

CYCLOATE GROUP 8 HERBICIDE

HELM

# Rovic Herbicide

**Liquid Herbicide for Weed Control in Sugar Beets**

**ACTIVE INGREDIENT:**

Cycloate (S-ethyl cyclohexylethylthiocarbamate) .....	73.9%
OTHER INGREDIENTS: .....	26.1%
TOTAL: .....	100.0%

Contains petroleum distillate.

Contains 6 pounds active ingredient per gallon.

**EPA Reg. No. 74530-16**

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**Read entire booklet before using this product. Observe all Precautionary Statements, and carefully follow  
Directions for Use, Storage and Disposal.**

Manufactured For  
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<b>FIRST AID</b>	
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <li>• Hold 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> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If Inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>NOTE TO PHYSICIAN</b>	
This product contains petroleum distillate. May pose an aspiration pneumonia hazard.	
<b>FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC: 1-800-424-9300. For 24-Hour Medical Emergency Assistance call National Poison Control Center at 1-800-222-1222.</b>	

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

**CAUTION:** Contains petroleum distillate. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**Personal Protective Equipment (PPE)**

Engineering controls are required for all mixers, loaders and applicators (see Engineering Controls for additional requirements).

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber, or viton, and
- Chemical-resistant apron when mixing and loading.

Handlers performing tasks, such as spill clean-up or cleaning equipment, for which engineering controls are not feasible must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber, or viton,
- Chemical-resistant apron, and
- One of the following respirator devices:
  - a NIOSH-approved respirator with an organic vapor (OV) cartridge with a combination R or P filter, with NIOSH approval number prefix TC-84A, or
  - a NIOSH-approved gas mask with a canister with NIOSH approval number prefix TC-14G, or
  - a NIOSH-approved powered air purifying respirator with an organic vapor (OV) cartridge and combination HE filter with NIOSH approval number prefix TC-23C.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

When handlers use closed systems, enclosed cabs, or aircraft 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.

**Engineering Controls**

**Mixers and loaders** must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for dermal protection, and must:

- Wear the personal protective equipment required in the PPE section of this labeling for mixers and loaders,
- Wear protective eye wear, if the system operates under pressure,
- *Either* use a closed system that also meets the requirements in the WPS for inhalation protection or wear the type of respirator specified in the personal protective equipment sections of the labeling, and
- Be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: chemical-resistant footwear, and, if using a closed system cab that provides respiratory protection, a respirator of the type specified in the PPE section of this labeling.

**Applicators** must use motorized ground equipment that is equipped with an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, applicators must:

- Wear the personal protective equipment required in the PPE section of this labeling for applicators,
- *Either* wear the type of respirator specified in the PPE section of this labeling or use an enclosed cab with a properly functioning ventilation system that is used and maintained according to the manufacturer's written operating instructions and that is declared in writing by the manufacturer or by a government agency to provide at least as much respiratory protection as the type of respirator specified in the PPE section of this labeling.
- Be provided and have immediately available for use in an emergency for when they must exit the cab in the treated area: chemical-resistant gloves, and, if using an enclosed cab that provides respiratory protection, a respirator of the type specified in the PPE section of this labeling.
- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Additional Use Limitations for California Only: Mixers, loaders, applicators, and other handlers are prohibited from handling more than 93 gallons (560 pounds active ingredient) in any 21- day period. Property operators must include in their Pesticide Use Records the name of the person(s) that handled the product for each application.

### User Safety Recommendations

Users should:

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

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment wash water or rinsate.

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Chemigation is prohibited. 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 (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Entry (including early entry that would otherwise be permitted under the WPS) by any person - other than a correctly trained and equipped handler who is performing a handling task permitted by the WPS - is PROHIBITED for 48 hours following applications. Do not allow entry by unprotected persons into the treated area until 48-hour period is expired and the warning signs are removed.

