

ACETOCHLOR	GROUP	15	HERBICIDE
MESOTRIONE	GROUP	27	HERBICIDE
CLOPYRALID	GROUP	4	HERBICIDE

# JAVARO™

Contains acetochlor, mesotrione, and clopyralid, the active ingredients used in Resicore®.

**An herbicide for control of annual grasses and broadleaf weeds in field corn, field seed corn, field silage corn, and yellow popcorn.**

ACTIVE INGREDIENT(S):	(% by weight)
Acetochlor: 2-chloro-N-ethoxymethyl-N-(2-ethyl-6-methylphenyl)acetamide.....	31.0%
Mesotrione: 2-[4-(methylsulfonyl)-1,3-cyclohexanedione].....	3.3%
Clopyralid MEA salt: 3,6-dichloropyridinecarboxylic acid, monoethanolamine salt.....	2.7%
OTHER INGREDIENTS:.....	63.0%
TOTAL:.....	100.0%

EPA Reg. No.: 93930-108

Contains 336 grams/liter or 2.8 pounds/gallon acetochlor, 36 grams/liter or 0.30 pounds/gallon mesotrione, and 22.4 grams/liter or 0.19 pounds/gallon clopyralid, acid equivalent (3,6-dichloropyridinecarboxylic acid).

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

See below for additional Precautionary Statements.

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <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 the poison control center or doctor.</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>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-984-465-4791 for emergency medical treatment information.	

**For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night Within USA and Canada:  
1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

Javaro™ is not manufactured, or distributed by Corteva Agriscience United States, seller of Resicore®.  
Not for sale, sale into, distribution and/or use in Nassau and Suffolk counties of New York State.

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber  $\geq$  14 mils, Nitrile Rubber  $\geq$  14 mils, Neoprene Rubber  $\geq$  14 mils, Polyvinyl Chloride (PVC)  $\geq$  14 mils, or Viton  $\geq$  14 mils
- Shoes plus socks

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

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

**Engineering Controls:** When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

**Users should:**

- 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

This pesticide 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.

### GROUNDWATER ADVISORY

Clopyralid, Mesotrione and Acetochlor are known to leach through soil into groundwater under certain conditions as a result of label use. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

### SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

### NON-TARGET ORGANISM ADVISORY

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow coming in contact with Oxidizing agent and Reducing agents. Hazardous Chemical reaction may occur.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

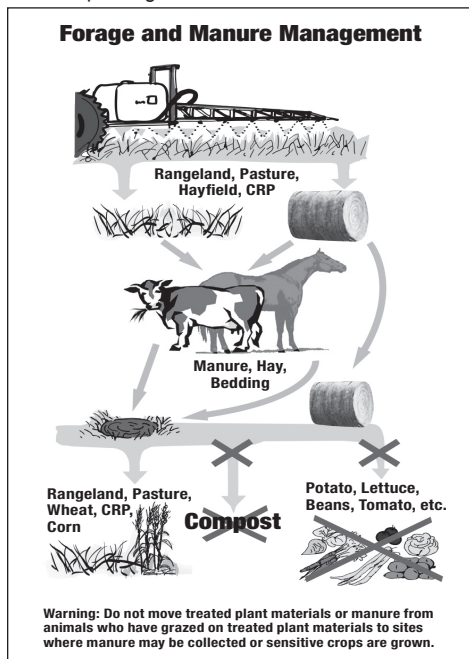
Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

This product is persistent and may be present in treated plant materials for months to years after application.

Do not sell or transport treated plant materials or manure from animals that have grazed on treated plant materials off-site for compost distribution or for use as animal bedding/feed for 18 months after application.

Manure from animals that have grazed or eaten forage or hay harvested from treated areas within the previous three days may only be applied to the fields where the following crops will be grown: pasture grasses, grass grown for seed, wheat and corn. Animals that have been fed clopyralid-treated forage must be fed forage free of clopyralid for at least 3 days before movement to an area where manure may be collected or sensitive crops are grown.

Warning: Do not move treated plant materials or manure from animals who have grazed on treated plant materials to sites where manure may be collected or sensitive crops are grown.



For more information on how to manage clopyralid treated materials and to prevent clopyralid from contaminating compost please visit <https://www.epa.gov/ingredients-used-pesticide-products/registration-review-pyridine-and-pyrimidine-herbicides#compost>.

### 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 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils, Neoprene Rubber ≥ 14 mils, Polyvinyl Chloride (PVC) ≥ 14 mils, or Viton ≥ 14 mils
- Shoes plus socks

### PRODUCT INFORMATION

For use only on field corn, field seed corn, field silage corn, and yellow popcorn, which collectively will be referred to as "corn" in this label.

**Javaro** may be used preplant, preemergence (after planting but prior to crop emergence), or postemergence (after crop emergence) in field corn, field seed corn, and field silage corn fields. For yellow popcorn, **Javaro** must be applied prior to crop emergence (i.e., preplant or preemergence) or severe crop injury may occur.

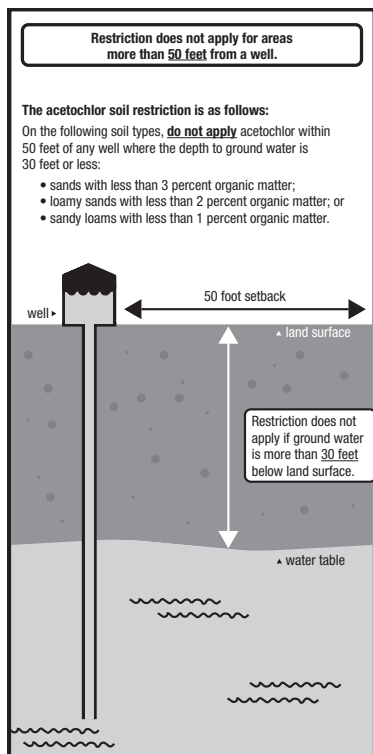
**Javaro** is a combination of the herbicides acetochlor (group 15), mesotrione (group 27), and clopyralid (group 4), plus the crop safener furilazole. This combination of three herbicide modes of action controls many grass and broadleaf weeds by interfering with normal germination, growth, and seedling development. When applied after weed emergence, **Javaro** will provide control of many broadleaf weed species but will not provide consistent control of emerged grass weeds. **Javaro** may be used in tank mix combinations with other herbicides registered for use on the above corn crops to enhance or broaden the spectrum of control of weeds listed in the **Weeds Controlled** section of this label (Tables 4 and 5).

