rates**

	BROADCAST RATE PER A	ACRE		100
Soil Textural Group	Salvus* (Pints)	+	Atrazine 4L** (Quarts)	
Coarse	1.75		1.25 to 1.5	
Medium	1.75 to 2.25		1.50 to 2.0	
Fine	2.00 to 2.50		1.50 to 2.0	

\*Use the higher rates in the application rate ranges in areas of heavy weed infestation.

\*\*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.

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

# 12.3.3 Salvus plus Atrazine following Princep

# Sequential Application

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, but before crop emergence, apply this tank mixture.

**NOTE:** LAND TREATED WITH PRINCEP SHOULD NOT BE PLANTED TO ANY CROP OTHER THAN 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.

Following application of Princep, see the following table for application rates.

#### **Application Rates**

	BROADCAST RATE PER	ACRE		
Soil Textural Group	Salvus* (Pints)	+	Atrazine 4L** (Quarts)	
Coarse	1.75		1.25	
Medium	2.25		1.50	de la com
Fine	2.25 to 2.5		1.50 to 2.0	

\*Use the higher rates in the application rate ranges in areas of heavy weed infestation.

\*\*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.

**NOTE:** Each section of this label provides specified treatment rates for this product and tank mixtures including this product. Applications that 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 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 TIMINGS 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 Salvus Herbicide

Apply this product in water or sprayable fluid fertilizer solution.

#### **Approved Application Systems**

Ground: Broadcast boom; banded Dry Bulk Fertilizer Impregnation

#### **Approved Application Methods**

#### Pre-Plant Incorporated; Pre-Emergence Surface

#### Post-Emergence Surface

Apply this product prior to weed emergence and before corn reaches 11 inches in height. Do not exceed 3.4 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 post-emergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

#### **Application Rates**

BROADCAST RATE PER ACRE (Pints)*					
Soil Textural Group	Less than 3% Organic Matter	3 % or more Organic Matter**			
Coarse	1.25 to 1.75	1.75			
Medium	1.75 to 2.25	1.75 to 2.25			
Fine	1.75 to 2.25	2.25 to 2.75			

\*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 2.5 to 3.4 pints/acre. On soils with more than 10 percent organic matter, use 3.4 pints per acre.

# 13.2 Salvus plus Roundup Agricultural Herbicides on Corn Containing Roundup Ready 2 Technology including Roundup Ready Corn 2

This program may be used pre-emergence and post-emergence 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 the Roundup Agricultural Herbicide labels for specific weeds controlled post-emergence.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS TANK-MIX 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**

# **Pre-Emergence Surface**

# Sequential Program

This product may be applied pre-emergence to corn containing Roundup Ready 2 Technology including Roundup Ready Corn 2 at the ROUNDUP READY RATE of 1.5 pints per acre in a planned pre-emergence followed by Roundup Agricultural Herbicide post-emergence sequential program.

# **Post-Emergence Surface**

This product may be applied post-emergence to corn containing Roundup Ready 2 Technology including Roundup Ready Corn 2 from seedling emergence until the corn is 11 inches in height. The ROUNDUP READY RATE for this product is 1.5 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 rate of Roundup Agricultural Herbicides labeled rates.

ROUNDUP READY RATE – Salvus at 1.5 pi	ints per acre.	Martin LawSter	and the second
	BROADCAST RATE PER	ACRE*	
Soil Textural Group	Salvus (Pints)	+	Roundup Agricultural Herbicides
Coarse	1.0 to 1.75	Contraction of the second second	Per Labeled Rate.
Medium	1.0 to 2.25		Per Labeled Rate.
Fine	1.0 to 2.75		Per Labeled Rate.

# 13.3 Salvus Tank-Mixtures for Pre-Emergence Use in Corn

This product may be tank-mixed with the following products for pre-emergence use in corn. Ensure that the specific product being used in the tank mixture is registered for application pre-emergence 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 pre-emergence 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]

# 13.4 Salvus Tank-Mixtures for Post-Emergence Use in Corn

This product may be tank-mixed with the following products for post-emergence use in corn. Ensure that the specific product being used in the tank mixture is registered for application post-emergence (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 post-emergence to 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]

# 14.0 MISCANTHUS AND OTHER NON-FOOD PERENNIAL BIOENERGY CROPS

For weed control in Miscanthus and other non-food perennial bioenergy crops, apply Salvus at 1.3-1.7 pints per acre after the crop has been transplanted or after fully emerged to a height of at least 2-3 inches.

Up to two applications of Salvus may be made each year. The total amount of this product applied each year must not exceed 3.4 pints per acre.

# **RESTRICTION:**

Do not allow the Miscanthus or other non-food perennial bioenergy crop treated with Salvus to be grazed or used as animal feed.

# **15.0 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 30th, when the sustained soil temperature at 4-inch depth is less than 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.

# 16.0 LIMIT OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ROTAM NORTH AMERICA, INC. or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ROTAM NORTH AMERICA, INC. and Seller harmless for any claims relating to such factors.

ROTAM NORTH AMERICA, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ROTAM NORTH AMERICA, INC. and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ROTAM NORTH AMERICA, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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