**NOTIFICATION:** Before the start of the application, notify workers of the application by warning them orally and by posting warning signs at entrances to the treated area. The signs must bear the skull and crossbones symbol and state: (1) "**DANGER/PELIGRO**", (2) "**DO NOT ENTER/NO ENTRE**", (3) the date and time of treatment, (4) "Rovic Herbicide in use", and (5) name, address, and telephone number of the applicator. Post the warning sign instead of the WPS sign for this application, but follow all WPS requirements pertaining to location, legibility, size, and timing of posting and removal.

Special Early Entry Exception: Workers may enter the treated area during the first 48 hours following application to plant crops, provided all of the following conditions are met:

(1) The special early entry workers must use motorized ground equipment that is equipped with an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, these workers must:

- Wear the personal protective equipment required in the PPE section of this labeling for applicators,
- *Either* wear the type of respirator specified in the PPE section of this labeling or use an enclosed cab with a properly functioning ventilation system that is used and maintained according to the manufacturer's written operating instructions and that is declared in writing by the manufacturer or by a government agency to provide at least as much respiratory protection as the type of respirator specified in the PPE section of this labeling.
- Be provided and have immediately available for use in an emergency when they must exit the cab in the treated area: chemical-resistant gloves, and, if using an enclosed cab that provides respiratory protection, a respirator of the type specified in the PPE section of this labeling,
- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

(2) Employers of the special early entry workers must make sure that these workers:

- Have received training equivalent to WPS pesticide handler training before entering the treated area,
- Are provided with the specified type of respirator, and the respirator fits them correctly and is maintained as required in the WPS for handlers,
- Are provided all of the WPS protections for early entry workers, including PPE instructions, labeling information and instructions, decontamination sites, and duties related to providing, cleaning, and maintaining the PPE for early-entry workers.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Keep containers closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. Protect from temperatures below 20° F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to re-dissolve crystals and assure uniformity before use. Do not store near sources of heat or open flame. COMBUSTIBLE LIQUID.

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

### CONTAINER HANDLING

**Nonrefillable Container:** Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying.

**(Liquid Formulations) Nonrefillable container equal to or less than 5 gallons:** 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.

**Nonrefillable container 5 gallons to bulk:** 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 complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!**

## RESISTANCE MANAGEMENT

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Rovic Herbicide or other Group 8 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your local HELM Agro US, Inc. representative.

## PRODUCT INFORMATION

### READ ALL LABEL DIRECTIONS BEFORE USING.

Rovic Herbicide is a selective herbicide which is mixed (incorporated) into the soil, or applied below the surface of the soil for control of weeds listed on this label. Rovic Herbicide controls weeds by interfering with normal seed germination and seedling development. It does not control established or germinated weeds present at application. All weed growth and crop stubble should be thoroughly worked into the soil before treatment.

### PRODUCT USE PRECAUTIONS

Rovic Herbicide must be used as directed at specified rates (do not overdose). Applied according to directions and under normal growing conditions, Rovic Herbicide will not harm the treated crop. During germination and early growth, extended periods of unusually cold and wet or hot and dry weather, insect, nematode, or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, highly saline or alkaline soil conditions, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. Rovic Herbicide used under these abnormal conditions could result in crop injury.

Rovic Herbicide may cause crop injury on very light sandy soil.

Tank mix this product with fungicides, insecticides, or herbicides only as recommended.

WEEDS CONTROLLED	
<b>ANNUAL GRASSES</b>	
Annual bluegrass	<i>Poa annua</i>
Annual ryegrass	<i>Lolium multiflorum</i>
Barley, volunteer	<i>Hordeum</i> spp.
Barnyardgrass (watergrass)	<i>Echinochloa</i> spp.
Crabgrass	<i>Digitaria</i> spp.
Foxtails	<i>Setaria</i> spp.
Wild oats	<i>Avena fatua</i>
<b>ANNUAL BROADLEAF WEEDS</b>	
Black nightshade	<i>Solanum nigrum</i>
Hairy nightshade	<i>Solanum villosum</i>
Henbit, deadnettle	<i>Lamium</i> spp.
Lambsquarters	<i>Chenopodium album</i>
Nettleleaf goosefoot*	<i>Chenopodium murale</i>
Purslane, common	<i>Portulaca oleracea</i>
Redroot pigweed	<i>Amaranthus retroflexus</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Small stinging nettle, Burning nettle	<i>Urtica urens</i>
Velvetleaf**	<i>Abutilon theophrasti</i>

\* California excluded.