### USE RESTRICTIONS

- **Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.**
- All containers of **Javaro** must be kept tightly closed when not in use.
- Observe all restrictions, precautions, and limitations on the label of each product used in tank mixtures.
- **Javaro** must be used in a manner that will prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.
- Do not store **Javaro** near seeds, fertilizers, or foodstuffs.
- Do not allow **Javaro** to contaminate feed or food.
- Do not use **Javaro** on any crop other than field corn (for grain, seed, or silage), or yellow popcorn.
- Do not use **Javaro** in the production of white popcorn or ornamental (Indian) corn or crop injury may occur.
- Do not apply **Javaro** to yellow popcorn after the crop has emerged or severe crop injury may occur.
- Do not make postemergence applications of **Javaro** to field corn, field seed corn, or field silage corn using liquid fertilizer as the carrier or severe crop injury may occur.
- Do not make postemergence (emerged corn) applications of **Javaro** in a tank mix with any organophosphate or carbamate insecticide or severe crop injury may occur.
- Do not apply **Javaro** to field corn, field seed corn, and field silage corn over 11 inches tall.
- Do not apply this product through any type of irrigation system.
- Use a sprinkler irrigation system only to incorporate **Javaro** after application. After **Javaro** has been applied, a sprinkler irrigation system set to deliver 0.5 - 1.0 inch of water may be used to incorporate the product; using more than one inch of water could result in reduced performance. On sandy soils low in organic matter, apply no more than 0.5 inch of water.
- Do not use flood or furrow irrigation to incorporate this product.
- Do not apply under conditions that favor runoff or wind erosion of soil containing this product to non-target areas.
- **To prevent off-site movement due to runoff or wind erosion:**
  - o 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.
  - o Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.
  - o Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

- **Aerial Application:** Do not apply **Javaro** using aerial application equipment.
- Thoroughly clean sprayer or other application equipment before and after use. Do not use a sprayer or applicator contaminated with other materials or crop damage or sprayer clogging of the application equipment may occur.
- Do not apply more than 3.25 quarts (2.275 lbs. acetochlor, 0.244 lb. mesotrione, 0.154 lb. clopyralid) of **Javaro** per acre per year.
- **Maximum Application Rates Per Calendar Year:**
  - o **Acetochlor:** When tank mixing or sequentially applying products containing acetochlor with **Javaro** to corn, do not exceed an application rate of 3.00 lbs. of acetochlor per acre per year. **Note:** For purposes of calculating total acetochlor active ingredient applied, **Javaro** contains 2.80 lbs. acetochlor per gallon (0.70 lbs. acetochlor per quart).
  - o **Mesotrione:** When tank mixing or sequentially applying products containing mesotrione with **Javaro** to corn, do not exceed an application rate of 0.24 lb. of mesotrione per acre per year. **Note:** For purposes of calculating total mesotrione active ingredient applied, **Javaro** contains 0.30 lb. mesotrione per gallon (0.075 lb. mesotrione per quart).
  - o **Clopyralid:** When tank mixing or sequentially applying products containing clopyralid with **Javaro** to corn, do not exceed an application rate of 0.25 lb. ae of clopyralid per acre per year. **Note:** For purposes of calculating total clopyralid active ingredient applied, **Javaro** contains 0.187 lb. ae clopyralid per gallon (0.047 lb. ae clopyralid per quart).
- Refer to **Table 3** for use rates of **Javaro** by soil texture and organic matter content.
- Do not make more than two applications of **Javaro** per year.
- **Preharvest Interval:** Do not apply **Javaro** within 45 days of harvest for ears and forage or within 60 days of harvest for stover.
- Do not contaminate irrigation water used for crops other than corn or water used for domestic purposes. On the following soil types, do not apply this product within 50 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1 percent organic matter. See **Figure 1** for additional clarification.

Figure 1.



This product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinks holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

## USE PRECAUTIONS

- Acetochlor 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.
- Avoid spray overlap, as crop injury may result.
- Avoid spray drift onto adjacent crop or non-crop areas.
- **Javaro** will not provide consistent control of emerged grass weeds present at application; utilize tank mixtures or sequential applications of herbicides registered for postemergence control of grass weeds in corn.
- Applying **Javaro** postemergence (emerged corn) to corn that has received an at-plant application of phorate or terbufos insecticide may result in severe corn injury. Temporary corn injury may occur if **Javaro** is applied to emerged corn where organophosphate insecticides other than phorate or terbufos were applied at planting.
- Postemergence (emerged corn) applications of any organophosphate or carbamate insecticide within 7 days before or 7 days after a **Javaro** application may result in severe corn injury.
- Dry weather following preplant or preemergence applications of **Javaro** or a **Javaro** tank mixture may reduce effectiveness. If weeds develop, they may be controlled with cultivation or use of registered corn herbicides.
- Where reference is made to weeds partially controlled, partial control can mean erratic or inconsistent control or efficacy at a level below that generally considered acceptable for commercial weed control.
- Applied according to directions and under normal growing conditions, **Javaro** will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil-applied systemic insecticides, or improperly placed fertilizers or soil insecticides may weaken crop seedlings and stress crop growth. **Javaro** used under these conditions could result in crop injury.

