42750-69 10/10/2003

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number: 42750-69

Date of Issuance: OCT 10 2003

Term of Issuance: Conditional, with Expiration Date of March 21, 2007

Name of Pesticide Product: Metolachlor 8E

NOTICE OF PESTICIDE:

X Registration
Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Albaugh, Inc.
c/o Pyxis Regulatory Consulting, Inc.
11324 17th Ave. Ct. NW
Gig Harbor, WA 98332

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Add the phrase "EPA Registration No. 42750-69" to the label before you release the product for shipment.

COMMENTS CONTINUED ON PAGES 2 AND 3 OF THIS NOTICE OF REGISTRATION

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product under the enclosed stamped copy of the label constitutes acceptance of these conditions.

Enclosure

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Signature of Approving Official: Joanne I. Miller

Date: OCT 10 2003

EPA Form 8570-6

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Comments Continued:

2. Submit the following data required for the registration of this pesticide product within 36 months from March 21, 2002:

EPA Guideline Data Number	Guideline Descriptor
71-4(a)	Avian Reproduction in Bobwhite Quail
72-4(b)	Aquatic Invertebrate Life-Cycle
164-1	Turf Field Dissipation
132-1(a)	Foliar Residue Dissipation
133-3	Dermal Passive Dosimetry Exposure

3. Submit the following data required for the registration of this pesticide product within 48 months from March 21, 2002, of this requirement stated in the registration of Drexel Metolachlor Technical Herbicide, EPA Registration No. 19713-539:

EPA Guideline Data Number	Guideline Descriptor
166-1	Small Scale Prospective Ground Water Monitoring Study

4. Submit the following data required for the registration of this pesticide product within 1 year from the date of this Notice of Tegistration:

EPA Guideline Data Number	Guideline Descriptor
830.6317	Storage Stability Study
830.6320	Corrosion Characteristics Study

5. Comply with labeling requirements associated with use claims involving mixtures or use with atrazine prior to January 1, 2004. A copy of the Atrazine "Labeling Changes Summary Table" is enclosed for your use. We note that this product **does not** contain atrazine; however, its use is claimed in tank mixes at dosages that must be addressed to comply with the atrazine IRED. Where tank mixtures are claimed on the labeling, a use precaution must be added to inform the using public that accumulative dosages of atrazine must not exceed those listed in the enclosed Labeling Changes Summary Table.

6. Only the Basic and the 1st 2 alternate Confidential Statements of Formula are accepted under this registeration.

7. In Table 1, on page 18, delete the tank mix partners without dosages in this table.

8. Submit and/or cite all data required for the registration of this product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of this product under FIFRA, section 4.

9. Submit one (1) copy of the final printed labeling before you release this product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of there conditions.

A stamped copy of the label is enclosed for your records.

Enclosures (2)

Albaugh, Inc.

Metolachlor 8E

For weed control in corn, cotton, peanuts, pod crops, potatoes, safflower, grain or forage sorghum, and soybeans

ACTIVE INGREDIENT:
Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide 86.4%
OTHER INGREDIENTS: 13.6%
TOTAL: 100.0%

Metolachlor 8E contains 8 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
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 do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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 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.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. This product may cause skin sensitization reactions in some people.

EPA Reg. No. 42750-AO **EPA Est. No.**

Manufactured by:
Albaugh, Inc.
Ankeny, IA 50021

ACCEPTED
with COMMENTS
In EPA Letter Dated
OCT 10 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 42750-69

NET CONTENTS
Gals. (Liters)

PERSONAL PROTECTIVE EQUIPMENT

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

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or viton
- 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/maintaining PPE. If no such instructions for washables, 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 the closed system, the mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

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

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 is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water 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:

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

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

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. 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 the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original container in a cool, dry place out of the reach of children. Store in a manner to prevent cross contamination with other pesticides, fertilizers, food, or feed.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal:

Plastic Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Bulk Tanks: Triple rinse (or equivalent) and wash with appropriate cleaners before reusing.

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 product is intended for use in weed control in corn, peanuts, pod crops, potatoes, safflower, grain or forage sorghum, and soybeans.

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 24 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-sleeve shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

Failure to follow the Directions for Use and Precautions on this label may result in reduced weed control, crop injury, or illegal residues.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

GENERAL INFORMATION

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

Metolachlor 8E is a selective herbicide recommended as a preplant surface-applied, preplant incorporated, or preemergence treatment in water or fluid fertilizer for the control of most annual grasses and certain broadleaf weeds in corn (all types), cotton, peanuts, pod crops, potatoes, safflower, grain or forage sorghum, and soybeans.

