

GROUP

15

HERBICIDE

# Metalica

**HERBICIDE FOR USE IN CORN, COTTON, PEANUTS, POD CROPS, POTATOES,  
SAFFLOWER, SORGHUM (GRAIN OR FORAGE), AND SOYBEANS**

**ACTIVE INGREDIENT:**

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide. . . . . 84.4%

**OTHER INGREDIENTS:** . . . . . 15.6%

**TOTAL: 100.0%**

Contains 7.8 lbs. of active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION/PRECAUCION**

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

See inside booklet for complete First Aid, Precautionary Statements, Directions For Use, and  
Limitation of Warranty and Liability.

**Physical and Chemical Hazard: Do not mix or allow coming in contact with oxidizing agents.  
Hazardous chemical reaction may occur.**

**Manufactured For:**

**Sharda USA LLC** 

7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

EPA Reg. No. 83529-57  
EPA Est. No. 05905-IA-01

**Net Contents: 2.5 Gallons**

<b>FIRST AID</b>	
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air. 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 treatment advice.</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 further treatment advice.</li> </ul>
<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 by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at <b>1-800-424-9300</b>.</p>	

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

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. This product may cause skin sensitization reactions in some people.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below.

**Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils, polyethylene, PVC  $\geq 14$  mils, or Viton  $\geq 14$  mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

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

**ENGINEERING CONTROL STATEMENTS**

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4)). When using this closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

When handlers used 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.

### USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash hands 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, 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 or rinsate.

#### Ground Water Advisory

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

#### Surface Water Advisory

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

#### Mixing/Loading Instructions

DO NOT allow **Metolica** to back-siphon into wells, spill, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check valves or anti-siphoning devices must be used on all mixing and/or irrigation equipment.

Do not mix or load **Metolica** within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. Do not mix or load **Metolica** within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of **Metolica** into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash-water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means that the pad must be self-contained. The pad must 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.

### 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. This labeling must be in the possession of the user at the time of pesticide application.

### AGRICULTURAL USE REQUIREMENTS

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

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils, polyethylene, PVC  $\geq 14$  mils, or Viton  $\geq 14$  mils
- Shoes plus socks

Failure to follow the Directions for Use, Restrictions, and Precautions in this label can result in poor weed control, crop injury, and/or illegal residues.

Not for sale, use, or distribution in Nassau or Suffolk counties in New York.

Do not apply **Metolica** in windy conditions. Do not allow spray to overlap as crop injury can occur.

### PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each state-registered product used in tank mixtures. Tank mixtures are permitted only in states where the tank mix partner product is registered.

**FOR ALL TANK MIXTURES:** It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Metolica** is a selective herbicide that can be used pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment in water or liquid fertilizer to control listed annual grasses and broadleaf weeds in all types of corn, cotton, peanuts, pod crops, potatoes, safflower, grain or forage sorghum, and soybeans. Post-emergence applications of **Metolica** can be made on corn and soybeans.

### RESISTANCE MANAGEMENT

**Metolica** is a Group 15 herbicide. Weed populations may contain or develop plants that become naturally resistant to metolachlor and/or other Group 15 herbicide products. If Group 15 herbicides are used repeatedly in the same field or in successive years as the primary method of control of targeted species, weed species that have developed resistance to Group 15 herbicides can dominate the weed population, resulting in partial or total loss of weed control.

#### To avoid herbicide resistance:

- Do not use **Metolica** consecutively with other Group 15 herbicides that have similar modes of action on targeted weed.
- Use tank mixtures and premixes from different Groups provided that the products involved are registered for the same use, have different modes of action, and/or are effective at the tank mix or prepack rate on the weed(s) concerned.
- Utilize a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated areas for loss of field efficacy.
- Contact your local state extension specialist, certified crop advisors, and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

## APPLICATION INSTRUCTIONS

### SOIL TEXTURES AND APPLICATION RATES

Where rates are based on soil texture, classes are categorized as follows:

Coarse-Textured	Medium-Textured	Fine-Textured
Sand, Loamy sand, Sandy loam	Loam, Silt loam, Silt	Sandy clay loam, Silty clay loam, Clay loam, Sandy clay, Silty loam, Silty clay, Clay

**Coarse-Textured/Low Organic Matter Soils:** Use the lower rate within the specified rate range.

**Fine-Textured/High Organic Matter Soils:** Use the higher rate within the specified rate range.

### APPLICATION METHODS

Apply **Metalica** alone or in combination with specified tank mix partners following pre-plant incorporated herbicides when used according to label instructions and such use is not prohibited on the respective labels.

Thoroughly clean sprayer/application device before applying **Metalica**. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with any other materials to avoid crop damage and/or clogging of the application device.

### MIXING INSTRUCTIONS

Mix **Metalica alone** with water or liquid fertilizer and apply as a spray:

- Fill the spray tank  $\frac{1}{2}$  -  $\frac{3}{4}$  full of water or liquid fertilizer.
- Add the specified amount of **Metalica**.
- Add the remaining water or liquid fertilizer.
- Maintain sufficient agitation during mixing and application to maintain a uniform emulsion.

### TANK MIX APPLICATIONS

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Tank Mixtures:

- Fill the spray tank  $\frac{1}{4}$  full with water, and begin agitation.
- Add 2,4-D, AAtrex®, Balan®, Banvel, Canopy®, Caparol 4L®, Command®, Cotoran®, Eptam®, Gemini®, Lexone®, Lorox®, Lorox Plus, Marksman®, MSMA, Preview®, Princep®, Prowl®, Pursuit®, AAtrex + Princep, Scepter®, Sencor®, Sonalan®, or Treflan®, ensuring products disperse.
- Add **Metalica**.
- Add Gramoxone® Extra, Landmaster® BW, or Roundup® if these products are being used.
- Add the rest of the water.

For tank mixtures with AAtrex, Banvel, Canopy, Caparol 4L, Command, Cotoran\*, Eptam, Gemini, Lexone, Lorox, Lorox Plus, Marksman, Preview, Princep, Prowl\*, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, or Treflan, liquid fertilizers can replace all or part of the water as carrier, except for AAtrex post-emergence and Banvel post-emergence tank mixes. For tank mixtures with AAtrex, refer to the AAtrex label for additional mixing instructions. For each mixture, check compatibility with liquid fertilizers before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

\*See **Special Mixing Instructions** for tank mixtures with Cotoran, and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

### Compatibility Test

Because liquid fertilizers vary, even within the same analysis, always **check compatibility with herbicide(s) prior to use**. Serious compatibility issues are most likely to occur when mixing with complete suspension or liquid fertilizers. Commercial application equipment can improve compatibility. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. To check compatibility:

1. Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
2. To **one** of the jars, add ¼ tsp. (1.2 milliliters) of a compatibility agent approved for this use such as Compex® or Unite® (¼ tsp. is equivalent to 2 pts./100 gals. spray). Shake/stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s).

**If more than one herbicide is used**, add them separately in the following order:

- Dry herbicides first, flowables next, and emulsifiable concentrates last.
- After each addition, shake or stir gently to thoroughly mix.
- The appropriate amount of herbicides for this test is:

**Dry Herbicides:** For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

**Liquid Herbicides:** For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

For **Metolica** tank mixtures with AAtrex + Princep, use ⅓ - ½ the amount of AAtrex specified and the remainder as Princep, depending on whether the 1:2 or 1:1 ratio of AAtrex to Princep is to be applied.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.
5. Let the mixtures stand 15 minutes.
6. After 15 minutes, check jars for chemical separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as adequate agitation is maintained.

If the mixtures are incompatible, the following methods may improve compatibility:

- Slurry the dry herbicide(s) in water before adding, or
- Add ½ of the compatibility agent to the fertilizer, and the other ½ to the emulsifiable concentrate or flowable herbicide before adding to the mixture.

If incompatibility is still observed, do not use the mixture.

### APPLICATION TIMING

**Metolica** alone or in some tank mixtures with other labeled herbicides may be applied for weed control in corn at various times. Refer to the **CORN** section of the label to determine if application timings listed below are specified.

#### Pre-Plant Surface Applications

**45 days before planting:** For minimum-tillage or no-tillage systems only, apply **Metolica** alone, or with **Metolica** tank mixtures.

**30-45 days before planting:** Make split applications, with ⅔ the specified broadcast rate for the crop and soil texture applied initially and the remaining ⅓ at planting.

**Less than 30 days before planting:** Make split applications or a single application.

Refer to individual crop to determine if early pre-plant surface application instructions are provided. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Extra or Roundup®). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

**Pre-Plant Incorporated:** Apply **Metolica** to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate **Metolica** after bed formation, unless specified otherwise.

**Pre-Emergence:** Apply **Metalica** during planting (behind the planter) or after planting but before weeds or crops emerge.

**Post-Emergence:** For corn, cotton, and soybean application: One application of **Metalica** will provide pre-emergence control or partial control of annual grasses and broadleaf weeds listed in the "**Weeds Controlled**" section of this label. Application of this product alone will not control emerged weeds; **Metalica** must be applied to a weed-free surface, or in tank mixture with products that provide post-emergence weed control. If weeds are present at the time of application, tank-mix with a labeled post-emergence herbicide and observe all directions for use, precautions and restrictions on the label of the tank-mix partner. For additional post-emergence information follow the crop specific label requirements identified on this label.

### SPECIAL APPLICATION PROCEDURES

**Fall Applications in the states of Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, portions of Nebraska and Illinois (see directions for use for corn, pod crops, and soybeans section for timing of application and other instructions):** Apply **Metalica** on medium- and fine-textured soils with more than 2.5% organic matter that will be planted to corn or soybeans in the following spring. The ground can be tilled before or after application.

#### Restrictions:

- DO NOT apply to frozen ground.
- DO NOT exceed 2-3-inch incorporation depth if soil is tilled after treatment.
- If a spring application is made, the total rate of the fall application and the spring application combined must not exceed the maximum total rate for the specific crop or illegal residues can result.

#### GROUND APPLICATION

Apply **Metalica** alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre unless otherwise specified. Use sprayers that provide accurate and uniform application. For **Metalica** tank mixtures with wettable powder or dry flowable formulations, screens and strainers must not be finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \frac{\text{broadcast}}{\text{rate per acre}} = \frac{\text{amount needed}}{\text{per acre of field}}$$

#### Low Carrier Volumes: Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-Cycle™, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers must be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to:

- maintain up to 35-40 psi at the nozzles.
- provide sufficient agitation in tank to keep mixture in suspension.

Use a minimum of 5 gals. of spray mixture per acre. Maximum sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

Use low pressure nozzles to reduce drift and increase application accuracy. Exercise care when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Use nozzle screens used when specified by the manufacturer. Place nozzles on 20-inch centers, except flooding types which must be placed on 40-inch centers. When Flat Fan-type nozzles are used, use those with angles of 80° or 110°. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

#### AERIAL APPLICATION

Apply **Metalica** in water alone or in tank mixture with AAtrex, Lexone, Lorox, or Sencor in a minimum volume of 2 gals./A. Aerial applications of **Metalica** can also be made with Balan®, Prowl, or Treflan. Do not apply under conditions where uniform coverage cannot be obtained, or when excessive spray drift may occur.

To avoid injury to sensitive crops from drift, aerial applications must adhere to the following **AERIAL USE DIRECTIONS AND RESTRICTIONS**:

- Nozzle height above the ground must be a maximum of 10 feet above the crop with low drift nozzles at a maximum pressure of 40 psi.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle must not exceed 45 degrees.
- Nozzles and/or spray boom must not be located any closer to the end of the wing or rotor than  $\frac{3}{4}$  the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- Establish a buffer zone between the area to be sprayed and sensitive crops.
- DO NOT spray when wind speed exceeds 10 mph.
- Do not apply to humans or animals.
- Do not allow flagmen and loaders to inhale spray mist.

To avoid injury to sensitive crops:

- Apply **Metalica** alone or in tank mix with AAtrex a minimum of 400 feet from sensitive plants.
- Apply **Metalica** + Lexone, Lorox, or Sencor a minimum of 300 feet upwind from sensitive plants.

The applicator is responsible for any loss or damage resulting from the application of **Metalica** in any manner not listed on this label. The applicator is responsible for following all state and local regulations and ordinances relative to spraying **Metalica**.

#### SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

**Ground Applications:** Apply using a nozzle height no more than 4 feet above the ground or crop canopy.

**Aerial Applications:** Product efficacy is reduced if the distance of the outermost nozzles on the boom exceed  $\frac{3}{4}$  the length of the wingspan or rotor. Nozzles must point backward parallel with the air stream and must not be pointed downward more than 45 degrees. Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and account for the information provided in the **SPRAY DRIFT MANAGEMENT** section of this label.

#### IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets greater than 150-200 microns. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **WIND, TEMPERATURE AND HUMIDITY**, and **TEMPERATURE INVERSION** sections). The presence of sensitive crops/species, environmental conditions, and pest pressure can impact applicator decisions in balancing drift control and coverage.

#### CONTROLLING DROPLET SIZE

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.



### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

### **APPLICATION HEIGHT**

Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### **SWATH ADJUSTMENT**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

### **WIND**

Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Don't apply when wind speed is below 2 mph due to variable wind direction and high inversion potential.

**NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### **TEMPERATURE INVERSIONS**

Do not apply during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

### **SENSITIVE AREAS**

**Metlica** must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

### **APPLICATION WITH IMPREGNATED DRY BULK GRANULAR FERTILIZERS**

**Metlica** may be impregnated or coated on many dry bulk granular fertilizers and applied alone or with **Metlica** tank mixtures that are registered for pre-plant incorporation or pre-plant surface application. Follow all directions for use restrictions and precautions on the **Metlica** label regarding corn, rates per acre, soil texture, application methods, and rotational crops.

It is the responsibility of the individual and/or company selling the herbicide/fertilizer mixture to comply with all individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application.

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Space nozzles used to spray **Metlica** onto the fertilizer to provide uniform spray coverage. Aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® FG or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Add absorptive materials only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results are obtained when a granule of 6/30 particle size or of a size similar to that of the fertilizer materials is used. Use less than 2% by weight of absorptive material. Do not use more than 5% absorptive material by weight.

Calculate the amount of **Metalica, AAtrex, AAtrex + Princep, Princep, Sencor, Lexone, or Sonalan** using the following formula:

2,000 lbs. fertilizer/acre X pts./A liquid/flowable product = pints of liquid/flowable product per ton of fertilizer

2,000 lbs. of fertilizer/acre X lbs./A dry product = pints of dry product per ton of fertilizer

**Application by Pneumatic (Compressed Air) Equipment (Metalica alone):** High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer can cause fertilizer mixtures to build up and/or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix 1-4 pints/gallon **Metalica** and ExxonMobil™ Aromatic 200. Aromatic 200 is a noncombustible, nonflammable petroleum product that can be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

If impregnating **Metalica** in a blender before application, substitute drying agent for the Aromatic 200 for a dryer mixture. Do not use drying agents with On-The-Go impregnation equipment.

**Precautions:** Use mixtures of **Metalica** and Aromatic 200 on dry fertilizer only. Poor results or crop injury can occur if these mixtures are used in water or liquid fertilizer solutions for spraying applications.

**Restrictions:**

To avoid potential for explosion:

- DO NOT impregnate **Metalica** on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
- DO NOT use **Metalica** on straight limestone as absorption will not occur.
- Fertilizer blends containing limestone can be impregnated.

**Application of Impregnated Dry Bulk Granular Fertilizer**

Apply 200 to 700 pounds of the herbicide/fertilizer mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury to subsequent rotational crops. Non-uniform application results in unsatisfactory weed control. In areas where conventional tillage is practiced, incorporate the mixture shallowly into the soil. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced-tillage situations or in some conventional till situations, apply **Metalica** approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, apply **Metalica** approximately 14 days prior to planting. Do not use herbicide/fertilizer mixtures on crops where bedding occurs.

**CHEMIGATION - CENTER PIVOT IRRIGATION**

**Metalica** alone or in tank mixture with other herbicides on this label that are registered for center pivot application can be applied in irrigation water pre-emergence (after planting but before weeds or crop emerge) at specified rates listed on this label. Apply this product only through a center pivot irrigation system.

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

Crop injury, reduced efficacy, and/or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in ½-1 inch of water. Use the lower water volume (½ inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

**Precaution for center pivot applications:** Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control can occur. Where sprinkler distribution patterns overlap excessively, crop injury can occur.

**Note:** For information on applying in lower volumes of carrier, see **Low Carrier Application** section of this label.

### CLEANING INSTRUCTIONS

- Do not use the same sprayer without thoroughly cleaning on sensitive crops; minute residues of **Metalica** in the tank can injure crops.
- Wash sprayer and spray equipment thoroughly with clean water immediately after use.
- Drain any remaining spray solution of **Metalica** from the spray tank and dispose of according to label disposal instructions.
- Rinse the spray tank and refill with water, adding 1 cup heavy-duty detergent per 20 gallons of water.
- Recycle this mixture through the equipment for 5 minutes, and spray out.
- Clean pump and nozzle screens thoroughly.
- Wash away any spray mixture from the outside of spray tank, nozzles or spray rig.
- Dispose of all rinse water in compliance with local, state, and Federal guidelines.

### USE PRECAUTIONS

Where directions specify a **Metalica** tank mixture with AAtrex formulations, other brands of atrazine may be used. Follow the rates, instructions, and limitations on the AAtrex or respective atrazine product label if other brands of atrazine are used.

Dry weather following pre-emergence application of **Metalica** or a tank mixture can reduce efficacy. Cultivate if weeds develop.

Where reference is made to weeds being partially controlled, partial control means erratic control that can range from poor to good, or consistent control at levels below what is generally considered acceptable for commercial weed control.

## USE RESTRICTIONS

- Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas.
- Do not apply to impervious substrates such as paved or highly compacted surfaces.
- Do not apply to powdery dry or light sand soils when conditions favor wind erosion. Soil surfaces must first be settled by rainfall or irrigation.
- Do not use tail-water from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least ½ inch of rainfall has occurred between application and the first irrigation.
- If **Metalica** is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

**Metalica** applied alone controls or partially controls the following weeds:

Barnyardgrass (watergrass)	Foxtail millet	Shattercane
Bristly foxtail	Galinsoga	Signalgrass ( <i>Brachiaria</i> )
Carpetweed	Giant foxtail	Southwestern cupgrass
Common purslane	Goosegrass	Tall waterhemp
Common waterhemp	Green foxtail	Texas panicum
Crabgrass	Hairy nightshade	Volunteer sorghum
Crowfootgrass	Pigweed	Wild proso millet*
Eastern black nightshade	Prairie cupgrass	Witchgrass
Eclipta	Red rice	Woolly cupgrass*
Fall panicum	Robust foxtails (purple, white)	Yellow foxtail
Florida beggarweed	Sandbur	Yellow nutsedge
Florida pusley	Seedling johnsongrass	

]Partial control. Refer to the **PRODUCT INFORMATION** section. Weed control is erratic due partially to variable weather conditions.

\*For control of these weeds in corn only, refer to the **Corn - Woolly Cupgrass and Wild Proso Millet Control Program** section of this label.

**Florida Beggarweed:** Apply a minimum of 2 pints/acre pre-emergence for partial control.

**Texas Panicum:** Apply a minimum of 2 pints/acre using a center pivot irrigation system.

### To improve weed control:

1. Till moist soil thoroughly to destroy germinating and emerged weeds. If **Metalica** is applied pre-plant incorporated, tillage may be used to incorporate **Metalica** if uniform 2-inch incorporation is achieved as specified in **Application Procedures**.
2. Plant crop into moist soil immediately after tillage. If **Metalica** is to be used pre-emergence, apply at planting or immediately after planting.
3. Irrigate ½ - 1 inch of water with a sprinkler system, if available, within 2 days of application. Irrigate with ½ inch water volume on coarse-textured soils, and 1 inch on fine-textured soils. Refer to the section on **Center Pivot Irrigation Application** for instructions with this application method.
4. If irrigation is impossible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, perform a shallow cultivation as soon as weeds emerge.

To improve weed control in corn, use 2.0 - 2.67 pts./A or the pre-plant surface-applied rates for **Metalica** alone or in tank mixture, if allowed, when making pre-plant incorporated or pre-emergence applications.

**Rotational Crops:****Metalica Alone:**

If a crop treated with **Metalica** alone is lost, any crop on this label may be replanted immediately. Do not make a second broadcast application of this product. If the original application was banded and the second crop is planted in the untreated row middles, make a second banded treatment.

Crop	Rotation Interval (Months)
Alfalfa	4 Months
Barley, oats, rye, wheat	4 ½ Months
Clover	9 Months
Tomatoes	6 Months
Any crop on this label plus root crops, tobacco, barley, buckwheat, milo, rice, cabbage, peppers, stone fruits, or tree nuts	Spring following treatment
All other crops	12 Months

Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, stone fruits, or tree nuts may be planted in the spring.

**Restriction:**

- Do not make a second broadcast application of **Metalica**.

**Metalica Tank Mixtures:** For **Rotational Crops** restrictions for **Metalica** used in tank mixtures, refer to the statements/restrictions above for **Metalica** and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

**CORN (Field, Sweet, and Pop)****Metalica ALONE**

Make either pre-plant surface, pre-plant incorporated, pre-emergence, or lay-by applications using the rates specified.

**Pre-Plant Surface-Applied Application:** Refer to instructions for use of **Metalica** alone under **Application Instructions**.

**Fall Application (Apply after September 30 in MN, ND, SD, WI and north of Route 30 in IA; Apply after October 15 north of Route 91 in NE and south of Route 30 in IA; Apply after October 31 north of Route 136 in IL):** In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, apply 1.67 - 2.0 pts./A on *medium-textured* and 2.0 pts./A on *fine-textured soils*. A fall and/or spring tillage operation may precede the application. Minimize furrow and ridge formation in the tillage operations.

**Restrictions:**

- If a spring application is made, the sum total rate of fall and spring applications must not exceed the maximum total rate for corn.
- Do not apply to frozen ground.
- A fall and/or spring tillage may follow application, but do not exceed an incorporation depth greater than 2 - 3 inches.

**Early Pre-Plant Application:**

Use of **Metalica** on medium- and fine-textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY:

- Apply ¾ the specified labeled rate of **Metalica** (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30 - 45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split application or single treatment.

- Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, pre-plant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a post-emergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., AAtrex, Beacon®, Bicep®, Exceed®, Accent®, Banvel, Basagran®, bromoxynil (Brominal® or Buctril®), or 2,4-D. Observe all directions for use, restrictions, precautions, and limitations on the post-emergent herbicide label.

**Restriction:**

- If the post-emergence treatment includes an herbicide used pre-plant surface-applied, do not exceed the total maximum specified rate for corn on a given soil texture.

**Pre-Plant Incorporated or Pre-Emergence Applications:** Follow instructions for use of **Metolica** alone under **Application Instructions**.

**Coarse soils:** Apply 1.0 - 1.33 pts./A of **Metolica** if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater.

**Medium soils:** Apply 1.33 - 1.67 pts./A of **Metolica**.

**Fine soils:** Apply 1.33 - 1.67 pts./A of **Metolica** if organic matter content is less than 3%, or 1.67 - 2.0 pts./A if organic matter content is 3% or greater.

**Lay-by Applications:**

To extend the duration of weed control in corn, apply the maximum rate of 2.0 pts. per acre **Metolica** after corn emerges until the corn reaches 40 inches tall, following any pre-plant surface-applied, pre-plant incorporated, or pre-emergence herbicide application, including **Metolica**.

For best results, apply to soil free of emerged weeds and directed towards the base of corn plants in excess of 5 inches tall. The total **Metolica** rate applied on corn during any one crop year must not exceed 4 pts./A, depending on soil texture.

**Corn Restriction:**

- Do not graze or feed forage from treated areas for 30 days following application.

**Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta - Partial Control:**

Apply 2.0 - 2.5 pts./A of **Metolica** as a single application, or apply 1.0 - 1.33 pts./A pre-plant incorporated followed by 1.0 - 1.33 pts./A of **Metolica** pre-emergence. Make pre-emergence application during or after planting, but before weeds and corn emerge. Apply the 1.33 pts./A rate of **Metolica** when a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected. Make a shallow cultivation to control any late emerging weeds. Do not apply more than a total of 2.55 pts./A **Metolica**.

**Woolly Cupgrass and Wild Proso Millet Control:**

**Medium soils:** Apply 1.67 pts./A **Metolica** early pre-plant, pre-plant incorporated, or pre-emergence.

**Fine soils:** Apply 2.0 pts./A up to the maximum specified label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5 - 7 days.

Apply a post-emergence tank mix of 0.38 oz./A Beacon or 1 packet per 4 acres Exceed plus Accent SP at 0.33 oz./A plus 1 qt. of crop oil concentrate plus 1 gal./A of 28% nitrogen, or the equivalent amount of ammonium sulfate, when grasses are 2-3 inches tall and the corn is at least 4 inches tall. Cultivate 14-21 days after the post-emergence application.

**Precautions:**

If annual weeds escape following a pre-plant surface, pre-plant incorporated, or pre-emergence treatment of **Metolica**, follow with a post-emergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., AAtrex, Beacon, Bicep, Exceed®, Accent, Banvel, Basagran, Brominal, Buctril, or 2,4-D.