## ROTATIONAL CROP RESTRICTIONS

When **Javaro** is applied as directed on this label, follow the crop rotation intervals in **Table 1**. If **Javaro** is tank mixed or used sequentially with other products, follow the most restrictive product's crop rotation interval.

**Table 1. Time Interval between Javaro Application and Replanting or Planting of Rotational Crop**

Rotational crop	Rotational Interval
Field corn Field seed corn Field silage corn Yellow popcorn	Anytime <sup>(1)</sup>
Wheat	4 months
Alfalfa <sup>(2)</sup> Barley Millet (pearl and proso) Oats Rice Rye Sorghum <sup>(3)</sup> Soybean <sup>(4,5,6)</sup> Sunflower <sup>(4)</sup> Sweet corn	10.5 months <sup>(7,8)</sup>
Cotton	12 months
All other rotational crops	18 months

<sup>(1)</sup> Do not make a second application of **Javaro** if the original corn crop is lost.

<sup>(2)</sup> **Idaho, Nevada, Oregon, Utah, and Washington:** 12 months, areas receiving greater than 18 inches of annual rainfall, excluding irrigation; 18 months, areas receiving less than 18 inches of annual rainfall, excluding irrigation. **All other states:** 10.5 months.

<sup>(3)</sup> **Idaho, Nevada, Oregon, Utah, and Washington:** 12 months. **All other states:** 10.5 months.

<sup>(4)</sup> **Florida:** 18 months. **Idaho, Nevada, Oregon, Utah, and Washington:** 12 months, areas receiving greater than 18 inches of annual rainfall, excluding irrigation; 18 months, areas receiving less than 18 inches of annual rainfall, excluding irrigation. **All other states:** 10.5 months for soils greater than 2% organic matter AND rainfall more than 15 inches during 12 months following applications; 18 months for soils less than 2% organic matter AND rainfall less than 15 inches during 12 months following applications.

<sup>(5)</sup> Injury may occur to soybeans planted the year following application on soils having a calcareous subsurface layer, if products containing atrazine were used at rates above 0.75 lb. ai atrazine per acre in tank mixtures and/or sequentially with **Javaro**.

<sup>(6)</sup> In eastern parts of the Dakotas, Kansas, western Minnesota and Nebraska, do not rotate to soybeans for 18 months following application if products containing atrazine were used in tank mixtures and/or sequentially with **Javaro** and the total atrazine rate applied was more than 2.0 pounds active ingredient per acre, or equivalent band application rate, or soybean injury may occur.

<sup>(7)</sup> If **Javaro** is applied after June 1, rotating to crops other than corn or grain sorghum the next spring may result in crop injury.

<sup>(8)</sup> In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use **Javaro** only when corn or sorghum is to follow field corn, or a crop of untreated corn or sorghum is to precede other rotational crops.

### Rotation to Non-food Winter Cover Crops

Following harvest of corn treated with **Javaro**, only non-food or non-feed winter cover crops (with the exception of winter 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 **Javaro**. This prohibition does not apply to winter wheat, which may be planted 4 months following the last application of **Javaro**, or to

nongrass animal feeds, which may be planted 9 months after the last application of **Javaro**.

### WEED RESISTANCE MANAGEMENT

For resistance management, please note that **Javaro** contains a Group 15/Acetochlor, a Group 27/Mesotrione, and a Group 4/Clopyralid herbicide. Any weed population may contain plants naturally resistant to Group 15, 27, and/or Group 4 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of **Javaro** or other Group 15, 27, or 4 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 Avalaire, LLC.

### Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides and applications with different modes of action and overlapping weed spectrums with or without tillage operations and/or other cultural practices. Research has demonstrated the importance of using full labeled rates and following use recommendations to minimize selection for resistance. Scouting fields after an herbicide application is important because it can facilitate the early detection and identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to adjust management practices to prevent weeds from reproducing by seed or vegetative propagules. Cleaning equipment between sites and avoiding

movement of plant material between sites may minimize the spread of resistant weed seed.

For annual cropping situations also consider the following:

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

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- Apply with the release height no more than 3 feet above the ground or crop canopy.
- Applicators are required to select a nozzle and pressure combination that delivers a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

#### Boom-less Ground Sprayer Applications:

- Applicators are required to select a nozzle and pressure combination that delivers a medium or coarser droplet size (ASABE S572) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### Handheld Technology Applications:

Take precautions to minimize spray drift.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### BOOM HEIGHT - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### WIND

Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### Boom-less Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### MIXING, SPRAYING, AND HANDLING INSTRUCTIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Carriers

##### Liquids:

- **Preemergence Applications:** Either clean water or liquid fertilizers, excluding suspension fertilizers, may be used as liquid carriers for preplant or preemergence applications of **Javaro**. If fluid fertilizers are used, a physical compatibility test must be done **before combining** in the spray tank. See **Appendix I** for details of the compatibility testing procedure. Even if **Javaro** is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.
- **Postemergence Applications:** Use only clean water as the carrier when applying **Javaro** after field corn emergence; do not make postemergence applications using liquid fertilizer as the carrier or severe crop injury may occur. Do not apply **Javaro** to emerged yellow popcorn or severe crop injury may occur.

**Dry Bulk Fertilizer:** **Javaro** may be impregnated on dry bulk fertilizer and applied as the fertilizer is spread. See **Appendix I** for directions and restrictions including which fertilizers are compatible.

#### Adding Javaro to the Spray Tank

The spray tank must be clean, thoroughly rinsed and decontaminated before adding either **Javaro** alone or with tank mix combinations. If water is used as the carrier, use clean water.