Note: Do not use in nurseries, landscape plantings, or turf.

Do not apply under conditions that favor runoff or wind erosion of soil containing this product to non-target areas.

To prevent off-site movement due to runoff or wind erosion:

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
2. Do not apply to impervious substrates such as paved or highly compacted surfaces.
3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least ½ inch of rainfall has occurred between application and the first irrigation.

Other atrazine brands may be used when directions specify a Metolachlor 8E tank mixture with AAtrex®. Follow the rates, recommendations, and limitations on the AAtrex® or other atrazine product label, if other brands of atrazine are used.

Note: 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.

If Metolachlor 8E is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Effectiveness may be reduced if dry weather follows preemergence application of Metolachlor 8E or a tank mixture. Cultivate if weeds develop.

When referring to weed control, partial control can either mean erratic control from good to poor, or consistent control at a level below that generally considered acceptable for commercial weed control.

Precaution: Abnormally high soil moisture conditions during early crop development may cause injury following the use of Metolachlor 8E.

Soil Textures and Herbicide Rates

Where rates are based on coarse, medium, or fine-textured soils, it is understood that soil textural classes are generally categorized as follows:

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

When a range of rates is provided in rate tables and elsewhere on this label, use the lower rate on soils relatively coarse-textured or low in organic matter and use the higher rate on soils relatively fine-textured or high in organic matter.

Note: Metolachlor 8E may be applied preemergence alone, or in combination with tank mix partners as specified on this label, following preplant incorporated herbicides when used according to their label recommendations, provided that such use is not prohibited on the respective labels.

Clean sprayer or other application device thoroughly before using. Dispose of the cleaning solution responsibly. Do not use a sprayer or other application equipment that is contaminated with any other materials or crop damage or clogging of the application device may result.

Mixing Instructions

Metolachlor 8E Alone: Mix Metolachlor 8E with water or fluid fertilizer and apply as a spray. Fill a spray tank ½ - ¾ full with water or fluid fertilizer, add the recommended amount of Metolachlor 8E, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Tank Mixtures: Fill the spray tank ¼ full with water and start agitation; add 2,4-D, AAtrex®, Balan™, Banvel® or Albaugh Dicamba DMA Salt, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol® 4L, Command®, Cotoran®, Eptam®, Lorox®, Marksman®, MSMA, Princep®, Prowl®, Pursuit®, AAtrex® + Princep®, Scepter®, Sencor®, Sonalan™, Starfire®, or Treflan™, and allow it to become dispersed; then add Metolachlor 8E; then add Gramoxone® Extra, Landmaster® BW, Roundup® or Gly Star™ Original if these products are being used; then add the rest of the water.

For tank mixtures with AAtrex®, Banvel® or Albaugh Dicamba DMA Salt, Canopy®, Caparol® 4L, Command®, Cotoran®*, Eptam®, Lorox®, Marksman®, Princep®, Prowl®*, Pursuit®, AAtrex® + Princep®, Scepter®, Sencor®, Sonalan™, Starfire®, or Treflan™, fluid fertilizers may replace all or part of the water as carrier, except in the AAtrex® postemergence and the Banvel® or Albaugh Dicamba DMA Salt postemergence tank mixes*. When mixing with AAtrex®, see additional mixing instructions on the AAtrex® label. Check the compatibility with fluid fertilizers for each tank mixture as described below before mixing in the 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

A jar test is recommended before tank mixing to ensure compatibility of Metolachlor 8E with other pesticides. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients.

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

Check compatibility by following the procedure below:

1. Add 1 pt. of carrier (fertilizer or water) to each of 2 one-quart jars with tight lids. **Note:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
2. To one of the jars, add ¼ tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex or Unite (1/4 tsp. is equivalent to 2 pts./100 gals. spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on recommended label rates. If more than one pesticide is used, add them separately with dry pesticides first, then flowables, and emulsifiable concentrates last. After each addition, shake or stir gently to mix thoroughly.
4. After adding all ingredients, put lids on and tighten, invert each jar 10 times to mix. Allow the mixture to stand 15-30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry pesticide(s) in water before addition, or (b) add ½ of the compatibility agent to the fertilizer or water and the other ½ to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the Storage and Disposal section of this label.