**Restrictions:**

- Do not apply more than the specified labeled rate for a given soil texture per year, either as a single or split treatment.
- Do not use **Metalica** on peat or muck soils.
- If the post-emergence treatment includes the herbicide used in the earlier treatment, do not exceed the total labeled rate for corn on a given soil texture.
- Do not exceed 1.2 lbs. a.i./A of AAtrex in tank-mix combination with Brominal or Buctril post-emergence.
- Refer to the AAtrex, Brominal, and Buctril labels for specific rates and precautions.

In corn, **Metalica** may be used up to 2.75 pts./A either pre-plant surface, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6%-20% or up to 2.0 pts./A on any soil for extended residual control and where severe stands of problem weeds are expected.

Brominal and Buctril may be applied post-emergence alone or in tank-mix combination with AAtrex. Refer to the AAtrex, Brominal, or Buctril labels for specific rates and precautions.

**Metalica Combinations for Corn**

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Metalica** in any tank mixture for corn (except **Metalica** + AAtrex post-emergence and **Metalica** + Banvel post-emergence) may be applied in water or fluid fertilizer. Use only water in the **Metalica** + AAtrex or the **Metalica** + Banvel post-emergence tank mixes.

**Restriction:**

- Do not graze or feed forage from treated areas for 30 days following application.

**FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE):**

All the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates. 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.

**Metalica Tank Mixtures for Corn - Additional Weeds Controlled and Special Instructions**

Tank Mix: <b>Metalica +</b>	Weeds Controlled	Weeds Partially Controlled
<b>AAtrex and/or Princep (Pre-Plant Surface, PPI, PRE)</b>	<b>Controls:</b> Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Ragweed, Smartweed, Velvetleaf	
<b>AAtrex (Post)</b>	<b>Controls:</b> Kochia, Lambsquarters, Mustard, Prickly sida, Ragweed, Smartweed, Velvetleaf <b>Partially controls:</b> Cocklebur, Jimsonweed, Morningglory	
<b>Banvel (Field Corn)</b>	<b>Controls:</b> Lambsquarters, Ragweed, Smartweed <b>Partially controls:</b> Cocklebur, Jimsonweed, Morningglory, Velvetleaf	
<b>AAtrex + Lorox</b>	<b>Controls:</b> Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Pigweed, Ragweed, Smartweed, Velvetleaf	
<b>AAtrex or Princep + Prowl</b>	<b>Controls:</b> Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Pigweed, Ragweed, Smartweed, Velvetleaf	

(continued)

**Metalica Tank Mixtures for Corn - Additional Weeds Controlled and Special Instructions (continued)**

Tank Mix: Metalica +	Weeds Controlled	Weeds Partially Controlled
<b>Marksman</b>	<b>Controls:</b> Cocklebur, Common purslane, Hairy nightshade, Jimsonweed, Kochia, Lambsquarters, Morningglory, Mustard, Pigweed, Prickly sida, Ragweed, Smartweed, Velvetleaf	
<b>Broadstrike® + Sharda Metolachlor 86.4EC</b>	<b>Controls:</b> Common purslane, Hairy nightshade, Kochia, Lambsquarters, Mustard, Pigweed, Prickly sida, Smartweed, Velvetleaf <b>Controls or Partially controls:</b> Cocklebur, Jimsonweed, Morningglory, Ragweed depending on ratio of products used and/or weed population.	

**MIXING INSTRUCTIONS**

**Special Mixing Instructions for Metalica + AAtrex or Princep and Prowl:**

- Although a single formulation for AAtrex or Princep is listed in the rate tables, other formulations may be substituted, using the following formula: 1 lb. of AAtrex Nine-O® or Princep Caliber 90® = 1.8 pts. of AAtrex 4L or Princep 4L.
- Fill the spray tank ¼ full with water or fluid fertilizer and start agitation.
- Add a compatibility agent at 4 pts./100 gals. spray mixture, such as Unite or X-77.
- Add the AAtrex or Princep and allow it to become dispersed.
- Add **Metalica** and Prowl 4E.
- Add the rest of the water.

**Additional AAtrex Instructions:**

- Although directions specify AAtrex formulations in tank mixture with **Metalica**, other brands of atrazine may be used. Follow the rates, specifications, and limitations on the atrazine label.
- See additional mixing instructions on the AAtrex label.
- Refer to the **Metalica Combinations for Corn - Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum-Tillage or No-Tillage Systems** sections for specific directions for 2,4-D or Banvel burndown combinations in Minimum-Tillage and No-Tillage systems.

Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

**Lorox Instructions:** Other formulations of Lorox can be used: 1 lb. of Lorox DF = 1 pt. of Lorox L.

In minimum-tillage and no-tillage systems, mix with Gramoxone Extra for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Roundup® for control of most emerged annual and perennial weeds.

**Metalica** in any tank mixture for corn may be applied in water or fluid fertilizer, except as follows:

**Corn Restrictions:**

- For all applications to corn, do not graze or feed forage from treated areas for 30 days following application.
- When applying **Metalica** in tank mixture with AAtrex, do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year.

Refer to **Corn (All Types) - Metalica Alone**, for sequential post-emergence treatments if escape weeds develop.

In corn, **Metalica** may be used up to 2.0 pts./A in combinations on any soil for extended residual control and where severe stands of problem weeds are expected.



### **Tank Mixture with AAtrex or Princep, or AAtrex + Princep - Pre-Plant Surface, Pre-Plant Incorporated, or Pre-Emergence**

In addition to the weeds controlled by **Metalica** alone, **Metalica** + AAtrex or Princep, or **Metalica** + AAtrex + Princep, applied pre-plant surface, pre-plant incorporated, or pre-emergence, also controls the following weeds:

Browntop Panicum	Hairy Nightshade	Ragweed
Cocklebur	Lambsquarters	Smartweed
Common Purslane	Morningglory	Velvetleaf

Apply **Metalica** + AAtrex or Princep, or **Metalica** + AAtrex + Princep either pre-plant surface, pre-plant incorporated, or pre-emergence.

**Pre-Plant Surface-Applied:** Follow instructions for use of **Metalica** alone under **Application Instructions** and under application instructions for **Metalica** alone on corn. Apply **Metalica** + AAtrex or Princep, or **Metalica** + AAtrex + Princep on medium soils (1.67 pts./A of **Metalica** + 3.2 - 4 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined) and on fine soils (1.67 - 2.0 pts./A of **Metalica** + 4 - 5 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined) in minimum-tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the **Metalica Alone - Pre-Plant Surface-Applied** section of the label for corn. On coarse soils, apply 1.33 pts./A of **Metalica** and 3.2 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined.

**Pre-Plant Incorporated or Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Instructions**. Apply **Metalica** in combination with AAtrex and using the appropriate rates from the **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep** table.

#### **Restriction:**

- Do not apply more than the specified labeled rate for a given soil texture per year, either as a split or single treatment.

### **Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta - Partial Control**

For more consistent partial control of shattercane, wild proso millet, woolly cupgrass and eclipta where **Metalica** is applied in tank mixture or sequentially with other registered corn herbicides, apply 2.0 - 2.33 pts. per acre as a single application or make the following applications:

1. Apply 1.0 - 1.33 pts./A of **Metalica** + 2 lbs. a.i./A of AAtrex or Princep pre-plant incorporated, followed by 1.0 - 1.33 pts./A of **Metalica** pre-emergence. Make the pre-emergence application during or after planting, but before weeds and corn emerge.
2. Apply **Metalica** at 1.33 pts./A alone or in tank mix combination with up to 2 lbs. a.i./A of AAtrex or Princep, pre-plant incorporated. Do not exceed the total rate of triazine herbicide listed for corn grown on a given soil texture. Follow with a post-directed application of Evik® 80W at 2.5 lbs./A. Refer to the Evik 80W label for specific directions for the post-directed application.
3. Apply Eradicane® or Sutan® (or equivalent EPTC or butylate formulations) at labeled rates pre-plant incorporated, followed by a pre-emergence application of **Metalica** at 1.0 - 1.33 pts./A. Do not use Eradicane or Sutan on soils where rapid degradation has been shown to occur. Make the pre-emergence application during or after planting, but before weeds and corn emerge.

When following the application regimes in numbers 1-3 above, make a shallow cultivation after the pre-emergence or post-emergence application to control any late emerging shattercane or wild proso millet plants.

**Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)**

**Do not use in muck or peat (soils with greater than 20% organic matter).**

BROADCAST RATES PER ACRE				
SOIL TEXTURE	Less than 3% Organic matter		Greater than 3% Organic matter	
	Tank Mix: Metalica +			
	AAtrex Nine O or Princep Caliber 90*	AAtrex Nine O** or Princep Caliber 90**	AAtrex Nine O or Princep Caliber 90*	AAtrex Nine O** or Princep Caliber 90**
<b>Coarse</b>	0.85 - 1.0 pt. + 1.1 - 2.2 lbs.	0.85 - 1.0 pt. + 0.6 - 1.1 lbs. + 0.6 - 1.1 lbs.	1.0 pt. + 1.3 - 2.2 lbs.	1.0 pt. + 0.7 - 1.1 lbs. + 0.7 - 1.1 lbs.
<b>Medium</b>	1.0 - 1.33 pts. + 1.3 - 2.2 lbs.	1.0 - 1.33 pts. + 0.7 - 1.1 lbs. + 0.7 - 1.1 lbs.	1.33 pts. + 1.8 - 2.2 lbs.	1.33 pts. + 0.9 - 1.1 lbs. + 0.9 - 1.1 lbs.
<b>Fine</b>	1.33 pts. + 1.8 - 2.2 lbs.	1.33 pts. + 0.9 - 1.1 lbs. + 0.9 - 1.1 lbs.	1.33 - 1.67 pts. + 1.8 - 2.2 lbs.***	1.33 - 1.67 pts. + 0.9 - 1.1 lbs. + 0.9 - 1.1 lbs.

\*Use Princep instead of AAtrex when heavy infestations of crabgrass or fall panicum are expected. On soils having between 6% and 20% organic matter, use up to 2.33 pts./A **Metalica** in tank mix combination with 2.2 lbs./A of AAtrex Nine-O, or equivalent rates of AAtrex 4L. Refer to the AAtrex label for weeds controlled at this reduced rate.

\*\*When using the tank mixture of **Metalica** + AAtrex Nine-O + Princep Caliber 90, use equal rates of each as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given in the **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)** table.

(Example: Total AAtrex Nine-O + Princep Caliber 90 = 1.2 lbs./A, use 0.4 lb. of AAtrex + 0.8 lb. of Princep, respectively.)

\*\*\*For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of AAtrex Nine-O, or equivalent rates of AAtrex 4L, or the same total amount of AAtrex + Princep with 1.33 - 1.67 pts./A of **Metalica**.

### Tank Mixture with AAtrex - Post-Emergence

	Weeds Controlled		Weeds Partially Controlled
Barnyardgrass (watergrass)	Yellow foxtail	Prickly sida	Cocklebur
Crabgrass	Jimsonweed	Purslane	Morningglory
Crowfootgrass	Kochia	Ragweed	Yellow Nutsedge
Fall panicum	Lambsquarters	Smartweed	
Giant foxtail	Mustard	Velvetleaf	
Green foxtail	Pigweed		

**Coarse soils:** Apply 1.0 pt./A of **Metalica** + 1.3 lbs./A of AAtrex Nine-O\* .

**Medium soils:** 1.33 pts./A of **Metalica** + 1.8 lbs./A of AAtrex Nine-O.

**Fine soils:** 1.33 - 1.67 pts./A of **Metalica** + 1.8 - 2.2 lbs./A\*\* of AAtrex Nine-O. Apply this tank mixture before grass and broadleaf weeds pass the 2-leaf stage and before corn exceeds 5" tall. Application to weeds larger than the 2-leaf stage will generally result in unsatisfactory control.

\*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

\*\*For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.2 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, with 1.33 - 1.67 pts./A of **Metalica**.

#### Lay-by Applications:

Apply to corn plants less than 12" tall. Direct applications to corn in >5" tall to the base of the corn plants. Apply over the top to corn plants <5" tall. Corn leaf burn can occur, but won't impact growth or yield.

Tank mixtures of **Metalica** + AAtrex can be applied following application of any registered pre-plant surface applied, pre-plant incorporated, or pre-emergence corn herbicide, including **Metalica** + AAtrex.

#### Restrictions:

- Do not exceed 4 pints of **Metalica**.
- Do not exceed 2.5 lbs. a.i./A AAtrex during any one crop year.
- Refer to the AAtrex label for geographic, soil-texture, and rotational restrictions.

#### Tank Mixture with Banvel

**Pre-Emergence:** Use this tank mixture only on field corn which is flat-planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI. In addition to the weeds controlled by **Metalica** alone, **Metalica** + Banvel, applied pre-emergence controls lambsquarters, ragweed, smartweed, and partially controls cocklebur, jimsonweed, morningglory, and velvetleaf.