**Javaro Applied Alone:** When **Javaro** is used alone, add the specified amount of **Javaro** to the spray tank when the tank is half filled with carrier and then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform mixture.

**Javaro Applied in Tank Mixtures:** Refer to the sections of this label for recommended tank mixes. Always refer to labels of the tank mix partners for mixing directions and precautions. Do not exceed label dosage rates nor combined maximum seasonal doses for acetochlor, mesotrione, or clopyralid.

**Javaro** cannot be mixed with any product bearing a label prohibition against such mixing. If a tank mixture is used, a compatibility test must be done. See **Appendix II** for details on the procedure for such a test.

If the tank mix partner is compatible, fill the tank half full of carrier. Start and continue agitation throughout mixing and spraying operation. All return lines to the spray tank must discharge below the liquid level to prevent foaming. Prepare the tank mix components and add them in the following order by formulation type:

1. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
2. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when the flowable is diluted with water before adding to the tank.
3. Add **Javaro**.
4. Add any other tank mix products next, with emulsifiable concentrates added last.
5. Add adjuvants last, if needed.
6. Complete filling the sprayer tank and continue agitation. Apply as soon as possible after spray mixture is prepared. Do not leave mixture in spray tank overnight without agitation or unattended.

**Note:** For all tank mixtures, maintain agitation during mixing and throughout application to ensure the spray mixture remains uniformly suspended. If the spray mixture is allowed to settle at any time, thorough agitation is required to resuspend the mixture before spraying is resumed.

### ADJUVANTS

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

Use of adjuvants with **Javaro** applied prior to weed emergence is not necessary or recommended.

Where **Javaro** is applied after field corn has emerged, a non-ionic surfactant (NIS) at 0.25% v/v (1 quart/100 gallons) may be used. A crop oil concentrate (COC) may also be used at a rate not to exceed 1.0% (1 gallon/100 gallons) or not more than the equivalent of 1.0 quart per acre. The use of crop oil concentrate (COC) may result in temporary crop injury. Do not apply **Javaro** to yellow popcorn after the crop has emerged or severe crop injury may occur.

Do not use nitrogen based adjuvants (AMS or UAN) or methylated seed oil (MSO) with **Javaro** when applied alone to emerged field corn or when **Javaro** is applied as a postemergence tank mixture with other products (except for the inclusion of AMS in tank mixtures containing glyphosate or glufosinate, as directed on those product labels), unless directed for a specific tank mix on this label or as part of a supplemental **Javaro** label.

Any of the above adjuvants may be used at a preplant or preemergence application timing (i.e., where the corn crop has not yet emerged) to enhance burndown activity on existing weeds.

### SPRAY EQUIPMENT

#### Ground Application

Spray nozzles must be uniformly spaced, the same size and type, and provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to avoid spray drift yet provide good coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Use a pump that can maintain an operating pressure of at least 35 - 40 psi at the nozzles and provide proper agitation within the spray tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles as long as adequate spray coverage is maintained. Always make sure that agitation

is maintained until spraying is completed, even if stopped for only brief periods of time. If agitation is stopped for more than five minutes, resuspend the spray solution by running at full agitation prior to spraying.

**Preplant or Preemergence Application:** Apply in a spray volume of 10 - 80 gallons per acre.

**Postemergence Application:** Good spray coverage of weeds is essential for optimum weed control. Base boom height for broadcast over-the-top applications on the height of the crop but set only high enough to provide uniform coverage with the spray nozzle used. Apply in a spray volume of 10 - 30 gallons per acre. When weed foliage is dense or corn approaches 11 inches in height, use a minimum spray volume of 15 gallons per acre. Use 80° or 110° flat fan nozzles for optimum postemergence coverage. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Do not use flood jet nozzles or controlled droplet application equipment for postemergence applications.

**Dry Bulk Fertilizer:** When applying **Javaro** impregnated on dry bulk fertilizer, use a minimum of 200 pounds of dry bulk fertilizer per acre. See **Appendix I** for directions and restrictions.

### APPLICATION DIRECTIONS

**Javaro** may be used for early preplant (EPP), preplant surface, preplant incorporated (PPI), or preemergence (PRE) application for control of many annual grasses and broadleaf weeds in field corn, field seed corn, field silage corn, and yellow popcorn. **Javaro** may also be applied postemergence for the control of broadleaf weeds in field corn, field seed corn, and field silage corn. This product will not consistently control grasses that are emerged at the time of application; utilize tank mixtures or sequential applications of herbicides registered for postemergence control of grass weeds in corn. Do not apply **Javaro** to emerged yellow popcorn or severe crop injury may occur.

See **Tables 4** and **5** for a list of weeds controlled by **Javaro**.

#### Tillage Systems

**Javaro** may be used in conventional, reduced, and no-tillage corn systems. Weed control will be greatest when applications are made as close to planting as possible. Thoroughly till soil or make an application of a burndown herbicide to control germinating and emerged weeds. The registrant recommends that a burndown herbicide, such as paraquat, glyphosate, glufosinate, and/or 2,4-D be tank mixed with **Javaro** in reduced, minimum, and no-tillage systems if weeds are present at application and corn has not yet emerged.

#### Soil Texture and Organic Matter

The texture and organic matter of the soil on which the application of **Javaro** is to be made must be known or determined prior to application. The use rate of **Javaro** is determined by the soil texture grouping (coarse, medium, or fine; see **Table 2**) and percent organic matter content.

**Table 2. Soil Texture Groupings for Javaro Use Rate Selection.**

Coarse	Medium	Fine
Sand	Loam	Silty Clay Loam
Loamy Sand	Silt Loam	Clay Loam
Sandy Loam	Silt	Sandy Clay
	Sandy Clay Loam	Silty Clay
		Clay

### JAVARO USE RATES

**Javaro** use rates based on soil texture and organic matter content are outlined in **Table 3**. Do not apply **Javaro** more than 28 days prior to planting or to field corn taller than 11 inches in height. **Javaro** is not recommended for use on soils with greater than 10% organic matter or poor weed control may result.