Application Procedures

Application Timing - Metolachlor 8E alone or in some tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the appropriate crop section of the label to determine if application timings listed below are recommended.

Preplant Surface-Applied: Minimum-tillage or no-tillage systems only, Metolachlor 8E applied alone or in some tank mixtures may be applied up to 45 days before planting certain crops. Use only split applications for treatments made 30-45 days before planting, with 2/3 the recommended broadcast rate for the crop and soil texture applied initially and the remaining 1/3 applied at planting. Treatments less than 30 days before planting may be made either as a split or a single application. Refer to the individual crop sections to determine if early preplant surface application is recommended. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide such as Gramoxone® Extra, Roundup® or Gly Star™ Original. Observe the directions for use, precautions, and restrictions on the label of the tank mix partner. Weed control will be diminished if treated soil is moved out of the row or untreated soil is moved to the surface during planting.

Preplant Incorporated: Apply Metolachlor 8E 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 preplant 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 Metolachlor 8E after bed formation, unless otherwise specified.

Preemergence: Apply Metolachlor 8E during planting (behind the planter) or after planting, but before weed or crop emergence.

Special Application Procedures

CA Only - Preplant Incorporated (Corn, Safflower, Pod Crops): Broadcast Metolachlor 8E to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Use caution when forming beds so that only soil from the Metolachlor 8E treated zone is used, avoid bringing untreated soil to the surface. If application is made to preformed beds, incorporate Metolachlor 8E with a tillage implement set to till 2-4 inches deep. Use care during tilling to keep the tilled (Metolachlor 8E treated soil) on the beds.
Preemergence: Apply Metolachlor 8E after planting and water with sprinkler or flood irrigation within 7-10 days.

Fall Application **(Only in IA, MN, ND, SD, WI, North of Route 20 in the state of NE, and North of Route 136 in the state of IL):** Use on medium and fine soils containing greater than 2.5% organic matter that will be planted to corn or soybeans the next spring. Do not apply when ground is frozen. Ground may be tilled before or after application. Do not exceed a 2 to 3-inch incorporation depth if tilled after treatment. **Note:** If a spring application is made, the total rate of the fall applications and spring applications must not exceed the maximum total rate for the specific crop, or illegal residues may result.

Ground Application: Apply Metolachlor 8E alone or in tank mixtures by ground equipment in a minimum of 10 gallons of spray mixture per acre, unless specified otherwise.

Use only sprayers that provide accurate and uniform application. For Metolachlor 8E tank mixtures with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50-mesh. Thoroughly rinse sprayer with clean water immediately after use.

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

band width in inches / row width in inches	X	broadcast rate per acre	=	amount needed per acre of field

Low Carrier Application

For 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 should 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: (1) maintain up to 35-40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a minimum of 5 gallons of spray mixture per acre. The maximum recommended sprayer speed is 15 mph. Thoroughly rinse sprayer with clean water immediately following each use.

Note: In order to reduce drift and increase application accuracy, low pressure nozzles are recommended. Use 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 when recommended by the manufacturer. All nozzles should be placed on 20-inch centers, except flooding types which should be placed on 40-inch centers. When Flat Fan-type nozzles are used, angles of 80° or 110° are recommended.

Read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

Aerial Application

Metolachlor 8E may be applied alone or in tank mixtures with AAtrex®, Lorox®, or Sencor® in a minimum spray volume of 2 gals./A by aircraft. Metolachlor 8E may also be applied by air in combination with Balan™, Prowl®, or Treflan™. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controlled within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low-drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Metolachlor 8E alone or Metolachlor 8E + AAtrex® by aircraft at a minimum upwind distance of 400 ft. from sensitive plants, or apply Metolachlor 8E + Lorox® or Sencor® at a minimum upwind distance of 300 ft. from sensitive plants.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Aerial Drift Management:

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backwards parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information** section below.

Aerial Drift Reduction Advisory Information:

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. 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 Inversions).

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 – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. 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 parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from 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 the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made 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. Application should be avoided 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 spray 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

Applications should not occur 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 concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should 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).