Apply **Metalica** + Banvel Pre-Emergence.

**Medium soils:** Broadcast 1 pt./A of Banvel with 1.33 pts./A of **Metalica**.

**Fine soils:** 1.33 - 1.67 pts./A of **Metalica** tank mixture to the soil surface at planting or after planting, but before corn emerges. Plant corn at least 1½" deep and apply behind planting equipment, avoiding incorporation by the planter wheel or other seed covering device.

**Coarse soils:** Do not apply.

#### Restrictions:

- Do not allow **Metalica** to drift to non-target plants such as soybeans during application.
- Do not apply with aircraft.
- If it is necessary to rotary hoe to break the soil crust, do not disturb the soil more than ½" deep.
- Do not incorporate before corn emerges.

**Post-Emergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV):**

Apply 1.0 - 1.5 pts. of **Metalica** + 0.5 - 1 pt./A of Banvel by ground equipment when pigweed plants are <3" tall and before corn is >5" tall in a minimum of 20 gals. of spray per acre. Use the lower rate within the specified rate range on coarse-textured and low organic matter soils. Use the higher rate within the specified rate range on fine textured and high organic matter soils.

Banvel SGF and Clarity® may be used at equivalent lbs. of active ingredient per acre.

**Restrictions:**

- Do not allow **Metalica** to drift to non-target plants such as soybeans during application.
- Do not apply with aircraft.

**Tank Mixture with AAtrex and Lorox to Control of Lambsquarters and Pigweed**

For prolonged control of lambsquarters and pigweed in DE, MD, NJ, NY, PA, VA, and WV, apply **Metalica** pre-emergence in tank mix combination with AAtrex + Lorox. Apply **Metalica** and AAtrex according to the rates specified in the **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)** table and Lorox according to the following rates:

**SOIL TEXTURE & BROADCAST RATE PER ACRE:**

Sandy loam (1 - 3% organic matter): 0.67 lb./A Lorox

Sandy loam (3 - 6% organic matter): 1.0 lb./A Lorox

Medium- and fine-textured soils (1-6% organic matter): 1.0 lb./A Lorox

Observe all directions for use, restrictions, precautions, and limitations on the **Metalica**, AAtrex, and Lorox labels when applying these products in tank mix combinations.

**Tank Mixture with AAtrex or Princep + Prowl for Prolonged Control of Lambsquarters and Pigweed in Field Corn Only (Northeast U.S., including MI, IN, KY, and States East of These)**

For prolonged control of lambsquarters, pigweed, and other annual broadleaf and grass weeds, apply **Metalica** in tank mix combination with AAtrex\* or Princep + Prowl 4E after planting but before corn or weeds emerge. Apply using ground equipment in a minimum of 10 gals. water or 20 gals. liquid fertilizer. Apply by air in a minimum of 5 gals. water. Refer to the **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)** table for rates of **Metalica**, AAtrex, or Princep to be applied. Apply Prowl 4E according to the following rates in the **Prowl 4E - Broadcast Rates Per Acre** table.

**Restriction:**

- Do not apply **Metalica** in tank mix combination with AAtrex 80W + Prowl, as this combination is incompatible. Other AAtrex formulations may be used.

**Prowl 4E - Broadcast Rates Per Acre**

Percent Organic Matter in Soil	Coarse Soil	Medium Soil	Fine Soil
<1.5%	1.5 - 2.0 pts.	2.0 pts.	2.0 pts.
1.5 - 3%	2.0 pts.	3.0 pts.	3.0 pts.
>3%	3.0 pts.	3.0 pts.	3.0 pts.

Observe all directions for use, restrictions, precautions, and limitations on the respective product labels when applying these products in tank mix combination. Refer to the Prowl 4E label for replanting instructions in the event of crop loss.

**Tank Mixture with AAtrex\* or Princep, AAtrex + Princep, with Gramoxone Extra, Landmaster BW, or Roundup® for Minimum-Tillage or No-Tillage Systems**

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Extra, Landmaster BW, or Roundup® may be added to a tank mix of **Metalica** + AAtrex or Princep, or **Metalica** + AAtrex + Princep. The **Metalica** + AAtrex or Princep, or **Metalica** + AAtrex + Princep portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep - Pre-Plant Surface, Pre-Plant Incorporated, or Pre-Emergence**.

**Application:** Apply before, during, or after planting, but before the corn emerges, at the rates specified below. Add Gramoxone Extra, Landmaster BW, or Roundup® at the following broadcast rates:

**Gramoxone Extra:** 1.5 - 2.0, 2.0 - 2.5, or 2.5 - 3.0 pts./A to 1 - 3 inches, 3 - 6 inches, or 6-inch tall weeds, respectively. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50 - 74% nonionic active ingredient, respectively. This treatment will not control weeds greater than 6" tall.

**Restriction:**

- Do not apply combinations containing Gramoxone Extra in suspension-type liquid fertilizers because the activity of paraquat will be reduced.

**Landmaster BW:** 27 - 54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

**Roundup®:** See the Roundup® or Roundup® RT label for weeds controlled, rates, and other use directions. Apply in 20 - 60 gals. of water or fluid fertilizer per acre with ground equipment.

**Coarse soils:** Apply 1.0 pts./A of **Metalica** with 1.3 lbs. of AAtrex Nine-O\* or Princep Caliber 90\*, or with 0.7 lb. of AAtrex Nine-O\*\* + 0.7 lb. of Princep Caliber 90\*\*.

**Medium soils:** Apply 1.33 pts./A of **Metalica** with 1.8 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9 lb. of AAtrex Nine-O + 0.9 lb. of Princep Caliber 90.

**Fine soils\*\*\*:** Apply 1.33 - 1.67 pts./A of **Metalica** with 1.8-2.2 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9 - 1.1 lbs. of AAtrex Nine-O + 0.9 - 1.1 lbs. of Princep Caliber 90.

\*Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected.

\*\*When using the tank mixture of **Metalica** + AAtrex Nine-O + Princep Caliber 90, use equal rates of AAtrex and Princep as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given.

(*Example:* Total AAtrex Nine-O + Princep Caliber 90 = 1.8 lbs./A, use 0.6 lb. of AAtrex + 1.2 lbs. of Princep, respectively.)

\*\*\*For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, or the same total amount of AAtrex + Princep, with 1.33 - 1.67 pts./A of **Metalica**.

**Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum-Tillage or No-Tillage Systems**

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, applying **Metalica** in combination with AAtrex will kill most emerged small annual weeds. Apply **Metalica** + AAtrex before, during, or after planting, but before corn emerges, according to the rates in the **Metalica + AAtrex or Princep, or Metalica + AAtrex + Princep, Pre-Plant Incorporated or Pre-Emergence - Corn (All Types)** table.

Where heavy crop residues exist, add 0.8 - 1.6 pts./A of an appropriately labeled 3.8 lbs. a.i./gal. 2,4-D amine (such as Weedar 64, Weedar 64A, DMA-4 Herbicide, or Formula 40) to the spray tank last and apply in a minimum of 25 gals. carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds, and therefore, are recommended instead of water. Add X-77 surfactant at 1.0 - 2.0 qts./100 gals. of diluted spray, or another appropriate

surfactant at its labeled rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3" tall. If alfalfa is present, add Banvel to the spray mixture at 0.33 - 0.5 pt./A and apply before alfalfa exceeds 6" tall.

For fields with existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy), when existing weeds exceed 3" tall or when very dry conditions exist, add Gramoxone Extra at the rate of 1.67 pts./A in place of or in addition to 2,4-D, as indicated above. Do not apply Gramoxone Extra in suspension-type liquid fertilizer. Observe all directions for use, restrictions, precautions, and limitations on the respective product labels when applying these products in tank mix combination.

#### **Tank Mixture with Marksman in Conservation Tillage - Field and Silage Corn**

In conservation tillage systems where corn is planted directly into a cover crop or previous crop residue, **Metalica** + Marksman will kill most emerged small annual weeds. Apply **Metalica** + Marksman before, during, or after planting, but before corn emergence on medium and fine soils with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3" tall or when very dry conditions exist, add Gramoxone Extra at its standard rate. Apply **Metalica** + Marksman post-emergence to corn <3" tall and before weedy grasses exceed the 2-leaf stage.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds.

#### **Restriction:**

- Do not apply Gramoxone Extra in suspension-type liquid fertilizer or use on emerged corn. Refer to the Marksman label and follow all directions, limitations, restrictions, precautions, and instructions regarding application and use in corn.

#### **Tank Mixture with Broadstrike® + Sharda Metolachlor 86.4EC**

For pre-plant surface, pre-plant incorporated, or pre-emergence application where severe grass populations are expected on medium- or fine-textured soils with relatively high organic matter content, Broadstrike + **Sharda Metolachlor 86.4EC** may be spiked with **Metalica** for optimum performance. Refer to the Broadstrike + **Sharda Metolachlor 86.4EC** label for its use rate and the amount of metolachlor active ingredient it contains. **Metalica** may be added up to, but not to exceed, the maximum alone **Metalica** label rate for the soil classification. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

### **COTTON**

#### **Metalica ALONE**

##### **Application:**

Apply **Metalica** pre-emergence only in Area 1\* at the rate of 0.50-1.0 pt./A on sandy loams, 0.67-1.33 pts./A on medium soils, or 1.0-1.33 pts./A on fine soils. Apply **Metalica** pre-plant incorporated or pre-emergence in Area 2\*\* at 1.0 pt./A on sandy loams, 1.0-1.33 pts./A on medium soils, or 1.33 pts./A on fine soils.

##### **Restriction:**

- Do not use on sands and loamy sand.

\*Area 1 = AR, LA, MS, TN, and Bootheel of MO

\*\*Area 2 = NM, OK, and TX

#### **Pre-Plant Incorporated (NM, OK, and TX Only):**

Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting, but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1-inch deep. Use a pre-plant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Where furrow irrigation is used, wet the top of the bed for best results. If the crop is to be planted on beds, apply and incorporate after bed formation. Cotton should be planted below the zone of incorporation; i.e., at least 1 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

For best control of yellow nutsedge and suppression of seedling johnsongrass, apply **Metalica** pre-plant incorporated at the maximum rate for the soil texture, whether applied alone or mixed with Caparol 4L.

**Pre-Emergence:** Apply to the soil surface at planting or after planting, but before weeds or crop emerge.

**Restrictions:**

- To avoid concentration in the seed furrow, do not make broadcast applications of **Metalica** to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow.
- To avoid crop injury, do not apply **Metalica** on sand or loamy sand soils, or in areas where water is likely to “pond” over the bed.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.
- To avoid possible illegal residues, do not graze or feed forage or fodder from cotton to livestock.

**Metalica + Caparol 4L-Cotton (NM, OK, TX)**

	SOIL TEXTURE	BROADCAST RATES PER ACRE	
		METALICA	CAPAROL 4L
ALL	Sand, loamy sand	<b>DO NOT USE</b>	
OK, and Blacklands and Gulf Coast of TX	Loams	0.85 - 1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.85 - 1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.85 - 1.0 pt.	1.6 pts.
	Loams	0.85 - 1.33 pts.	2.4 pts.
	Sandy clay loams	1.33 pts.	2.4 pts.
	Other clay soils	1.33 pts.	3.2 pts.

**Restrictions:**

- To avoid concentration in the seed furrow, do not make broadcast applications of **Metalica + Caparol 4L** to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow.
- To avoid crop injury, do not apply on sand or loamy sand soils, or in areas where water is likely to “pond” over the bed.
- Do not apply in cut areas of newly leveled fields, or in areas of excess salt.
- Do not apply to glandless cotton varieties.
- Do not apply on Taloka silt loam.
- Do not use in Gaines County, TX.
- To avoid possible illegal residues, do not graze or feed forage or fodder from cotton to livestock.
- Refer the Caparol 4L label for further instructions and limitations.

**Tank Mixture with Cotoran DF**

**Metalica** may be applied in tank mixture with Cotoran DF (Sharda Fluometuron) pre-emergence for control of those weeds controlled by **Metalica** alone and those as listed on the Cotoran DF (Sharda Fluometuron) label. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crops emerge, using the appropriate rates from the **Metalica + Cotoran DF (Sharda Fluometuron)-Cotton** table.

**Mixing Instructions:** Incompatibility may occur when tank mixing **Metalica** and Cotoran DF. To help overcome this condition, fill the spray tank ¼ full with water or fluid fertilizer and start agitation, add the Cotoran DF (Sharda Fluometuron) and allow it to become dispersed. Add X-77 at 0.5% volume/volume final spray (4 pts./100 gals.), then add the **Metalica** and finally the rest of the water or fluid fertilizer. Agitate during mixing and application to maintain a uniform suspension.