**Table 3. Javaro Use Rates by Soil Texture and Organic Matter Content.**

Soil Texture	Rate Quarts per Acre*	
	Soil Organic Matter Content	
	Less than 3%	3% or Greater
Coarse	2.25 (1.575 lbs. acetochlor, 0.169 lb. mesotrione, 0.106 lb. clopyralid)	2.50 (1.750 lbs. acetochlor, 0.188 lb. mesotrione, 0.118 lb. clopyralid)
Medium	2.50 (1.750 lbs. acetochlor, 0.188 lb. mesotrione, 0.118 lb. clopyralid)	2.75 (1.930 lbs. acetochlor, 0.206 lb. mesotrione, 0.129 lb. clopyralid)
Fine	2.75 (1.930 lbs. acetochlor, 0.206 lb. mesotrione, 0.129 lb. clopyralid)	3.00 (2.10 lbs. ai acetochlor, 0.225 lb. mesotrione, 0.141 lb. clopyralid)

\*An additional 0.25 quart per acre may be used in areas of heavy weed infestation. Do not apply more than 3.25 quarts per acre of **Javaro** per year.

### JAVARO APPLIED ALONE

#### Early Preplant (EPP) or Preplant Surface

**Javaro** may be applied up to 28 days prior to planting. The registrant recommends that a burndown herbicide, such as paraquat, glyphosate, glufosinate, and/or 2,4-D be tank mixed with **Javaro** to control emerged weeds.

#### Preplant Incorporated (PPI)

For PPI application, uniformly incorporate **Javaro** into the upper 2 inches of the soil using a field cultivator, disc, or spring tooth harrow any time within 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tillage may result in erratic, streaked, or otherwise unsatisfactory weed control. Do not mix **Javaro** deeper than 2 inches into the soil and avoid moving or shaping soil after incorporation.

#### Preemergence (PRE) Surface

**Javaro** may be applied to the soil surface as a broadcast application after planting but prior to corn emergence. Precipitation or sprinkler irrigation of at least 0.25 inch is required to bring **Javaro** into contact with germinating weed seeds. If rainfall or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar equipment to incorporate the herbicide. Operate incorporation equipment at a shallow depth to avoid disturbance of germinating corn seed. Erratic weed control resulting from exposure of untreated soil may occur if surface soil is moved or reshaped after incorporation.

#### Postemergence

**Javaro** may be applied after field corn emergence. See the **Adjuvants** section of this label for adjuvant recommendations. Do not apply postemergence to field corn with liquid fertilizer as the carrier or severe crop injury may occur. Apply this treatment when broadleaf weeds are less than 3 inches tall.

Occasional field corn leaf burn may result but this will not affect later corn growth or yield. Postemergence applications to field corn must occur before the crop reaches 11 inches in height. Do not apply **Javaro** to emerged yellow popcorn or severe crop injury may occur.

**Javaro** will not provide consistent control of emerged grass weeds. For control of emerged grass weeds, a grass herbicide tank mixture may be required (see tank mix section of this label). Tank mixtures with atrazine can improve control of emerged annual grass and broadleaf weeds. Refer to atrazine product labels for use directions and restrictions and weeds controlled.

#### Split Application

**Javaro** may be applied as a split application in field corn, field seed corn, or field silage corn. For a split application program, apply approximately half (50%) of the labeled rate of **Javaro** (for the soil type, from **Table 3**) prior to crop emergence, followed by a second **Javaro** application at approximately half (50%) of the labeled rate, but a **minimum of 1.25 quarts per acre**, as a post application after corn emergence.

The total amount of **Javaro** applied in the split application program cannot exceed the labeled rates by soil type listed in **Table 3** or 3.25 quarts per acre per year. Refer to the **Postemergence** section above for instructions on postemergence applications.

### JAVARO TANK MIX COMBINATIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Use of Spray Adjuvants with Tank Mixtures

When **Javaro** is used as a preemergence herbicide, and before weeds have emerged, spray adjuvants have little or no effect on performance and are not recommended. In burndown situations, where weeds have emerged and the corn has not, an adjuvant(s) may be used with **Javaro** applied alone or when applied in tank mixtures with a burndown herbicide, as allowed on the individual product labels. Use only those adjuvants approved for agricultural crop use. See the **Adjuvants** section of this label for further instructions.

#### Burndown Combinations Applied Before Corn Emergence in Reduced Tillage Systems

In reduced or no-till corn prior to crop emergence, **Javaro** tank mixtures with glyphosate, glufosinate, or paraquat can be used to burn down susceptible emerged weeds. For best results, apply such tank mixtures to emerged weeds that are less than 6 inches tall.

#### Preplant and Preemergence Tank Mixtures Applied Before Corn Emergence

In conventional, reduced, or no-till corn prior to crop emergence, the following tank mix partners may be applied by the same methods and at the same timings as **Javaro** unless otherwise specified in the tank mix product label:

- Glyphosate, glufosinate, or paraquat, per product labels, to control susceptible emerged weeds.
- Atrazine, to improve broadleaf and grass weed control.

Follow all tank mix product label directions and restrictions and perform a compatibility test prior to spraying the mixture. Tank mixtures with 2,4-D are allowed but extreme care must be taken to ensure tank mix compatibility, as 2,4-D products can vary widely in their compatibility properties.