\*\* Partial control or suppression only.

The above broadleaf weeds will be controlled only if application is made when conditions are favorable for germination. Rovic Herbicide WILL NOT CONTROL ESTABLISHED OR GERMINATED WEEDS PRESENT AT APPLICATION.

PERENNIAL WEEDS	
Yellow nutsedge	<i>Cyperus esculentus</i>
Purple nutsedge	<i>Cyperus rotundus</i>

Existing stands of nutsedge must be turned under and chopped thoroughly before treatment. Prior to planting, Rovic Herbicide must be thoroughly mixed into the soil or applied subsurface to the soil with injectors for nutsedge control.

#### SOIL PREPARATION

Prepare the soil for seeding according to good agricultural practice. All weed growth should be thoroughly worked into the soil before treatment. DO NOT APPLY BEFORE PREIRRIGATION.

#### APPLICATION DIRECTIONS

**Mechanical Soil Incorporation or Injection Applications:** Apply Rovic Herbicide to well-worked soil which is dry enough to permit thorough mixing with incorporation equipment or proper injection. Use standard low-pressure (20-50 psi) boom spray equipment. Application equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are free from clogging and delivering a uniform pattern. Apply UNIFORMLY the directed rate of Rovic Herbicide in 10 to 50 gallons of water per acre. Avoid overlaps that will increase Rovic Herbicide dosage above specified limits because plant injury will occur.

**Sprinkler Irrigation:** Begin sprinkler incorporation immediately following application, and complete within a 36 hour period using sufficient water to penetrate to a depth of 3-4 inches. The application and incorporation must be done within five days after the last tillage operation, since poor results will occur if weeds have germinated.

**Rovic Herbicide with Fluid Fertilizer:** Rovic Herbicide may be combined with fluid (solution, slurry, or suspension) fertilizers. However, physical compatibility with these fluid fertilizers must be determined before combining in the spray tank. See Appendix I giving directions for these combinations. Even though found to be compatible, constant agitation is necessary to keep the Rovic Herbicide evenly mixed with the fluid fertilizer.

**Impregnation on Dry Bulk Fertilizers:** Impregnation of dry bulk fertilizer is permitted in commercial settings only. On-farm impregnation of dry bulk fertilizer is prohibited. All persons involved in the impregnation process are considered pesticide handlers and must wear the handler personal protective equipment and follow the engineering control requirements specified on this labeling. If at any time during the impregnation process, including loading of the impregnated fertilizer into the trucks for transporting, the system does not provide inhalation protection equivalent to an organic-vapor removing respirator, all persons, at the impregnation site must wear the respirator required on this labeling for handlers. Rovic Herbicide may be impregnated on many dry bulk fertilizers for use on sugar beets. Rovic Herbicide impregnated on dry bulk fertilizers may be applied and incorporated into the soil either in the fall (in states where fall application for Rovic Herbicide is recommended) before the ground freezes, or before planting. However, uniform distribution of Rovic Herbicide on fertilizer particles and uniform application are necessary to assure good results. See Appendix II for special instructions regarding directions for impregnation and use.

#### INCORPORATION DIRECTIONS

Rovic Herbicide must be incorporated into the soil to prevent loss of the herbicide.

**Timing:** Rovic Herbicide applications in water must be incorporated immediately (within minutes). Whenever possible, application and incorporation should be done in the same operation. Applications made in liquid fertilizer may have a maximum delay of 4 hours before incorporation. Applications made on dry bulk fertilizer must be incorporated within the same day of application. Immediate incorporation must be made with liquid and dry bulk fertilizer applications if soil surface is damp or if windy conditions (15 mph or greater) or rainfall are present or expected.