**Metalica + Cotoran DF (Sharda Fluometuron)-Cotton**

SOIL TEXTURE	BROADCAST RATES PER ACRE		
	METALICA		COTORAN DF*** (LBS.)
	Area 1*	Area 2**	
Sand, loamy sand	<b>DO NOT USE</b>		
Sandy loam	0.50 - 1.0	0.85 - 1.0	1.2
Loam, silt, silt loam	0.67 - 1.33	1.0 - 1.33	1.2 - 1.9
Fine soil	1.0 - 1.33	1.33	1.9 - 2.4

\*Area 1 = AR, LA, MS, Bootheel of MO, and TN.  
 \*\*Area 2 = Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX.  
 \*\*\*When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

**Precaution:**

- The use of Cotoran (Sharda Fluometuron) following the use of a systemic insecticide at planting may result in crop injury.

**Restrictions:**

- Do not use in Gaines County, TX.
- To avoid possible illegal residues, do not feed treated forage or gin trash to livestock, or graze treated areas.
- Do not use on Taloka silt loam.
- To avoid concentration in the seed furrow, do not make broadcast applications of **Metalica + Cotoran (Sharda Fluometuron)** to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow.
- To avoid crop injury, do not apply **Metalica + Cotoran (Sharda Fluometuron)** on sand or loamy sand soils, or in areas where water is to "pond" over the bed.

Refer to the Cotoran (Sharda Fluometuron) labels for further instructions, restrictions, precautions, and limitations.

**Tank Mixture of Metalica or Metalica + Cotoran (Sharda Fluometuron) with Gramoxone Extra or Roundup® for Minimum-Tillage or No-Tillage Systems**

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Extra or Roundup® may be added to a tank mix of either **Metalica** or **Metalica + Cotoran (Sharda Fluometuron)**. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup® combinations will control emerged annual and perennial weeds when applied as directed on the Roundup® label. The **Metalica** and **Metalica + Cotoran (Sharda Fluometuron)** portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the **Metalica** and **Metalica + Cotoran (Sharda Fluometuron)** sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions** under the **Tank Mixture with Cotoran DF (Sharda Fluometuron)** section.

**Application:** Apply before, during, or after planting, but before the cotton emerges, at the rates specified below.



Apply **Metalica** at 0.85-1.0 pt./A on sandy loams, medium-, and fine-textured soils. Refer to the **Metalica + Cotoran DF (Sharda Fluometuron)-Cotton** table for the Cotoran DF (Sharda Fluometuron) rates.

Add Sharda Para-Shot or Gramoxone Extra or Roundup® at the following broadcast rates:

**Sharda Para-Shot or Gramoxone Extra:** 1.5-2.0, 2.0-2.5, or 2.5-3.0 pts./A to 1-3 inches, 3-6 inches, or 6-inch tall weeds, respectively. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

**Restriction:**

- Do not apply combinations containing Sharda Para-Shot or Gramoxone Extra in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

**Roundup®:** See the Roundup® label for weeds controlled, rates, and other use directions. Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

**Precaution:**

- If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.

**Restriction:**

- Do not use in Gaines County, TX.

Refer to the Cotoran (Sharda Fluometuron) labels and the **Tank Mixture with Sharda Fluometuron or Cotoran® DF** section of this label for further instructions, precautions, and limitations.

## PEANUTS

### **Metalica ALONE**

Apply **Metalica**, either pre-plant incorporated, post-plant incorporated or pre-emergence using the appropriate rate specified below.

**Pre-Plant Incorporated or Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Procedures**.

**Post-Plant Incorporated:** Apply and shallowly incorporate **Metalica** into the soil after planting, but before peanut germination. Incorporation depth and incorporating implements must be kept above the seed, or seed will be damaged.

Apply **Metalica** alone, pre-plant incorporated, post-plant incorporated or pre-emergence at a broadcast rate of 1.0-1.33 pts./A in the Southeast\* and 0.85-1.33 pts./A in NM, OK, and TX.

\*In the Southeast, use 1.33-2.0 pts./A and apply pre-emergence for partial control of Florida beggarweed.

**Restrictions:**

- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest or illegal residues may result.

**Metalica** alone may be applied as directed after any of the following pre-plant incorporated herbicides when used according to their label directions: Balan® at 3-4 qts./A; Treflan® E.C. at 1 pt./A; Vernam® at 2.33-3 pts./A; Sonalan® at 1.25-3 pts./A; Pursuit® at 0.25 pt./A; or Prowl® at 1-2 pts./A.

### **Metalica COMBINATIONS**

#### **Tank Mixture with Balan® L.C.**

**Metalica** + Balan® tank mixture applied pre-plant incorporated controls those weeds listed under **Metalica Applied Alone** and those weeds as listed on the Balan® label.

Apply 1.0-1.33 pts./A of **Metalica** + 3-4 qts./A of Balan® in a minimum of 10 gals. of spray volume per acre for ground application or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the procedures for Balan® on the Balan® label for soil preparation and incorporation of this tank mix. Apply and incorporate **Metalica** + Balan® up to 14 days prior to planting.

Follow all restrictions and precautions on the Balan® label.

**Tank Mixture or Sequentially with Pursuit**

The tank mixture or sequential treatment of **Metalica** and Pursuit controls all weeds controlled by **Metalica** alone and by Pursuit alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Pursuit (Sharda Praxis) label for weeds controlled by Pursuit.

Refer to the respective labels for application methods, timing, rates, restrictions, and precautions, and use in accordance with the more restrictive label.

**Tank Mixture with Sonalan**

The tank mixture controls all weeds controlled by **Metalica** alone and by Sonalan alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Sonalan label for weeds controlled by Sonalan.

Apply **Metalica** + Sonalan pre-plant incorporated, using the appropriate rate from the **Metalica + Sonalan-Peanuts** table.

Follow labeled soil preparation procedures for Sonalan.

**Metalica + Sonalan-Peanuts**

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	SOUTHEAST		NM, OK, TX	
	METALICA	SONALAN	METALICA	SONALAN
Coarse	1.0 - 1.33 pts.	1.25 - 2 pts.	0.85 - 1.33 pts.	1.25 - 2 pts.
Medium		1.75 - 2.5 pts.		1.75 - 2.5 pts.
Fine		2.25 - 3 pts.		2.25 - 3 pts.

Follow all use directions, limitations, restrictions, precautions, and information regarding application to peanuts on the **Metalica** and Sonalan labels.

**Tank Mixture with Prowl**

**Metalica** + Prowl applied pre-plant incorporated controls all weeds controlled by **Metalica** alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply **Metalica** + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2 inches of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the Incorporation instructions of the respective labels for additional directions.

Apply **Metalica** + Prowl pre-plant incorporated, using the appropriate rates from the **Metalica + Prowl-Peanuts** table.

**Metalica + Prowl-Peanuts**

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	NM, OK, TX	OTHER PEANUT GROWING STATES
	METALICA + PROWL	METALICA + PROWL
Sand, loamy sand	0.85 pt. + 1-1.5 pts.	1.0-1.33 pts. + 1.5-2 pts.
Sandy loam	0.85-1.0 pt. + 1-1.5 pts.	1.0-1.33 pts. + 1.5-2 pts.
Fine soil	1.33 pts. + 1-1.5 pts.	1.33 pts. + 1.5-2 pts.

Follow all use directions, limitations, precautions, and information regarding application to peanuts on the **Metalica** and Prowl labels.

### **Sequentially with Storm**

Apply **Metolica** according to the directions for **Metolica Alone** and follow with a post-emergence treatment of Storm as specified on its label for the control of weeds listed on the **Metolica Alone** label and on the Storm label. Refer to the **Peanuts – Metolica Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

### **Multiple Applications**

Where weed pressure is heavy or where species difficult to control are expected, **Metolica Alone** is most effective when used as follows:

#### **Southeast Only (AL, FL, GA, NC, SC, VA)**

**1<sup>st</sup> Application:** Apply **Metolica** pre-plant incorporated as directed under **Peanuts – Metolica Alone** or apply + Balan<sup>®</sup> pre-plant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

**2<sup>nd</sup> Application:** Apply **Metolica** any time from pre-emergence to before 'ground cracking' at 1.0-2.0 pts./A for extended control of weeds not yet emerged. If peanuts have emerged, use **Metolica** according to its label section entitled **Peanuts – Metolica Combinations – Multiple Applications**.

**3<sup>rd</sup> Application:** Apply **Metolica** at lay-by as directed under **Peanuts – Metolica Alone** section of the **Metolica** label.

#### **Restrictions:**

- Do not apply more than the equivalent of 4 lbs. of metolachlor active ingredient per acre during any one year or illegal residues may result.
- Do not use **Metolica** after peanuts have emerged.
- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest or illegal residues may result.
- Do not use **Metolica** in the third application.

#### **Southwest Only (NM, OK, TX)**

**1<sup>st</sup> Application:** Apply **Metolica** pre-plant incorporated or pre-emergence to before 'ground cracking' as directed under **Peanuts – Metolica Alone** or apply **Metolica** + Balan<sup>®</sup> pre-plant incorporated as directed previously in this section.

#### **Restrictions:**

- Do not apply more than the equivalent of 2.6 lbs. of metolachlor active ingredient per acre during any one year or illegal residues may result.
- Do not use **Metolica** after peanuts have emerged.
- Do not graze or feed peanut forage or fodder to livestock for 30 days following application.
- Do not apply within 90 days of harvest or illegal residues may result.

### **POD CROPS**

Pod crops, including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English\*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), and lupines (sweet, white, white sweet, and grain)

#### **Metolica ALONE**

##### **Fall Application:**

- Apply after September 30 in ND, SD, MN, WI, and north of Route 30 in IA.
- Apply after October 15 north of Route 91 in NE and south of Route 30 in IA.
- Apply after October 31 north of Route 136 in IL.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.65-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches.

**Restrictions:**

- If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for pod crops or illegal residues may result.
- Do not apply to frozen ground.

**Spring Application**

Apply **Metalica**, either pre-plant incorporated or pre-emergence, using the appropriate rate specified below.

**Pre-Plant Incorporated or Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Procedures**. On coarse soils with less than 3% organic matter, apply 1.0 -1.33 pts./A of **Metalica** or 1.33 pts./A if organic matter is 3% or greater. On medium soils, apply 1.33-1.67 pts./A of **Metalica**. On fine soils, apply 1.33-1.67 pts./A of **Metalica** if organic matter content is less than 3%, or 1.67-2 pts./A if organic matter content is 3% or greater.

\*On English peas, use only pre-emergence applications.

**Restrictions:**

- Do not use on English peas in northeastern U.S.
- To avoid possible illegal residues, do not cut for hay within 120 days following a **Metalica** application.
- Do not apply more than 2.0 pts./A of **Metalica** during any one crop year, depending on soil texture.

**Metalica COMBINATIONS**

**Restriction:** When applying **Metalica** in combination on pod crops, do not cut for hay within 120 days following application or illegal residues may result.

**Tank Mixture and Sequential Applications with Eptam-Beans (Green or Dry)**

This mixture controls all weeds controlled by **Metalica** alone and by Eptam alone. Refer to the **Metalica Applied Alone** section of this label for weeds controlled by **Metalica** alone and to the Eptam label for weeds controlled by Eptam.

**Pre-Plant Incorporated:** Follow instructions for use of **Metalica** alone under **Application Procedures**.

**Sequential:** Apply Eptam alone pre-plant incorporated, as specified on that label. Follow with a pre-emergence application of **Metalica**, at rates specified for **Metalica** alone, during planting (behind the planter) or after planting, but before the weeds or crop emerge.

Refer to the **Product Information** section of this label and to the Eptam label for weather, cultural practices, and all other restrictions, precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam 7E\* with **Metalica** as specified. On coarse soils, apply 0.85 pt./A of **Metalica** if organic matter content is less than 3%, or 1.0 pt./A if organic matter content is 3% or greater. On medium soils, apply 1.0 pt./A of **Metalica** if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On fine soils, apply 1.33 pts./A of **Metalica** if organic matter is less than 3%, or 1.33-1.67 pts./A if organic matter is 3% or greater.

**Restriction:**

- Do not exceed 3.5 pts./A of Eptam 7E on small white beans or green beans grown on coarse-textured soils.

**Tank Mixture with Treflan-Beans (Dry-Kidney, Navy, Pinto, etc.; Lima; and Snap)**

**Metalica** + Treflan tank mix applied pre-plant incorporated controls those weeds listed under **Metalica Applied Alone** and those weeds listed for Treflan alone on the Treflan label. **Metalica** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the labeled procedures on this label and on the respective Treflan label using equipment that provides uniform 2-inch incorporation.