#### Postemergence Tank Mixtures Applied After Field Corn Emergence

In conventional, reduced, or no-till field corn after crop emergence, the following tank mix partners may be applied by the same methods and at the same timings as **Javaro** unless otherwise specified in the tank mix product label:

- Atrazine, to improve broadleaf and grass weed control.
- For emerged grass control, follow all tank mix product (such as Nicosulfuron, Rimsulfuron, and Thifensulfuron) label directions and restrictions and perform a compatibility test prior to spraying the mixture.

Consult the **Adjuvants** section of this label for recommendations when applying **Javaro** alone or in tank mixtures to emerged field corn. Do not apply **Javaro** tank mixtures to emerged yellow popcorn or severe crop injury may occur.

## JAVARO PROGRAMS FOR GLYPHOSATE TOLERANT CORN

### Javaro Preemergence Followed by Glyphosate Postemergence

Javaro may be applied preemergence at a rate as low as 1.8 quarts per acre as part of a two-pass weed control system when followed by a postemergence application of a glyphosate product that is registered for use in glyphosate tolerant field corn. Use higher Javaro rates, up to the maximum amounts listed by soil type in Table 3, if there is a history of glyphosate-resistant weeds in the field. Atrazine may also be tank mixed with Javaro to improve broadleaf and grass weed control. When used in this way, Javaro will provide reduced competition from the weeds listed in Tables 4 and 5 for a period of 30 or more days, improving the timing flexibility and effectiveness of the follow-up glyphosate application.

### Javaro + Glyphosate Tank Mixture Applied Postemergence

Javaro may be applied postemergence at a rate as low as 1.25 quarts per acre in a tank mixture with a solo glyphosate product that is registered for use in glyphosate tolerant field corn. To minimize weed competition effects on the crop, apply this mixture to 1 to 2 inch tall weeds and before the corn reaches 11 inches in height. If the glyphosate product includes an adjuvant system (does not call for additional adjuvants), only spray-grade ammonium sulfate (AMS) at 8.5 lbs. per 100 gallons should be added to this tank mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to the mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to the mixture or crop injury may occur.

## JAVARO PROGRAMS FOR GLUFOSINATE TOLERANT CORN

### Javaro Preemergence Followed by Glufosinate Postemergence

Javaro may be applied preemergence at rate as low as 1.8 quarts per acre as part of a two-pass weed control system when followed by a postemergence application of a glufosinate product that is registered for use in glufosinate tolerant field corn. Use higher Javaro rates, up to the maximum amounts listed by soil type in Table 3, if there is a history of glufosinate-resistant weeds in the field. Atrazine may also be tank mixed with Javaro to improve broadleaf and grass weed control. When used in this way, Javaro will provide reduced competition from the weeds listed in Tables 4 and 5 for a period of 30 or more days, improving the timing flexibility and effectiveness of the follow-up glufosinate application.

### Javaro + Glufosinate Tank Mixture Applied Postemergence

Javaro may be applied postemergence at a rate as low as 1.25 quarts per acre in tank mixture with a solo glufosinate product that is registered for use in glufosinate tolerant field corn. To minimize weed competition effects on the crop, apply this mixture to 1 to 2 inch weeds and before the corn reaches 11 inches in height. Ammonium sulfate (AMS) may be added at 8.5 lbs. per 100 gallons as a spray adjuvant as directed on the glufosinate product label but AMS should be the only adjuvant added to this tank mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to the mixture or crop injury may occur.

## CULTIVATION

If weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If Javaro was incorporated, cultivate at less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to a shallow depth and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

## WEEDS CONTROLLED

Javaro applied as directed in this label will control or suppress the weeds listed in Tables 4 and 5. Additional weeds may be controlled with tank mixtures. See the Javaro Tank Mix Combinations section of this label for recommended tank mix combinations. Always consult the tank mix product labels for specific use rates and directions. Always follow the most restrictive label when tank mixing Javaro with another product. Javaro may be tank mixed with any other registered corn product as long as compatibility is verified and tank mixing is not prohibited by the tank mix product label.

Table 4. Weeds Controlled or Partially Controlled by Preplant or Preemergence Applications of Javaro.

Grasses and Sedges	C = Control PC = Partial Control
Barnyardgrass	C
Crabgrass species	C
Crowfootgrass	C
Cupgrass, prairie	C
Cupgrass, Southwestern	C
Cupgrass, woolly	PC
Foxtail, bristly	C
Foxtail, giant	C
Foxtail, green	C
Foxtail, robust (purple, white)	C
Foxtail, yellow	C
Goosegrass	C
Johnsongrass, seedling	PC
Millet, foxtail	C
Millet, wild proso	PC
Nutsedge, yellow	C
Oat, wild	PC*
Panicum, browntop	C
Panicum, fall	C
Panicum, Texas	PC
Rice, red	C
Sandbur, field	PC
Shattercane	PC
Signalgrass, broadleaf	C*
Signalgrass, narrowleaf	C
Sprangletop, red	C
Starbur, bristly	C
Wheat, volunteer	PC*
Witchgrass	C
Broadleaves	C = Control PC = Partial Control
Amaranth, Palmer	C*
Amaranth, Powell	C
Amaranth, spiny	C

(continued)

**Table 4. Weeds Controlled or Partially Controlled by Preplant or Preemergence Applications of Javaro. (continued)**

Broadleaves (continued)	C = Control PC = Partial Control
Bedstraw, catchweed	PC*
Beggarweed, Florida	C
Buckwheat, wild	C*
Buffalobur	C
Carpetweed	C
Chickweed, common	C
Clover, red	C
Cocklebur, common	C*
Deadnettle, purple	C
Devil's-claw	C
Galinsoga	C
Groundcherry, annual	PC*
Groundcherry, cutleaf	PC*
Henbit	C
Horseweed (marestail)	C
Jimsonweed	C
Kochia	C*
Lambsquarters, common	C
Mallow, Venice	C
Morningglory, entireleaf	C*
Morningglory, ivyleaf	C*
Morningglory, pitted	C*
Morningglory, tall	C*
Mustard, wild	C
Nightshade, black	C
Nightshade, eastern black	C
Nightshade, hairy	C
Pigweed, redroot	C
Pigweed, smooth	C
Pigweed, tumble	C
Puncturevine	C*
Purslane, common	C
Pusley, Florida	C
Radish, wild	C
Ragweed, common	C
Ragweed, giant	C*
Sesbania, hemp	C
Shepherd's-purse	C
Sicklepod	C*
Sida, prickly	PC*
Smartweed, ladythumb	C
Smartweed, Pennsylvania	C