**Depth:** Rovic Herbicide should be incorporated into the soil to a depth of 2-3 inches (**California only:** incorporate to a depth of 3 inches). Thorough soil mixing is necessary for good weed control. Use equipment which has been proven to incorporate thoroughly to the specified depth.

**SOIL MIXING (INCORPORATION) BEFORE PLANTING**

The following equipment commonly is used for soil mixing (incorporation) before planting:

**For Broadcast (Overall) Application:**

- Power Driven Cultivation Equipment (recommended on all soil types). Set to cut to a depth of 2 to 3 inches.
- Tandem Discs (recommended on all soil types). Set to cut to a depth of 4 to 6 inches, operated at 4 to 6 mph followed by a spiked-tooth harrow or some other leveling device which extends beyond the ends of the discs. For more thorough mixing (for nutsedge, heavier soils), disc in two different directions (cross disc).
- Field Cultivators (recommended on lighter soils in good tilth only). Do not use in California. Use 3 to 4 rows of sweeps, spaced at 7 inch or less intervals and staggered so that no soil is left unturned, followed by a spiked-tooth harrow or some other leveling device pulled behind the cultivator. Do not use chisels or points. Set the cultivator to cut 4 inches deep, operated at 5 mph or more. Run the equipment over the field twice, the second run at an angle to the first.
- Rotary Ground Driven or Spring-Tooth Cultivators (recommended on lighter soils in good tilth only). Do not use in California. Set to penetrate to a depth of 4 to 6 inches and operated at 5 to 8 mph in two different directions.

**For Band (Row) Application:**

Uniformly mix to a depth of 2 to 3 inches.

- Hooded power-driven rotary tillers.
- Hooded ground-driven rotary tillers.

**Rolling:** Under most conditions, the treated area should be firmly rolled between the incorporation unit and the planters.

**PLANTING**

For maximum weed control benefits, crops should be planted or seeded immediately after application except for fall applications. Do not use a drag behind the planter as it may concentrate Rovic Herbicide over the seed row and cause crop injury.

**CULTURAL PRACTICES FOLLOWING APPLICATION**

Rovic Herbicide is not persistent in the soil and susceptible weeds germinating later during the growing season may not be controlled. Shallow cultivation and approved postemergence herbicides may be necessary to control those susceptible weeds that escape control by Rovic Herbicide as well as those weeds not susceptible to Rovic Herbicide. Do not cultivate deeper than the depth of the herbicide incorporation.

When cultivating fields where Rovic Herbicide has been banded in the row, use shields to prevent the movement of untreated soil into the treated row.

SUGAR BEETS USE RATES Broadcast Treatment			
CROP	APPLICATION TIMING	GALLONS Rovic Herbicide PER ACRE	REMARKS
Sugar Beets*	Preplant or At Planting or Immediately Post Planting	1/2 to 2/3	Use on mineral soils ONLY. Use lower rate on sandy soils. Use higher dosage rate on heavier soil. Injury may result in highly saline or alkaline soils.
	Fall application	2/3	Apply only in the states of Idaho, Minnesota, Montana, North Dakota, Oregon, and Wyoming. Apply and incorporate in late fall before the ground freezes.

Maximum of 2/3 gallon (4 pounds active ingredient) per application and one application per crop cycle.

\* Make only one (1) application per growing season. If Rovic Herbicide is applied in the fall, do not reapply Rovic Herbicide the following spring.

**Band Treatment**

The rates given above are for broadcast treatment. For band treatment, reduce the amount of Rovic Herbicide proportionately depending on the row spacing and band width to be treated. DO NOT USE BAND APPLICATION ON ROCKY GROUND BECAUSE THOROUGH INCORPORATION IS NOT POSSIBLE.

**Soil Injection Application on Sugar Beets:** Special equipment designed for soil injection must be used. The injector units must be rigidly mounted immediately ahead or immediately behind the planter unit.