Apply **Metalica** + Treflan tank mix using the appropriate **Metalica** rate specified for **Metalica** alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Follow all restrictions and precautions on the respective Treflan label and in the **Pod Crops - Metalica Alone** section of this label.

## POTATOES

### **Metalica ALONE**

Apply **Metalica**, either incorporated or pre-emergence, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

**Incorporated:** Apply **Metalica** at 1.0-2.0 pts./A to the soil and incorporate into the top 3 inches before planting, using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices should not bring untreated soil to the surface. Post-plant incorporated application may be made any time after planting to drag-off, but before potato emergence. Use an implement that evenly distributes **Metalica** in the top 2 inches of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

**Pre-Emergence:** Apply **Metalica** at 1.0-2.0 pts./A, either after planting as a pre-emergence, delayed pre-emergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.75 pts./A of **Metalica** alone may be used where soil organic matter is between 6% and 20%.

#### **Restrictions:**

- Do not use on sweet potatoes or yams.
- Do not use on muck or peat soils. If cool, wet soil conditions occur after application, **Metalica** may delay maturity and/or reduce yield of Superior and other early maturing potato varieties.
- Do not apply both as a pre-emergence and an incorporated treatment.
- Potatoes treated with **Metalica** must not be harvested within 60 days after the at-planting to drag-off application or illegal residues may result.

### **Metalica COMBINATIONS**

#### **Tank Mixture with Sencor or Lexone**

In addition to those weeds controlled by **Metalica** alone, **Metalica** applied in tank mix combination with, or sequentially with, any of the registered Sencor or Lexone formulations, also controls the following broadleaf weeds: cocklebur\*, hairy nightshade\*, hemp sesbania, jimsonweed\*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

\*Partially controlled.

**Metalica** at 1.0-2.0 pts./A plus the labeled Sharda Metrixx, Sencor® or Lexone® use rate may be used pre-emergence. Apply 1.0-1.33 pts./A of **Metalica** on coarse soils and 1.33-2.0 pts./A on other soil textures. Within this rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. **Metalica** will not control emerged weeds.

Refer to the Sharda Metrixx, Sencor®, or Lexone® labels for use rates, precautionary statements, restrictions, application information, and weeds controlled.

#### **Restrictions:**

- Do not apply to sweet potatoes or yams.
- Do not use this tank mixture on muck or peat soils.
- Potatoes treated with **Metalica** in tank mixture with Sharda Metrixx, Sencor® or Lexone® cannot be harvested within 60 days after application or illegal residues may result.

#### **Metalica + Lorox Tank Mixture (East of Rocky Mountains)**

**Metalica** may be applied in a tank-mix combination with any of the registered Lorox formulations as a pre-emergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in **Metalica + Lorox-Potatoes (East of Rocky Mountains)**.

**Metalica + Lorox-Potatoes (East of Rocky Mountains)**

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	1% TO LESS THAN 3% ORGANIC MATTER		3-5% ORGANIC MATTER	
	METALICA	LOROX*	METALICA	LOROX*
<b>Coarse</b> Sandy loam	1.0 pt.	1 - 1.5 lbs.	1.33 pts.	1.5 - 2 lbs.
<b>Medium</b> Loam, silt loam, silt	1.33 pts.	1.5 - 2 lbs.	1.67 - 2.0 pts.	2 - 2.5 lbs.
*When using Lorox L or Lorox DF, use equivalent rates. 1 pt. of Lorox L equals 1 lb. of Lorox DF.				

**Restriction:**

- To avoid crop injury, do not use on sands or loamy sands and do not incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the Lorox label for precautionary statements, restrictions, application information, and weeds controlled.

**Tank Mixture with Prowl 4E**

In addition to the weeds controlled by **Metalica** alone, this tank mixture with Prowl 4E controls such problem species as kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply **Metalica** + Prowl 4E pre-emergence or pre-emergence incorporated, according to the specific directions on the Prowl 4E label, using the rates in the **Metalica + Prowl 4E-Potatoes** table.

**Metalica + Prowl 4E-Potatoes**

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	LESS THAN 3% ORGANIC MATTER	MORE THAN 3% ORGANIC MATTER
	METALICA + PROWL 4E*	METALICA + PROWL 4E*
<b>Coarse</b>	1.0-1.33 pts. + 1-1.5 pts.	1.0-1.33 pts. + 1-1.5 pts.
<b>Medium</b>	1.33 pts. + 1.5-2 pts.	1.33-1.67 pts. + 2-3 pts.
<b>Fine</b>	1.33-1.67 pts. + 2-3 pts.	1.67-2.0 pts. + 3 pts.
*When using other formulations of Prowl, use equivalent rates of active ingredient.		

Refer to the **Metalica** and Prowl 4E labels and observe all directions, timings, limitations, restrictions, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

**Tank Mixture with Prowl 4E + Eptam**

In addition to the weeds controlled by **Metalica** alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the **Metalica** + Prowl 4E labels for rates of those products and add Eptam 7E at 3.5-7.0 pts./A, depending on geographical area. Refer to the respective **Metalica**, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

## SAFFLOWER

### **Metalica ALONE**

**Pre-Plant Incorporated or Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Procedures**.

On coarse soils, apply 1.0-1.33 pts./A of **Metalica** if organic matter content is less than 3%, or 1.33 pts./A if organic matter is 3% or greater. On medium soils, apply 1.33-1.67 pts./A of **Metalica**. On fine soils, apply 1.33-1.67 pts./A of **Metalica** if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

### **GRAIN OR FORAGE SORGHUM (Seed Treated with Concep® or Screen)**

### **Metalica ALONE**

Apply **Metalica**, either pre-plant surface, pre-plant incorporated, or pre-emergence, using the appropriate rate specified below. Apply **Metalica** alone only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

**Pre-Plant Surface-Applied:** Refer to instructions for use of **Metalica** under **Application Procedures**. For minimum-tillage or no-tillage systems only, **Metalica** may be applied up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting, with  $\frac{2}{3}$  of the broadcast rate applied initially and the remaining  $\frac{1}{3}$  at planting. Apply 1.50 pts./A of **Metalica** on medium soils or 1.67 pts./A on fine soils. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of **Metalica** on coarse soils not more than 2 weeks prior to planting. Under dry conditions, irrigate after application to move **Metalica** into the soil.

**Pre-Plant Incorporated or Pre-Emergence:** Refer to instructions for use of **Metalica** under **Application Procedures**. Broadcast 1.0-1.33 pts./A of **Metalica** on coarse soils, 1.33-1.50 pts./A on medium soils, or 1.33-1.67 pts./A on fine soils.

### **Precautions:**

- If sorghum seed is not properly treated with Concep or Screen, **Metalica** will severely injure the crop.
- Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Metalica**. The crop will normally outgrow this effect.

### **Restrictions:**

- Except for the split pre-plant surface treatment, do not make more than one application per year, or illegal residues may result.
- Do not use **Metalica** on sorghum grown under dry mulch tillage or injury may occur.

### **Metalica COMBINATIONS**

**Metalica** tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply **Metalica** in tank mixtures only when the sorghum seed has been properly treated by the seed company with Concep or Screen.

### **IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE)**

If applying **Metalica** in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those listed on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

### **Precautions:**

- Applications of **Metalica** + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury.
- If sorghum seed is not properly treated with Concep or Screen, **Metalica** + AAtrex may severely injure the crop.
- Under high soil moisture conditions prior to sorghum emergence, injury may occur following the use of **Metalica** + AAtrex. The crop will normally outgrow this effect.

### **Restrictions:**

- Except for the split pre-plant surface treatment, do not make more than one application per year, or illegal residues may result.
- Do not use **Metalica** + AAtrex on sorghum grown under dry mulch tillage, or injury may occur.

### **Tank Mixture with AAtrex**

In addition to the weeds controlled by **Metalica** alone, **Metalica** + AAtrex also controls the following broadleaf weeds when applied either pre-plant surface, pre-plant incorporated, or pre-emergence: cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

**Pre-Plant Surface-Applied:** Refer to instructions for use of **Metalica** under **Application Procedures**. For minimum-tillage or no-tillage systems only, **Metalica** + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting, with  $\frac{2}{3}$  of the broadcast rate applied initially and the remaining  $\frac{1}{3}$  at planting. Apply 1.5 pts./A of **Metalica** + 1.7-2 lbs./A of AAtrex Nine-O\* on medium soils with 1.5% organic matter or greater. Apply 1.5 pts./A of **Metalica** + 1.7-2 lbs./A of AAtrex Nine-O on fine soils with less than 1.5% organic matter, or apply 1.67 pts./A of **Metalica** + 2-2.2 lbs./A of AAtrex Nine-O on fine soils with 1.5% organic matter or greater. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigate after application to move **Metalica** + AAtrex into the soil.

### **Restriction:**

- To avoid crop injury, do not use on coarse soils and do not use on medium soils with less than 1.5% organic matter.

**Pre-Plant Incorporated or Pre-Emergence:** Refer to instructions for use of **Metalica** under **Application Procedures**. On medium soils with 1.5% organic matter or greater, apply 1.0 pt./A of **Metalica** + 1.3 lbs./A of AAtrex Nine-O\*. On fine soils with less than 1.5% organic matter, apply 1.0 pt./A of **Metalica** + 1.3 lbs./A of AAtrex Nine-O; on fine soils with 1.5% organic matter or greater, apply 1.2-1.33 pts./A of **Metalica** + 1.6-1.8 lbs./A of AAtrex Nine-O.

\*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

### **Restrictions:**

- Do not use on medium soils with less than 1.5% organic matter.
- Do not use on coarse soils.
- Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas.

### **Tank Mixture of Metalica or Metalica + AAtrex, with Sharda Para-Shot or Gramoxone Extra, Landmaster® BW, or Roundup® for Minimum-Tillage or No-Tillage Systems**

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep or Screen) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Sharda Para-Shot or Gramoxone Extra, Landmaster® BW, or Roundup® may be tank mixed with **Metalica** or **Metalica** + AAtrex. See Comment No. 7 following **Metalica Tank Mixtures for Corn Additional Weeds Controlled and Special Instructions** chart. The **Metalica** or **Metalica** + AAtrex portion of the tank mixture provides pre-emergence control of the weeds listed on this label under the respective sections.

Refer to the label of each product used in combination and observe the planting details, use rates, restrictions, and all other precautions and limitations.

**Application:** Apply before, during, or after planting, but before sorghum emerges, at the appropriate rates listed under **Grain or Forage Sorghum - Metalica Alone** or **- Metalica Combinations - Metalica + AAtrex**, respectively. Add Sharda Para-Shot or Gramoxone Extra, Landmaster® BW, or Roundup® at the following broadcast rates:

**Sharda Para-Shot or Gramoxone Extra:** 1.5-2, 2-2.5, or 2.5-3 pts./A to 1-3 inches, 3-6 inches, or 6-inch tall weeds, respectively. Apply surfactant at 1 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

**Landmaster BW:** 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, rates for specific weeds, and other information concerning use.

**Roundup®:** See the Roundup® or Roundup® RT label for weeds controlled, rates, and other use directions. Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.



## SOYBEANS

### **Metalica ALONE**

Apply **Metalica**, either pre-plant surface-applied, pre-plant incorporated, pre-emergence, or post-emergence using the appropriate rate specified below.

**Pre-Plant Surface-Applied, Pre-Plant Incorporated, Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Procedures**. **Post-Emergence:** Follow the **Tank Mixture** instructions under **Post-Emergence Applications**.

**Pre-Plant Surface-Applied Fall Application (Apply after September 30 in MN, ND, SD, WI and north of Route 30 in IA; Apply after October 15 north of Route 91 in NE and south of Route 30 in IA; Apply after October 31 north of Route 136 in IL):**

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on medium-textured and 2.0 pts./A on fine-textured soils. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches. Minimize furrow and ridge formation in the tillage operations.

### **Restrictions:**

- If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans or illegal residues may result.
- Do not apply to frozen ground.

Use on medium and fine soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply  $\frac{2}{3}$  the labeled rate of **Metalica** (1.67 pts./A on medium soils and 2.0 pts./A on fine soils) as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A on coarse soils not more than 2 weeks prior to planting.

**Pre-Plant Incorporated or Pre-Emergence:** On coarse soils, apply 1.0-1.33 pts./A of **Metalica** if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On medium soils, apply 1.33-1.67 pts./A of **Metalica**. On fine soils, apply 1.33-1.67 pts./A of **Metalica** if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

On soybeans, **Metalica** may be used up to 2.55 pts./A as a pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment on soils having an organic matter content between 6% and 20%.

### **Restrictions:**

- The total **Metalica** rate applied to soybeans during any one crop must not exceed 2.55 pts./A.
- Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment, or illegal residues may result.