Center Pivot Irrigation Application

Metolachlor 8E alone or in tank mixture with other herbicides specified on this label, which are registered for center pivot application, may be applied in irrigation water preemergence (after planting, but before weeds or crop emerge) at rates recommended on this label. Only apply this product through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, ineffectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Users should contact State Extension specialists, equipment manufacturers, or other experts for questions regarding calibration. 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 (1/2 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 may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

Impregnating Dry Fertilizers

Metolachlor 8E may be used to impregnate many dry bulk granular fertilizers alone or in selected Metolachlor 8E tank mixtures which are registered for preplant incorporated or preplant surface application which are used to control weeds in crops on the Metolachlor 8E label and are not prohibited from use on dry bulk granular fertilizers.

Follow all directions for use and precautionary language on the respective product labels regarding target crops, rates per acre, soil texture, application methods (including application timing), and rotational crop restrictions when applying Metolachlor 8E alone or in mixtures with dry bulk granular fertilizers.

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

The herbicide/fertilizer mixture may be prepared by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Ensure nozzles used to spray Metolachlor 8E or Metolachlor 8E mixtures onto the fertilizer are placed to provide uniform spray coverage. Use care to avoid spraying the walls of the blender. Spray should be directed only onto the fertilizer.

If the herbicide/fertilizer mixture is too wet, a highly absorptive material such as Agsorb® or Celatom MP-79®, or similar granular clay or diatomaceous earth materials may be added to obtain a dry, free-flowing mixture. Only add absorptive materials after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results will be obtained by using a granule of 6/30 particle size or of a size similar to that of the fertilizer material being used. In general, less than 2% by weight of absorptive material will be needed. Avoid using more than 5% absorptive material by weight.

Calculate the amounts of Metolachlor 8E, AAtrex®, AAtrex® + Princep®, Princep®, Sencor®, or Sonalan™ by the following formula:

$\frac{2000}{\text{lbs. of fertilizer per acre}}$	X	pts./A of liquid or flowable product	=	pts. of liquid or flowable product per ton of fertilizer
$\frac{2000}{\text{lbs. of fertilizer per acre}}$	X	lbs./A of dry product	=	lbs. of dry product per ton of fertilizer

Pneumatic (Compressed Air) Application (Metolachlor 8E Alone): High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixture to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix Metolachlor 8E with Exxon Aromatic 200 at a rate of 1-4 pts./gal. of Metolachlor 8E. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Drying agents should not be used when using Aromatic 200.

Notes: (1) Use mixtures of Metolachlor 8E and Aromatic 200 on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. (2) When impregnating Metolachlor 8E in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. The use of Agsorb FG or drying agents of 6/30 particle size are recommended. (3) Drying agents are not recommended for use with On-The-Go impregnation equipment.

Precautions: To avoid the potential for explosion, (1) Do not impregnate Metolachlor 8E or Metolachlor 8E mixtures on ammonium, potassium, or sodium nitrate, either alone or in blends with other fertilizers. (2) Do not use Metolachlor 8E or Metolachlor 8E mixtures on straight limestone, since absorption will not be achieved. Limestone containing fertilizer blends can be impregnated.

Application: Apply 200-700 lbs. of the herbicide/fertilizer mixture per acre. To ensure best results, uniformly apply the mixture to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may result in less than satisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control. 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, make applications approximately 30 days before planting to allow

moisture to move the herbicide/fertilizer mixture into the soil. On coarse textured soils, make applications approximately 14 days prior to planting.

Precaution: Crop injury may be avoided by not using the herbicide/fertilizer mixture on crops where bedding occurs.

METOLACHOR 8E APPLIED ALONE

When applied alone, Metolachlor 8E will control the following weeds:

barnyardgrass (watergrass)	prairie cupgrass	yellow foxtail
bristly foxtail	red rice	yellow nutsedge
crabgrass	robust foxtails (purple, white)	carpetweed
crowfootgrass	signalgrass (*Brachiaria*)	common waterhemp
fall panicum	southwestern cupgrass	Eastern black nightshade
foxtail millet	wild proso millet*	Florida pusley
giant foxtail	witchgrass	galinsoga
goosegrass	woolly cupgrass*	pigweed
green foxtail		tall waterhemp

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

Weeds Partially Controlled*: common purslane, eclipta, Florida beggarweed**, hairy nightshade, sandbur, seedling johnsongrass, shattercane, Texas panicum***, volunteer sorghum, wild proso millet, and woolly cupgrass.