**Soil Injection:** Injector shanks must be spaced 2 1/2 to 3 inches apart and mounted in staggered positions to avoid trash building up on them. Injector shanks must be set to inject Rovic Herbicide 1 1/2 to 2 inches below the soil surface. The width of the band in which weed control is desired will determine the number of injector shanks required per row (that is, four injector shanks for a 10 to 12-inch band, six injector shanks for a 15 to 18-inch band). The two injector shanks adjacent to the drill row must be 1 1/4 to 1 1/2 inches on either side of it.

**ROVIC HERBICIDE AND EPTAM® 7-E SELECTIVE HERBICIDE TANKMIX FOR PREPLANT USE IN SUGAR BEETS FOR MICHIGAN, MINNESOTA, OHIO, AND THE RED RIVER VALLEY AREA OF NORTH DAKOTA.**

**DIRECTIONS FOR USE**

The Rovic Herbicide and EPTAM 7-E herbicide combination is a selective tankmix which controls weeds by interfering with normal germination and seedling development. This tank mixture can be applied only once per growing season. The combination may be used in the fall or in the spring (except where noted, see table below).

The Rovic Herbicide and EPTAM 7-E combination may cause crop injury on very light sandy soil and when used under adverse environmental conditions that weaken crop seedlings. A tank mixture of Rovic Herbicide and EPTAM 7-E will give equal to or greater control of the following listed weeds than either product used separately. This combination does not control established weeds.

Green foxtail	<i>Setaria viridis</i>
Yellow foxtail	<i>Setaria glauca</i>
Wild oats	<i>Avena fatua</i>
Yellow nutsedge	<i>Cyperus esculentus</i>
Purple nutsedge	<i>Cyperus rotundus</i>
Lambsquarters, common*	<i>Chenopodium album</i>
Pigweed, redroot*	<i>Amaranthus retroflexus</i>

\* Partial control only (suppression)

### APPLICATION DIRECTIONS

During filling, pour the directed rates of both Rovic Herbicide and EPTAM 7-E into a properly calibrated, low-pressure boom sprayer having good agitation, and mix thoroughly. Apply the material uniformly in 10 to 50 gallons of water per acre. Check calibration frequently during application and observe the nozzles to ensure a uniform spray pattern. The soil should be well worked prior to application and dry enough to permit thorough mixing with incorporation equipment.

### SOIL INCORPORATION

The Rovic Herbicide and EPTAM 7-E tank mixture must be immediately incorporated (mixed) into the top 2 to 3 inches of soil after spraying to prevent loss of the herbicides.

SPRING* PREPLANT INCORPORATED APPLICATION RATES** (Pints/Acre***)			
SOIL TEXTURE	ORGANIC MATTER %	EPTAM 7-E	Rovic Herbicide
Coarse	3.0 to 4.5	1.0	3.0
	> 4.5	1.0 to 1.25	3.0
Medium	3.0 to 4.5	1.0 to 1.25	3.0 to 4.0
	> 4.5	1.0 to 1.75	3.0 to 4.0
Fine	3.0 to 4.5	1.0 to 1.5	3.0 to 4.0
	> 4.5	1.0 to 2.0	3.0 to 4.0

\* DO NOT USE THE TANKMIX IN THE SPRING IN MICHIGAN OR OHIO.

\*\* Make only one application per growing season. Do not apply the Rovic Herbicide / EPTAM 7-E combination in the spring if either this combination or Rovic Herbicide alone was applied in the fall.

\*\*\* Do not apply more than 5 pints/acre of Rovic Herbicide and EPTAM 7-E combined regardless of the ratio.

FALL PREPLANT INCORPORATED APPLICATION RATES* (Pints/Acre**)			
SOIL TEXTURE	ORGANIC MATTER %	EPTAM 7-E	Rovic Herbicide
Coarse	3.0 to 4.5	1.0	4.0
	> 4.5	1.0 to 1.25	4.0 to 4.33
Medium	3.0 to 4.5	1.0 to 1.25	4.0 to 4.5
	> 4.5	1.0 to 1.5	4.0 to 4.5
Fine	3.0 to 4.5	1.0 to 1.5	3.0 to 4.5
	> 4.5	1.0 to 2.0	4.5

\* Make only one application per growing season. Do not apply the Rovic Herbicide / EPTAM 7-E combination in the spring if either this combination or Rovic Herbicide alone was applied in the fall.