### **Post-Emergence**

#### **From emergence up through the third trifoliolate leaf stage:**

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **third trifoliolate leaf stage**. **Metalica** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

#### **From emergence up through the fifth trifoliolate leaf stage:**

Apply 1.0-1.33 pts./A as a post-emergence treatment to soybeans from emergence up through the **fifth trifoliolate leaf stage**. **Metalica** will not control emerged weeds so it must be applied to a weed-free surface or in a tank mixture with products that provide post-emergence control of weeds present at the time of application.

### **Restrictions:**

- Do not apply a post-emergence application of **Metalica** if a pre-plant surface, pre-plant incorporated, or pre-emergence application of metolachlor products have already been applied.
- When **Metalica** is applied post-emergence to soybeans do not apply more than 1.33 pts./A post-emergence.
- To avoid possible illegal residues, make post-emergence applications at least 90 days before harvest.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application of **Metalica**.

**Metalica COMBINATIONS**

Water or fluid fertilizer may be used as carrier for **Metalica** in combination with Sharda Metrixx, Sencor, Lexone, Lorox®, Lorox® Plus, Gemini®, Canopy®, Sharda Metrixx Plus, Preview®, Pursuit®, Sharda Praxis, Scepter®, Sonalan®, or Command®.

For all of the following combinations, **Metalica** may be used up to 2.3 pts./A on soils having an organic matter content between 6% and 20%.

**Restriction:**

- The total **Metalica** rate applied to soybeans during any one crop year must not exceed 2.55 pts./A.

**Pre-Plant/Pre-Emergence Applications**

**Tank Mixture with Sencor or Lexone**

In addition to those weeds controlled by **Metalica** alone, **Metalica** + Sharda Metrixx, Sencor or Lexone, when applied as directed, also controls the following broadleaf weeds: cocklebur\*, hairy nightshade, hemp sesbania, jimsonweed\*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

\*Partially controlled.

Apply **Metalica** plus Sharda Metrixx, Sencor or Lexone pre-plant incorporated or pre-emergence, using the appropriate rates from the **Metalica + Sharda Metrixx, Sencor or Lexone-Soybeans** table.

**Pre-Plant Incorporated or Pre-Emergence:** Follow instructions for use of **Metalica** alone under **Application Procedures**. Consult the tank mix partner label for specific use rate and other application information.

**Sequential:** Apply **Metalica** alone pre-plant incorporated, as specified in **Metalica + Sharda Metrixx, Sencor or Lexone-Soybeans** table for this tank mixture. Follow with a pre-emergence application of Sharda Metrixx, Sencor or Lexone during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Refer to the Sharda Metrixx, Sencor or Lexone labels for planting details and soybean variety restrictions.

**Metalica + Sharda Metrixx, Sencor, or Lexone-Soybeans**

SOIL TEXTURE**	BROADCAST RATES PER ACRE					
	0.5% to Less than 3% Organic Matter		3% Organic Matter or Greater			
	METALICA		METRIX, SENCOR OR LEXONE DF*	METALICA	METRIX, SENCOR OR LEXONE DF*	
<b>Coarse</b> Loamy sand (over 2% organic matter) Sandy Loam	0.85 - 1.0 pt.	+	Consult product label for specific use rate information.	1.0 pt.	+	Consult product label for specific use rate information.
<b>Medium</b>	1.0 - 1.33 pts.			1.33 pts.		
<b>Fine</b>	1.33 pts.			1.33 - 1.67 pts.		
<b>Mississippi Delta Only</b> Silty clay, clay	1.33 pts.			1.33 - 1.67 pts.		
<b>Muck or Peat</b> (soils with more than 20% organic matter)	<b>DO NOT USE</b>					

\*When using Metrixx, Sencor 4, or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.  
**\*\*Restriction:** On all sand and on loamy sand with less than 2% organic matter, do not use this tank mixture pre-emergence or the sequential treatment. Do not use the tank mixture pre-plant incorporated on any sand, loamy sand, or sandy loam, or crop injury may occur.

**Precaution:**

- If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days.

**Restriction:**

- To avoid crop injury, do not use the tank mix or sequential application on soil with less than 0.5% organic matter or on alkaline soil with a pH over 7.4.

**Tank Mixture with Lorox**

In addition to those weeds controlled by **Metalica** alone, **Metalica** + Lorox, applied pre-emergence, also controls the following broadleaf weeds: cocklebur\*, jimsonweed\*, lambsquarters, morningglory\*, prickly sida, ragweed, smartweed, velvetleaf\*, Venice mallow, and wild mustard.

\*Partially controlled.

**Pre-Emergence:** Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from the **Metalica + Lorox-Soybeans** table.

**Restriction:**

- Do not use on soil with less than 0.5% organic matter or crop injury may occur.

**Metalica + Lorox-Soybeans**

SOIL TEXTURE*	BROADCAST RATES PER ACRE					
	0.5% to Less than 3% Organic Matter			3% Organic Matter or Greater		
	METALICA		LOROX DF***	METALICA		LOROX DF***
<b>Coarse</b>	0.85 pt.		1 lb.	1.0 pt.		1 - 1.5 lbs.
<b>Medium</b>	1.0 pt.	+	1 - 1.5 lbs.	1.33 pts.	+	1.5 - 2 lbs.
<b>Fine</b>	1.33 pts.		2 lbs.	1.33 - 1.67 pts.		2.5 - 3 lbs.
<b>Muck or Peat</b> (soils with more than 20% organic matter)	<b>DO NOT USE</b>					
* <b>Restriction:</b> Do not use on sand, gravelly soils, or exposed subsoils.						
** <b>Restriction:</b> Do not use on loamy sand, except in the northeastern U.S. on loamy sand with over 1% organic matter.						
***When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1 lb. of Lorox DF.						

**Tank Mixture with Treflan**

**Metalica** + Treflan tank mix applied pre-plant incorporated controls those weeds listed under the **Metalica Applied Alone** section and those weeds listed for Treflan Alone on the Treflan label. **Metalica** + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days before planting. Follow the procedures on the Treflan and **Metalica** labels, using equipment that provides uniform 2-inch incorporation.

Apply **Metalica** + Treflan tank mix, using the appropriate rate from the **Soybeans - Metalica Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass\* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate listed in the **Metalica + Treflan-Organic Matter Content Less Than 3%**.

### Metalica + Treflan-Organic Matter Content Less Than 3%

SOIL TEXTURE	BROADCAST RATE PER ACRE		
	METALICA	TREFLAN E.C. **	
	ORGANIC MATTER		
	Less Than 3%	Less Than 2%	2 - 3 %
<b>Coarse*</b>	0.85 - 1.0 pt.	1 pt.	1.5 pts.
<b>Medium</b>	1.0 pt.	1.5 pts.	1.5 pts.
<b>Fine</b>	1.33 pts.	2 pts.	2 pts.
*Where a range of rates is given for <b>Metalica</b> , use the minimum rate where DNA-resistant goosegrass is the predominant species.			
**When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pts. of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.			

Follow all restrictions and precautions on the respective Treflan label and in the **Soybeans-Metalica** section of this label.

### Tank Mixture with Scepter

This tank mixture controls all weeds controlled by **Metalica** alone and by Scepter alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply **Metalica** + Scepter pre-plant incorporated or pre-emergence, using rates in the **Metalica + Scepter-Soybeans** table.

Follow use directions under Application Instructions on the Scepter label. For pre-plant incorporated applications, apply and incorporate within 30 days before planting. Observe all other restrictions, precautions and limitations on the Scepter labels.

### Metalica + Scepter-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	Less Than 3% Organic Matter		3% Or More Organic Matter	
	METALICA	SCEPTER	METALICA	SCEPTER
<b>Coarse</b>	0.85 pt.	0.67 pt.	1.0 pt.	0.67 pt.
<b>Medium</b>	1.0 pt.		1.33 pts.	
<b>Fine</b>	1.33 pts.		1.33-1.67* pts.	
<b>Muck or Peat</b> (soils with more than 20% organic matter)	<b>DO NOT USE</b>			
*Use the higher rate of <b>Metalica</b> if heavy weed infestations are expected.				

### Restrictions:

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.

### Tank Mixture with Lorox Plus

This tank mixture controls all weeds controlled by **Metalica** alone and by Lorox Plus alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Lorox Plus label for weeds controlled by Lorox Plus.

Apply **Metalica** + Lorox Plus pre-emergence after planting, but before soybeans emerge, using rates in the **Metalica + Lorox Plus-Soybeans** table.

Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Lorox Plus labels.

#### **Metalica + Lorox Plus-Soybeans**

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	0.5 - 3% Organic Matter	
	METALICA	LOROX PLUS (60DF)
<b>Coarse</b>	0.85 pt.	12 - 14 oz.
<b>Medium</b>	1.0 pt.	14 - 16 oz.
<b>Fine</b>	1.33 pts.	16 - 18 oz.

#### **Restriction:**

- Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 6.8.

#### **Tank Mixture with Gemini**

This tank mixture controls all weeds controlled by **Metalica** alone and by Gemini alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Gemini label for weeds controlled by Gemini.

Apply **Metalica** + Gemini pre-emergence after planting, but before soybeans emerge, using rates in the **Metalica + Gemini-Soybeans** table.

Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Gemini labels.

#### **Metalica + Gemini-Soybeans**

SOIL TEXTURE	BROADCAST RATES PER ACRE	
	0.5 - 3% Organic Matter	
	METALICA	GEMINI (60DF)
<b>Coarse</b> Sandy loam only	0.85 pt.	12 - 16 oz.
<b>Medium</b>	1.0 pt.	16 - 20 oz.
<b>Fine</b>	1.33 pts.	20 - 24 oz.

#### **Restriction:**

- Do not apply to sand or loamy sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as in the directions of use for the Gemini label.

#### **Tank Mixture with Sharda Metrixx Plus or Canopy®**

This tank mixture controls all weeds controlled by **Metalica** alone and by Sharda Metrixx Plus or Canopy alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Sharda Metrixx Plus or Canopy labels for weeds controlled.

Apply pre-plant incorporated or pre-emergence, using the appropriate rates from the **Metalica + Sharda Metrixx Plus or Canopy-Soybeans** table.

**Pre-Plant Incorporated:** Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

**Pre-Emergence:** Apply after planting, but before soybeans emerge.

Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Sharda Metrixx Plus or Canopy labels.

**Metalica + Sharda Metrix Plus or Canopy-Soybeans**

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	0.5 to Less Than 3% Organic Matter		3-5% Organic Matter	
	METALICA	SHARDA METRIX PLUS OR CANOPY	METALICA	SHARDA METRIX PLUS OR CANOPY
<b>Coarse</b>	0.85 pt.	Consult product label for specific use rate information.	1.0 pt.	Consult product label for specific use rate information.
<b>Medium</b>	1.0 pt.		1.33 pts.	
<b>Fine</b>	1.33 pts.		1.33 - 1.67 pts.	

**Restriction:**

- Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as noted in the directions for use of the Sharda Metrix Plus or Canopy labels.

**Tank Mixture with Preview**

This tank mixture controls all weeds controlled by **Metalica** alone and by Preview alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Preview label for weeds controlled by Preview.

Apply pre-plant incorporated or pre-emergence, using the appropriate rates from the **Metalica + Preview-Soybeans** table.

**Pre-Plant Incorporated:** Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans.

**Pre-Emergence:** Apply after planting, but before soybeans emerge.

Follow all use directions, varietal restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Preview labels.

**Tank Mixture with Command\***

This tank mixture controls all weeds controlled by **Metalica** alone and by Command alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Command label for weeds controlled by Command.

Apply **Metalica** + Command pre-plant incorporated, using rates in the **Metalica + Command-Soybeans** table. Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

\*Before making applications, read and strictly follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Command labels.

**Metalica + Command-Soybeans**

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	METALICA		COMMAND 4E	
	0.5-3% Organic Matter	Greater Than 3% Organic Matter	Northern Area	Southern Area
<b>Coarse</b>	0.85 pt.	1.0 pt.	1.5 - 2 pts.	2 - 2.5 pts.
<b>Medium</b>	1.0 pt.	1.33 pts.		
<b>Fine</b>	1.33 pts.	1.33 - 1.67 pts.		

### Tank Mixture with Sonalan

This tank mixture controls all weeds controlled by **Metalica** alone and by Sonalan alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Sonalan label for weeds controlled by Sonalan.

Apply **Metalica** and Sonalan pre-plant incorporated, using the appropriate rates from the **Metalica + Sonalan-Soybeans** table.

**Pre-Plant Incorporated:** Follow soil preparation procedures for Sonalan. Refer to the Sonalan/**Metalica** Tank Mixture label for incorporation specifications.