*See **General Information** section of this label. Due to variable weather conditions, control of these weeds may be erratic. Weed control may be improved by following these suggested procedures:

1. When making preplant incorporated or preemergence applications in corn, use 1.95-2.6 pts./A or the preplant surface-applied rates for Metolachlor 8E Plus alone or in tank mixture if allowed.
2. Destroy germinating and emerged weeds by thoroughly tilling soil. If Metolachlor 8E is to be applied preplant incorporated, this tillage may be used to incorporate Metolachlor 8E if uniform 2-inch incorporation is achieved as recommended under **Application Procedures**.
3. Immediately after tillage, plant crop into moist soil. If Metolachlor 8E is to be used preemergence, apply at planting or immediately after planting.
4. If available, sprinkler irrigate within 2 days after application. Apply ½-1 inch of water. Use lower water volume (1/2 inch) on coarse textured soils and higher volume (1 inch) on fine textured soils. Refer to the **Center Pivot Irrigation Application** section of this label for this method of applying Metolachlor 8E.
5. If rain does not occur within 2 days and irrigation is not possible after planting and application, weed control may be decreased. If this occurs, a uniform, shallow cultivation is recommended as soon as weeds emerge.

**For partial control of Florida beggarweed, use a minimum of 2 pts./A and apply preemergence.
*** For partial control of Texas panicum, use a minimum of 2 pts./A and apply through a center pivot irrigation system.

Rotational Crops: Metolachlor 8E Alone: (1) Any crop on this label may be replanted immediately if crop treated with Metolachlor 8E alone is lost. Do not make a second broadcast application of Metolachlor 8E. A second banded treatment may be applied if the original application was banded and the second crop is planted in the untreated row middles. (2) Barley, oats, rye, or wheat may be planted 4 ½ months following treatment; alfalfa may be planted 4 months following application. Tomatoes may be planted 6 months following application. (3) Root crops, tobacco, barley, buckwheat, milo, oats, rice, rye,

wheat, cabbage, peppers and any crop listed on this label may be planted in the spring following treatment. Clover may be seeded 9 months after application. Do not graze or feed forage or fodder from cotton to livestock. All other rotational crops may be planted 12 months after a lay-by application. (4) Following a lay-by treatment or multiple treatments applied the previous season, any crop on this label, in addition to tobacco, cabbage, or peppers, may be planted in the spring.

Rotational Crops: Metolachlor 8E Tank Mixtures: For restrictions regarding Metolachlor 8E used in tank mixtures, refer to the statements/restrictions above for Metolachlor 8E and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

Important Notes: To avoid rotational alfalfa or clover injury: (1) Do not apply more than 2.0 lbs. a.i. of metolachlor per acre (2.0 pts. of Metolachlor 8E) preemergence (including preplant surface, preplant incorporated, postplant incorporated, etc.), and (2) Do not make lay-by or other postemergent applications of Metolachlor 8E.

CROPS

CORN (ALL TYPES)

Metolachlor 8E Alone

Metolachlor 8E may be applied preplant surface, preplant incorporated, preemergence, or lay-by, using the appropriate rate specified below.

Preplant Surface-Applied: Refer to the instructions for use of Metolachlor 8E alone under **Application Procedures.**

(1) **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 the state of IL):** For 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. On soils having greater than 2.5% organic matter in minimum-till or no-tillage systems, use 1.67-2.0 pts./A on medium textured and 2.0 pts./A on fine textured soils. Do not apply while ground is frozen. 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. **Note:** If a spring application is made, the total rate of the fall application plus the spring application must not exceed the maximum total rate for corn, or illegal residues may result.

(2) In **CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY,** use only on medium and fine textured soils with minimum- or no-tillage systems. Apply 2/3 the recommended rate of Metolachlor 8E (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. If applying less than 30 days prior to planting, applications may be made as either a split or single treatment. For coarse soils, apply 1.33 pts./A not more than 2 weeks prior to planting.

(3) In **CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV,** on medium and fine textured soils with minimum- or no-tillage systems, preplant surface applications may be applied following the directions for use provided above. If less than satisfactory length of weed control following the earlier treatment is observed due to the amount of rainfall, a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used (i.e., AAtrex®, Accent®, Banvel® or Albaugh Dicamba DMA Salt, Basagran®, Beacon®, Bicep®, bromoxynil (Buctril®), Exceed®, or 2,4-D). Do not exceed the total labeled rate for corn on a given soil texture if the postemergence treatment includes the herbicide used preplant surface-applied. Observe all directions for use, precautionary language, and limitations on the label of the postemergence herbicide.