\*\* Do not apply more than 6 pints/acre of Rovic Herbicide and EPTAM 7-E combined regardless of the ratio.

## APPENDIX I

### ROVIC HERBICIDE WITH FLUID FERTILIZERS

The following procedure is suggested for determining whether Rovic Herbicide may be combined with a specific fluid fertilizer for spray tank application.

#### MATERIALS REQUIRED

1. Rovic Herbicide
2. Fluid fertilizer to be used.
3. Adjuvant for fertilizer tankmix: Compex™, Sponto 168-D™, Unite™, or equivalent. The adjuvant which provides the best emulsification depends on the specific fertilizer under consideration.
4. Two one-quart, wide-mouth glass jars with lid or stopper.
5. Measuring spoons (a 25 ml pipette or graduated cylinder provides more accurate measurement).
6. Measuring cup, 8 oz. (237 ml).

## PROCEDURE

1. Pour a pint (about 473 ml) of the fluid fertilizer into each of the quart jars.
2. Add adjuvant to one of the jars and mix (see rate table).
3. Add the Rovic Herbicide to both jars (see rate table).
4. Close both jars with lid or stopper and mix the contents by turning the jars upside down ten times.
5. Inspect the surface and body of the mixtures.
  - (A) Immediately after completing the jar inversions.
  - (B) After allowing the jars to stand quietly for 30 minutes.
  - (C) And then again after turning the jars upside down 10 times.

If the uniform mix cannot be made, the mixture should not be used. If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with the jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant first at a rate of 3 pints per 100 gallons of fluid fertilizer; foaming can be minimized by using moderate agitation. If nondispersible oil, sludge, or clumps of solids form in the mixtures, the combinations should not be used.

RATE TABLE FOR ROVIC HERBICIDE AND ADJUVANT** WITH THE FLUID FERTILIZER		
Gallons of fluid fertilizer to be applied per acre	ml or tsp. of Rovic Herbicide* to be added to 1 pint of fertilizer	
	Rovic Herbicide	
	ml	tsp
10	8	1 2/3
15	5	1
20	4	3/4
25	3	2/3
30	2 1/2	1/2
40	2	2/5

\* Based on field rate of 1 pound active ingredient per acre in the fertilizer volumes indicated. Increase volume proportionately to correspond with intended field rate in terms of pounds of active ingredient per acre (e.g., for field rate of 4 pounds actual Rovic Herbicide in 40 gallons fertilizer per acre, add 8 ml or 2 tsp Rovic Herbicide to each jar for compatibility testing purposes).

\*\* Two (2) milliliters or one-half (1/2) teaspoon of adjuvant to be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizer.

## APPENDIX II

### ROVIC HERBICIDE IMPREGNATION ON DRY BULK FERTILIZERS

Impregnation of dry bulk fertilizer is permitted in commercial settings only. On-farm impregnation of dry bulk fertilizer is prohibited. All persons involved in the impregnation process are considered pesticide handlers and must wear the handler personal protective equipment and follow the engineering control requirements specified on this labeling. If at any time during the impregnation process, including loading of the impregnated fertilizer into the trucks for transporting, the system does not provide inhalation protection equivalent to an organic-vapor removing respirator, all persons, at the impregnation site must wear the respirator required on this labeling for handlers.

**CAUTION:** Nitrate fertilizers represent a potential explosive hazard, particularly in contact with organic substances such as Rovic Herbicide. Do not impregnate Rovic Herbicide on ammonium nitrate. Do not use fertilizers containing ammonium, potassium or sodium nitrate. Such mixtures may cause explosion.

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling Rovic Herbicide fertilizer mixtures.