**Sequential:** Apply Sonalan alone pre-plant incorporated as specified on the Sonalan label. Follow with a pre-emergence application of **Metalica** during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

### Metalica + Sonalan-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	METALICA	SONALAN	METALICA	SONALAN
Coarse	1.0 - 1.33 pts.	1.25 - 2 pts.	1.33 pts.	1.25 - 2 pts.
Medium	1.33 - 1.67 pts.	1.75 - 2.5 pts.	1.33 - 1.67 pts.	1.75 - 2.5 pts.
Fine	1.33 - 1.67 pts.	2.25 - 3 pts.	1.67 - 2.0 pts.	2.25 - 3.0 pts.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			
*For eastern black nightshade on these soils, apply 3 pts./A of Sonalan on medium and 3.5 pts./A on fine-textured soils, and follow with 2 incorporation passes.				

Follow all use directions, limitations, restrictions, precautions, and information regarding application to soybeans on the **Metalica** and Sonalan labels.

### Tank Mixture with Pursuit

This tank mixture controls all weeds controlled by **Metalica** alone and by Pursuit alone. Refer to the **Metalica Applied Alone** section for weeds controlled by **Metalica** and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply **Metalica** + Pursuit early pre-plant, pre-plant incorporated, or pre-emergence after planting, using rates in the **Metalica + Pursuit-Soybeans** table. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early pre-plant and pre-plant incorporated applications, apply within 30 days of planting.

Follow all use directions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the **Metalica** and Pursuit labels.

### Metalica + Pursuit-Soybeans

SOIL TEXTURE	BROADCAST RATES PER ACRE		
	Less Than 3% Organic Matter	3% or More Organic Matter	
	Metalica	Metalica	PURSUIT
Coarse	0.85 pt.	1.0 pt.	0.25 pt.
Medium	1.0 pt.	1.33 pts.	
Fine	1.33 pts.	1.33 - 1.67 pts.	

**Sequential:** Apply **Metcalica** early pre-plant, pre-plant incorporated, or pre-emergence after planting at 0.85 pt./A on coarse soils and 1.0 pt./A on medium- and fine-textured soils. Follow with a sequential post-emergence application of Pursuit to control emerged weeds according to the Pursuit label. **Metcalica** will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit post-emergence label for a listing of weeds controlled, application rate, and growth stage limitations.

**Tank Mixture with Sharda Metrix, Lexone, Sencor, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, Pursuit or Sharda Praxis, plus Gramoxone Extra, Sharda Para-Shot or Roundup® for Minimum-Tillage or No-Tillage Systems**

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Sharda Para-Shot, Gramoxone Extra or Roundup® may be added to a tank mix of either **Metcalica** + Metrix, Sencor or Lexone, **Metcalica** + Scepter, **Metcalica** + Lorox, **Metcalica** + Lorox Plus, **Metcalica** + Gemini, **Metcalica** + Sharda Praxis Plus or Canopy, **Metcalica** + Preview, or **Metcalica** + Sharda Praxis or Pursuit. When used as directed, the Gramoxone Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup® combinations will control emerged annual and perennial weeds when applied as directed on the Roundup® label. The **Metcalica** + Sharda Metrix or Sencor, Lexone, Scepter, Lorox, Lorox Plus, Gemini, Canopy, Preview, or Pursuit portion of the tank mixture provides pre-emergence control of the weeds listed on this label in the tank mixture section for **Metcalica** + Sharda Metrix, Sencor or Lexone, **Metcalica** + Scepter, **Metcalica** + Lorox, **Metcalica** + Lorox Plus, **Metcalica** + Gemini, **Metcalica** + Sharda Metrix Plus or Canopy, **Metcalica** + Preview, and **Metcalica** + Pursuit, respectively.

Refer to the product label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application and use rates to soybeans, geographical restrictions, and all other precautions and limitations.

Refer below for rates of Sharda Para-Shot, Gramoxone Extra or Roundup®, **Metcalica** + Sharda Metrix, Sencor or Lexone, **Metcalica** + Scepter, **Metcalica** + Lorox, **Metcalica** + Lorox Plus, **Metcalica** + Gemini, **Metcalica** + Sharda Metrix Plus or Canopy, **Metcalica** + Preview, and **Metcalica** + Sharda Praxis or Pursuit, respectively.

**Application:** Apply before, during, or after planting, but before the soybeans emerge, at the rates specified below. Add Gramoxone Extra or Roundup® at the following broadcast rates:

**Sharda Para-Shot or Gramoxone Extra:** 1.5-2, 2-2.5, or 2.5-3 pts./A to 1-3 inches, 3-6 inches, or 6-inch tall weeds, respectively. Apply surfactant at 1.0 or 2 pts./100 gals. of spray mixture with 75% or greater or 50-74% nonionic active ingredient, respectively. This treatment will not control weeds taller than 6 inches.

**Restriction:** Do not apply combinations containing Gramoxone Extra (Sharda Para-Shot) in suspension-type liquid fertilizers as the activity of paraquat will be reduced.

**Roundup®/Glyphosate:** See the Roundup® or Roundup® RT label for weeds controlled, rates, and other use directions. Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

**Metcalica + Sharda Metrix, Lexone or Sencor + Sharda Para-Shot, Gramoxone Extra or Roundup®**

On loamy sand with over 2% organic matter, apply 1.0 pt./A of **Metcalica** + product label use rate of Sharda Metrix, Sencor or Lexone DF. On medium soils, apply 1.33 pts./A of **Metcalica** + product label use rate of Sharda Metrix, Sencor or Lexone DF. On fine soils, apply 1.33-1.67 pts./A of **Metcalica** + product label use rate of Sharda Metrix, Sencor or Lexone DF. Refer to the tank mix partner product label for specific information on use rate, application information, restrictions and precautions.

When using Sharda Metrix, Sencor 4 or Lexone 4L, multiply lbs. of DF by 1.5 to get pts./A.

**Precaution:**

- If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days or where the seeding slit has not been properly closed.

**Restriction:**

- To avoid crop injury, do not use this tank mixture on soil with less than 0.5% organic matter, on alkaline soil with a pH over 7.4, or on all sand and on loamy sand with less than 2% organic matter.



**Metalica + Scepter + Sharda Para-Shot or Gramoxone Extra or Roundup® glyphosate**

On coarse soils, apply 1.0 pt./A of **Metalica** + 0.67 pt./A of Scepter. On medium soils, apply 1.33 pts./A of **Metalica** + 0.67 pt./A of Scepter. On fine soils, apply 1.67 pts./A of **Metalica** + 0.67 pt./A of Scepter.

**Restrictions:**

- Do not apply within 90 days of harvest.
- Do not graze or feed treated soybean forage, hay or straw to livestock or illegal residues may result.

**Metalica + Lorox + Sharda Para-Shot, Gramoxone Extra or Roundup®**

On coarse soils\*, apply 1.0 pt./A of **Metalica** + 1-1.5 lbs./A of Lorox DF\*\*. On medium soils, apply 1.33 pts./A of **Metalica** + 1-2 lbs./A of Lorox DF. On fine soils, apply 1.33-1.67 pts./A of **Metalica** + 2-3 lbs./A of Lorox DF.

**\*Restrictions:**

- Do not use on loamy sand except in the northeastern U.S. on loamy sand with over 1% organic matter or injury may occur.
- Do not use on sand, gravelly soils, or exposed subsoils, or injury may occur.
- Do not use on soil with less than 0.5% organic matter or crop injury may occur.

\*\*When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

**Metalica + Lorox Plus + Sharda Para-Shot or Gramoxone Extra or Roundup®**

Use only where soils have 0.5-3% organic matter. On coarse soils, apply 1.0 pt./A of **Metalica** + 12-14 oz./A of Lorox Plus 60DF. On medium soils, apply 1.33 pts./A of **Metalica** + 14-16 oz./A of Lorox Plus. On fine soils, apply 1.33-1.67 pts./A of **Metalica** + 16-18 oz./A of Lorox Plus.

**Restriction:**

- Do not apply to sand or to any soil with pH greater than 6.8.

**Metalica + Gemini + Sharda Para-Shot or Gramoxone Extra or Roundup®**

Use only where soils have 0.5-3% organic matter. On coarse soils (sandy loam only), apply 1.0 pt./A of **Metalica** + 12-16 oz./A of Gemini 60DF. On medium soils, apply 1.33 pts./A of **Metalica** + 16-20 oz./A of Gemini. On fine soils, apply 1.33-1.67 pts./A of **Metalica** + 20-24 oz./A of Gemini.

**Restriction:**

- Do not apply to sand or loamy sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as in the directions for use of the Gemini label.

**Metalica + Canopy + Gramoxone Extra or Roundup®**

Use only where soils have 0.5-5% organic matter. On coarse soils (except sand), apply 1.0 pt./A of **Metalica**, on medium soils, apply 1.33 pts./A of **Metalica**, and on fine soils, apply 1.33-1.67 pts./A of **Metalica**. Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

**Restriction:**

- Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as in the directions for use of the Canopy label.

**Metalica + Preview + Gramoxone Extra or Roundup®**

Use only where soils have 0.5-5% organic matter. On coarse soils (except sand), apply 1.0 pt./A of **Metalica** + 6\*-7 oz./A of Preview 75DF. On medium soils, apply 1.33 pts./A of **Metalica** + 7\*-8 oz./A of Preview. On fine soils, apply 1.33-1.67 pts./A of **Metalica** + 8\* to 9-10 oz./A of Preview.

\*Use this rate where the soil organic matter is in the 0.5 to less than 3.0% range.

**Restriction:**

- Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 6.8.

**Metalica + Sharda Praxis or Pursuit + Sharda Para-Shot or Gramoxone Extra or Roundup®**

On coarse soils, apply 1.0 pt./A of **Metalica** + 0.25 pt./A of Sharda Praxis or Pursuit. On medium soils, apply 1.33 pts./A of **Metalica** + 0.25 pt./A of Sharda Praxis or Pursuit. On fine soils, apply 1.67 pts./A of **Metalica** + 0.25 pt./A of Sharda Praxis or Pursuit.

**Post-Emergence Applications**

**Tank Mixture with Glyphosate Products**

**Metalica** at 1.0-1.33 pts./A may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the third trifoliolate leaf stage of Roundup® Ready or glyphosate-tolerant soybeans. **Metalica** alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g. Roundup® Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for post-emergence use in Roundup® Ready or glyphosate-tolerant soybeans.

**Tank Mixture with Glufosinate Ammonium (Liberty) Products**

**Metalica** at 1.0-1.33 pts./A may be tank mixed with glufosinate products at labeled rates and applied from emergence up through the third trifoliolate leaf stage of soybeans. **Metalica** alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g. LibertyLink).

Follow the tank mix product label for adjuvant recommendations.

**Precaution:** The use of adjuvants such as COC or UAN with **Metalica** may result in temporary crop injury.

**Restrictions:**

- To avoid possible illegal residues when **Metalica** is applied post-emergence to soybeans, do not apply more than 1.33 pts./A post-emergence.
- Do not graze or feed treated forage or hay from soybeans to livestock following a post-emergence application of **Metalica**.
- To avoid possible illegal residues when **Metalica** is applied post-emergence to soybeans, make post-emergence application at least 90 days before harvest.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** This product may be stored at temperatures down to 30°F below 0°F.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance.

#### **Container Handling:**

**NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS):** 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 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. Offer for recycling, if available.

**NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS):** 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 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. Offer for recycling, if available.

**REFILLABLE CONTAINER:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

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

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

To the extent consistent with applicable law, neither Sharda USA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHARDA USA LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SHARDA USA LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sharda USA LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Sharda USA LLC.

All trademarks are property of their respective owners.

# Metalica

HERBICIDE FOR USE IN CORN, COTTON, PEANUTS, POD CROPS, POTATOES, SAFFLOWER, SORGHUM (GRAIN OR FORAGE), AND SOYBEANS

ACTIVE INGREDIENT:	WT. BY %
Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide	84.4%
OTHER INGREDIENTS:	15.6%
<b>TOTAL:</b>	<b>100.0%</b>

Contains 7.8 lbs. of active ingredient per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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

See inside booklet for Directions For Use and Limitation of Warranty and Liability.

### Physical and Chemical Hazard:

**Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.**

### FIRST AID

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. **IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice. **IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of an emergency involving this product, call CHEMTREC at **1-800-424-9300**.

GROUP

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HERBICIDE

OPEN HERE

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. This product may cause skin sensitization reactions in some people.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** This product may be stored at temperatures down to 30°F below 0°F. **Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance. **Container Handling: NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS):** 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 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. Offer for recycling, if available. **NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS):** 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 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. Offer for recycling, if available. **REFILLABLE CONTAINER:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Manufactured For:** Sharda USA LLC, 7217 Lancaster Pike, Suite A, Hockessin, Delaware 19707  
**EPA Reg. No. 83529-57 EPA Est. No. 05905-IA-01 Net Contents: 2.5 Gallons**