(continued)

**Table 4. Weeds Controlled or Partially Controlled by Preplant or Preemergence Applications of Javaro. (continued)**

Broadleaves (continued)	C = Control PC = Partial Control
Sunflower, common	C*
Velvetleaf	C
Waterhemp, common	C*
Waterhemp, tall	C*
Wormwood, biennial	C*

\* The addition of atrazine at specified label rates may improve control.

Thoroughly till soil or make an application of a burndown herbicide to control germinating and emerged weeds. Plant crop immediately after tillage.

If a significant rainfall does not occur within 7 days after application, weed control may be reduced. If irrigation is available, apply 0.25 - 0.75 inch of water. If irrigation is not available, a uniform shallow cultivation is recommended as soon as weeds emerge.

**Table 5. Weeds Controlled or Partially Controlled by Postemergence Applications of Javaro.**

Grasses and Sedges	C = Control PC = Partial Control
Crabgrass, large <sup>1</sup>	C*
Nutsedge, yellow	PC*
Signalgrass, broadleaf <sup>1</sup>	C*
Broadleaves	C = Control PC = Partial Control
Amaranth, Palmer	C*
Amaranth, Powell	C
Amaranth, spiny	C
Alfalfa, volunteer (seedling)	PC*
Atriplex	C
Beans, volunteer	C*
Bedstraw, catchweed	PC*
Beggarweed, Florida	C
Buckwheat, wild	C*
Buffalobur	C
Burcucumber	PC*
Carpetweed	C
Carrot, wild	PC*
Chickweed, common	C
Clover species	C
Cocklebur, common	C
Dandelion, common	PC*
Deadnettle, purple	C
Devil's-claw	C
Dock, curly	PC*
Galinsoga	C
Groundcherry, annual	C

(continued)

Table 5. Weeds Controlled or Partially Controlled by Postemergence Applications of Javaro. (continued)

Broadleaves (continued)	C = Control PC = Partial Control
Groundcherry, cutleaf	C
Hemp	C
Henbit	C
Horsenettle	C*
Horseweed (marestail)	C*
Jimsonweed	C
Knotweed, prostrate	PC
Kochia	C*
Lambsquarters, common	C
Lentils, volunteer	C*
Mallow, Venice	C*
Morningglory, entireleaf	C*
Morningglory, ivyleaf	C*
Morningglory, pitted	C*
Morningglory, tall	C*
Mustard, Wild	C
Nightshade, black	C
Nightshade, eastern black	C
Nightshade, hairy	C
Peas, volunteer	C*
Pigweed, redroot	C
Pigweed, smooth	C
Pigweed, tumble	C
Pokeweed	C*
Potatoes, volunteer	C
Prickly lettuce	PC
Purslane, common	C
Pusley, Florida	C
Radish, wild	C
Ragweed, common	C*
Ragweed, giant	C*
Sesbania, hemp	C
Shepherd's-purse	C
Sicklepod	PC*
Sida, prickly	C*
Smartweed, ladythumb	C*
Smartweed, Pennsylvania	C*
Soybean, volunteer	C
Sunflower, common	C*
Thistle, Canada	C*
Velvetleaf	C

(continued)

Table 5. Weeds Controlled or Partially Controlled by Postemergence Applications of Javaro. (continued)

Broadleaves (continued)	C = Control PC = Partial Control
Waterhemp, common	C*
Waterhemp, tall	C*
Wormwood, biennial	C*

\*The addition of atrazine at specified label rates may improve control.

<sup>1</sup>Apply before the weed exceeds 2 inches in height.

Javaro will not provide consistent control of emerged grass weeds. For control of emerged grass weeds, a grass herbicide tank mixture may be required (see **Javaro Tank Mix Combinations** section of this label). Tank mixtures with atrazine can improve control of emerged annual grass and broadleaf weeds. Refer to atrazine product labels for use directions, restrictions, and weeds controlled.

## Appendix I

### Dry Bulk Fertilizer Impregnation

Impregnation of bulk fertilizer is restricted to commercial facilities. On-farm fertilizer impregnation is prohibited. No more than 500 tons of bulk fertilizer can be impregnated per day. No single facility may impregnate fertilizer with this product for more than 30 days per calendar year.

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

- Applicator must wear long-sleeved shirt, long pants, shoes, and socks
- The restricted-entry interval is 12 hours.

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

Dry bulk fertilizers (Table 6) may be impregnated with this product or the tank mixtures of this product 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 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. When applying Javaro alone or in tank mixes with dry bulk fertilizers, follow all directions for use and precautions on the respective tank mix product labels regarding rates, soil type, application methods and rotational restrictions. Refer to the table for broadcast rate per acre to determine the application rate per acre for the herbicide treatment to be applied.

Table 6. Approved Dry Fertilizer Ingredients for Use with Javaro.