Preplant Incorporated or Preemergence: Refer to the instructions for use of Metolachlor 8E alone under **Application Procedures.** For coarse soils with organic matter content less than 3%, apply 1.0-1.33 pts./A of Metolachlor 8E. For coarse soils with organic matter content greater than 3%, apply 1.33 pts./A. For medium soils, apply 1.33-1.67 pts./A of Metolachlor 8E. For fine soils with organic matter content less than 3%, apply 1.33-1.67 pts./A. For fine soils with organic matter content greater than 3%, apply 1.67-2.0 pts./A Metolachlor 8E.

(1) **Lay-by:** The duration of weed control in corn may be extended by applying a maximum rate of 2.0 pts./A of Metolachlor 8E after corn emergence until the corn plants reach 40 inches in height, following any preplant surface-applied, preplant incorporated, or preemergence herbicide application, including Metolachlor 8E. Applications should be made to soil free of emerged weeds and directed towards the base of corn plants in excess of 5 inches tall for best results. During any one crop year, the maximum rate applied to corn should not exceed 4.0 pts./A, depending on the soil texture.

Note for all applications to corn: Do not graze or feed forage from treated areas for 30 days following application to avoid possible illegal residues.

(2) **Partial Control of Shattercane, Wild Proso Millet, Woolly Cupgrass and Eclipta:** More consistent partial control of shattercane, wild proso millet, woolly cupgrass, or eclipta may be obtained by applying 1.95-2.5 pts./A as a single application; or apply 1.0-1.33 pts./A of Metolachlor 8E preplant incorporated followed by an application of 1.0-1.33 pts./A of Metolachlor 8E applied preemergence. Make the preemergence application during or after planting, but before weeds and corn emerge. When a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected, apply the 1.33 pts./A rate of Metolachlor 8E. To control late emerging weeds, a shallow cultivation may be needed.

(3) **Woolly Cupgrass and Wild Proso Millet Control Program:** For control of these species, use the following 3-step program: (1) Apply Metolachlor 8E early preplant, preplant incorporated, or preemergence at 1.67 pts./A on medium soils and 2.0 pts./A on fine textured soils, up to the maximum label rate. If rainfall does not occur within 5-7 days, lightly incorporate with a rotary hoe; (2) When grasses are 2-3 inches tall and corn is at least 4 inches tall, apply a postemergence tank mix of Beacon® at 0.38 oz./A or 1 packet of Exceed® per 4 acres 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; and (3) Cultivate 14-21 days after the postemergence application.

Notes: (1) Illegal residues may result if Metolachlor 8E is applied at more than the labeled application rate for a given soil texture per year either as a single or split treatment. (2) In corn, Metolachlor 8E may be applied up to 2.67 pts./A as either a preplant surface, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20%. (3) If annual weeds should escape following a preplant surface, preplant incorporated, or preemergence treatment of Metolachlor 8E, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide (i.e., AAtrex®, Accent®, Banvel® or Albaugh Dicamba DMA Salt, Basagran®, Beacon®, Bicep®, bromoxynil (Buctril®), Exceed, or 2,4-D). Do not exceed the total labeled rate for corn on a give soil texture if the postemergence treatment includes the herbicide used in the earlier treatment. (4) Buctril® may be applied postemergence alone or in tank-mix combination with AAtrex®. Do not exceed 1.2 lbs. a.i./A of AAtrex® in tank-mix combination with Buctril® postemergence. Refer to the AAtrex® and Buctril® labels for specific rates and precautions. (5) Do not use Metolachlor 8E on peat or muck soils.

Metolachlor 8E Combinations

Metolachlor 8E in any tank mixture for corn may be applied in water or fluid fertilizer before corn emerges. Use only water as a carrier when Metolachlor 8E is applied after corn emergence.

Note: For all applications to corn, do not graze or feed forage from treated areas for 30 days following application, or possible illegal residues may result.

IMPORTANT

FOR TANK MIXTURES WITH AATREX® (OR OTHER BRANDS OF ATRAZINE) – If applying Metolachlor 8E in tank mixture with AAtrex®, follow all restrictions and rate limitations on the AAtrex® label if more restrictive/protective than those on this label. Broadleaf weed control may be affected if AAtrex® is applied at rates lower than those recommended on this label. Refer to the AAtrex® label for weeds controlled at the reduced rates.