Rovic Herbicide may be impregnated on many dry bulk fertilizers (Table 1) and applied and incorporated into the soil before planting for the control of labeled grasses and broadleaf weeds in sugar beets.

All Rovic Herbicide label and supplementary literature instructions and precautions regarding rates per acre, soil type and soil incorporation, application, and other directions must be followed.

Test results have shown Rovic Herbicide on many dry bulk fertilizers gives weed control equal to Rovic Herbicide applied as a spray in water or liquid fertilizer. However, uniform impregnation of the pesticide on the dry fertilizer particles and uniform application in the field are necessary to assure good results.

A minimum of 200 pounds of approved fertilizer ingredients (Table 2) impregnated with the appropriate amount of Rovic Herbicide must be applied per acre.

For impregnating the pesticides on dry fertilizers, use a closed rotary-drum type mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside of the mixer to provide uniform spray coverage of the tumbling fertilizer. The Rovic Herbicide should be sprayed uniformly onto the fertilizer using a fine spray pattern.

The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with Rovic Herbicide provides a satisfactory dry mixture.

If the absorptivity is not adequate, use of a highly absorptive powder is required to provide a dry, free-flowing mixture. Micro-Cel™ E is the recommended absorbent powder. It should be added separately and uniformly to the prepared pesticide-fertilizer mixture, in a quantity that is sufficient to provide a suitable free-flowing mixture. Generally, less than 2% by weight of Micro-Cel is required.

The amount of Rovic Herbicide actually required in the manufacture of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amounts of Rovic Herbicide actually contained in the mixture applied to the soil represent the correct rates of use.

Bulk fertilizers impregnated with Rovic Herbicide should be **applied immediately**, NOT STORED. All bulk containers should be tightly covered while the products are being transported and applied to reduce chance of Rovic Herbicide loss via volatilization.



**Table 1**

<b>APPROVED DRY FERTILIZER INGREDIENTS FOR USE WITH ROVIC HERBICIDE</b>			
	<b>N</b>	<b>P</b>	<b>K</b>
Ammonium sulfate	21	0	0
Ammonium phosphate-sulfate	16	20	0
Diammonium phosphate	18	46	0
Monoammonium phosphate	11	56	0
Potassium chloride	0	0	60
Potassium sulfate	0	0	52
Single superphosphate	0	20	0
Treble superphosphate	0	46	0
Urea	45	0	0

NOTE: SUL-PO-MAG, K-MAG and 11-48-0 have been shown to be compatible with Rovic Herbicide and are approved for use.

**Rovic Herbicide Physical Data**

Specific Gravity 20/20°C: 0.97  
 Pounds/gallon 20/20°C: 8.12  
 Flashpoint: 168°F (Tagliabue Closed Cup)  
 Viscosity: Sprayable down to 25°F  
 Freeze Point: 20°F (seeded)

**Table 2**

<b>RATE CHART FOR THE IMPREGNATION OF DRY BULK FERTILIZERS WITH ROVIC HERBICIDE</b>		
<b>Fertilizer Rate per Acre</b>	<b>Rovic Herbicide Rate Per Acre</b>	
	<b>2 Quarts per Acre</b>	<b>2 2/3 Quarts per Acre</b>
200 lbs.	20 quarts / ton	26 2/3 quarts / ton
250 lbs.	16 quarts / ton	21 1/3 quarts / ton
300 lbs.	13 1/3 quarts / ton	17 3/4 quarts / ton
350 lbs.	11 2/5 quarts / ton	15 1/4 quarts / ton
400 lbs.	10 quarts / ton	13 1/3 quarts / ton
450 lbs.	8 7/8 quarts / ton	11 7/8 quarts / ton
500 lbs.	8 quarts / ton	10 2/3 quarts / ton
550 lbs.	7 1/3 quarts / ton	9 3/4 quarts / ton
600 lbs.	6 2/3 quarts / ton	8 7/8 quarts / ton
650 lbs.	6 1/5 quarts / ton	8 1/4 quarts / ton
700 lbs.	5 3/4 quarts / ton	7 5/8 quarts / ton

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