Fertilizer	N	P	K
Ammonium Phosphate-Sulfate	16	20	0
Ammonium Sulfate	21	0	0
Diammonium Phosphate	18	46	0
Monoammonium Phosphate	11	56	0
Potassium Chloride	0	0	60
Potassium Sulfate	0	0	52
Urea <sup>†</sup>	45	0	0

<sup>†</sup>Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

For impregnating the pesticides on dry fertilizers, use an appropriate mixer equipped with suitable spraying equipment. Position the spray nozzles inside the

mixer to provide uniform spray coverage of the tumbling fertilizer. Spray **Javaro** uniformly onto the fertilizer using a fine spray pattern. Tank mix components may be applied as separate ingredients with powders and dry flowables added first or they may be mixed in a slurry in the proper ratio and added jointly. **Javaro** may also be impregnated on the go and applied with pneumatic applicators.

The following table provides a reference to determine the amount of **Javaro** to be mixed per ton of dry bulk fertilizer for a range of herbicide and fertilizer rates per acre.

**Table 7. Javaro Fertilizer Impregnation Rate Conversions.**

Fertilizer Rate (lbs./acre)	Acres Covered (per ton)	Quarts of Javaro per Ton of Fertilizer to Deliver:			
		2.25 qts./ acre	2.50 qts./ acre	2.75 qts./ acre	3.00 qts./ acre
200	10.0	22.5	25.0	27.5	30.0
250	8.0	18.0	20.0	22.0	24.0
300	6.7	15.1	16.8	18.4	20.1
350	5.7	12.8	14.3	15.7	17.1
400	5.0	11.3	12.5	13.8	15.0
450	4.5	10.1	11.3	12.4	13.5

To determine the amount of **Javaro** needed for other fertilizer rates, use the following formula:

$$\text{Javaro rate (quarts/acre)} \times 2000 = \frac{\text{Quarts of Javaro per ton of fertilizer}}{\text{Pounds of fertilizer/acre}}$$

If the herbicide/fertilizer mixture is too wet, use of a drying agent is required to provide a dry, free-flowing mixture. For mixtures to be used in spinning-disc applicators, Micro-Cel E calcium silicate powder (Manville, Filtration & Minerals) is recommended for use as a drying agent. Mixtures to be used in pneumatic applicators should use Micro-Cel E or Agsorb 16/30 RVM-MS granular clay (Oil-Dri Corporation). The drying agents 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% Micro-Cel E or 5% Agsorb 16/30 RVM-MS by weight is required.

**Precaution:** To avoid potential for explosion, do not impregnate **Javaro** on ammonium sorbate nitrate, potassium nitrate, or sodium nitrate fertilizer or fertilizer blends. Do not impregnate on single (0-20-0) or triple (0-46-0) super phosphate. Do not impregnate on agricultural limestone because **Javaro** will not be absorbed.

## Appendix II

### Tank Mix Compatibility Test

Complete a compatibility test before tank mixing to ensure compatibility of **Javaro** with other pesticides. The following test assumes a spray volume of 25 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

**Note:** Nitrogen solutions or complete liquid fertilizers, excluding suspension fertilizers, may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before use.** Incompatibility of tank mixtures is more common with mixtures of fertilizer and pesticides.

#### Test Procedure:

1. Add 1.0 pint of carrier (fertilizer or water) to each of two one quart jars with tight lids. **Note:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.

2. To one of the jars, add 1/4 teaspoon or 1.2 milliliters of a compatibility agent approved for this use, such as Compex or Unite (1/4 teaspoon is equivalent to 2.0 pints per 100 gallons of spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
4. After adding all ingredients, put lids on and tighten and invert each jar ten times to mix. Let the mixtures stand 15 - 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry pesticide(s) in water before addition, or (b) add 1/2 the compatibility agent to the fertilizer or water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section of this label.

### Procedure for Testing the Compatibility of Javaro and Tank Mixes with Fluid Fertilizers

Since fluid fertilizers vary, the following procedure is suggested for determining whether **Javaro** may be combined with a specific fluid fertilizer for spray tank application.

#### Materials Needed:

- **Javaro** and any tank mix products.
- Fluid fertilizer to be used.
- Adjuvant for fertilizer tank mix: Use any adjuvant cleared for use on growing crops under 40 CFR 180.1001 to improve the compatibility of **Javaro** with fluid fertilizers. The adjuvant that provides the best emulsification depends on the specific fertilizer under consideration.
- Two 1 quart, wide mouth glass jars with lid or stopper.
- Measuring spoons (a 25-ml pipette or graduated cylinder provides more accurate measurement).
- Measuring cup, 8 ounces (257 ml).

#### Procedure:

1. Pour a pint (about 473 ml) of the fluid fertilizer into each of the quart jars.
2. Add **Javaro** and any tank mix combination to the jars. The order of addition is wettable powders first with mixing, followed by flowables with mixing and the EC's last. The rate of wettable powders and dry flowables is 1 1/2 teaspoon per pound of product per acre to be applied. Add EC's at the rate of 1/2 teaspoon for each pint per acre to be applied. Premixing the wettable powders in 1 ounce of water before adding to the pint of fluid fertilizer will improve the compatibility of the final mixture.
3. Add 1/2 teaspoon (2 ml) adjuvant to one of the jars, label it as "with", and mix. The rate of 1/2 teaspoon per pint is equal to 3 pints of adjuvant per 100 gallons of fluid fertilizer.
4. Close both jars with lids or stoppers 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 after the 30 minute inspection

**Evaluation:**

If either mixture remains uniform for 30 minutes, use the combination. Should either mixture separate after 30 minutes, but readily remix uniformly with 10 jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory but the mixture 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 may be minimized by using only moderate agitation. **If non-dispersible oil, sludge, or clumps of solids form in the mixtures, the combination must not be used.**

SPECIMEN

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**For plastic containers ≤ 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.

**For plastic containers > 5 gallons: Nonrefillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Recap 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures allowed by state and local authorities.

## LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT: READ BEFORE USE.** Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of AVALAIRE, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, AVALAIRE, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither AVALAIRE, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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