Chart 1: Metolachlor 8E Tank Mixtures for Corn – Additional Weeds Controlled and Special Instructions

	Metolachlor 8E + AAtrex® and/or Princep® (Preplant Surface, PPI, PRE)	Metolachlor 8E + AAtrex® (Post)	Metolachlor 8E + Banvel® or Albaugh Dicamba DMA Salt (Field Corn)	Metolachlor 8E + AAtrex® + Lorox
Section	A1	A2	A3	A4
Special Mixing Instructions				
Comments	2, 3, 4, 5, 7, 8	2,3,4,5		2,3,4,5,6
Browntop panicum	C			C
Cocklebur	C	P	P	C
Common purslane	C			C
Hairy nightshade	C			C
Jimsonweed		C	P	
Kochia		C		
Lambsquarters	C	C	C	C
Morningglory	C	P	P	C
Mustard		C		
Pigweed				C
Prickly sida		C		
Ragweed	C	C	C	C
Smartweed	C	C	C	C
Velvetleaf	C	C	P	C

C = control; P = partial control; PC = partial to full control depending on ratio of products used or on weed population

Chart 1 Continued: Metolachlor 8E Tank Mixtures for Corn – Additional Weeds Controlled and Special Instructions

	Metolachlor 8E + AAtrex® or Princep® +Prowl®	Metolachlor 8E + Marksman®	
Section	A5	A8	
Special Mixing Instructions	1		
Comments	2,3,4,5	7	
Browntop panicum	C		

	Metolachlor 8E + AAtrex® or Princep® +Prowl®	Metolachlor 8E + Marksman®	
Cocklebur	C	C	
Common purslane	C	C	
Hairy nightshade	C	C	
Jimsonweed		C	
Kochia		C	
Lambsquarters	C	C	
Morningglory	C	C	
Mustard		C	
Pigweed	C	C	
Prickly sida		C	
Ragweed	C	C	
Smartweed	C	C	
Velvetleaf	C	C	

C = control; P = partial control; PC = partial to full control depending on ratio of products used or on weed population

Comments

1. Special Mixing Instructions for Metolachlor 8E + AAtrex® or Princep® and Prowl®

(1) Fill the spray tank ¼ full with water or fluid fertilizer and start agitation. (2) Compatibility agents such as Unite® or X-77® at 4 pts./100 gals. of spray mixture may be added to aid compatibility. (3) Add the AAtrex® or Princep® and allow it to become dispersed. (4) Then add Metolachlor 8E and Prowl® 4E. (5) Add the remaining water.

2. 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

3. Other brands of atrazine may be used besides AAtrex®. Read and follow the rates, recommendations and limitations on the atrazine label used.

4. See additional mixing instructions on the AAtrex® label.

5. **Precaution:** Do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year. However, certain states may have limitations for atrazine within specific geographical areas. Users should consult their state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

6. Other Lorox® formulations can be used: 1 lb. of Lorox® DF = 1 pt. of Lorox® L

7. In Minimum- and No-Tillage systems, mix with Gramoxone® Extra for control of most emerged annual weeds and suppression of perennial weeds; or for suppression of emerged field bindweed and control or suppression of annual weeds, mix with Landmaster® BW; or with Roundup® or Gly Star™ Original for control of most emerged annual and perennial weeds.

8. Refer to the **Tank Mixture with AAtrex®; or AAtrex® + 2,4-D; or AAtrex® + 2,4-D + Banvel® or Albaugh Dicamba DMA Salt for Minimum- and No-Tillage Systems** label section for specific directions for 2,4-D or Banvel® burndown combinations in Minimum- and No-Tillage systems.

Metolachlor 8E may be applied in water or fluid fertilizer in any tank mixture for use on corn, except as noted.

Notes: (1) For all applications to corn, do not graze or feed forage from treated areas for 30 days following application, or possible illegal residues may result. (2) Do not exceed a total of 2.5 lbs. a.i. of atrazine per year when applying Metolachlor 8E in tank mixture with AAtrex®. (3) Refer to the section titled **Corn (All Types) – Metolachlor 8E Alone**, Note 3 for recommended sequential postemergence treatments if escape weeds develop.

SECTION A

1. **Tank Mixture with AAtrex® or Princep®, or AAtrex® + Princep® - Preplant Surface, Preplant Incorporated, or Preemergence:** In addition to the weeds controlled by Metolachlor 8E alone, browntop panicum, cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf may be controlled by tank mixes of Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep®, applied preplant surface, preplant incorporated, or preemergence.
   Apply Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep® either preplant surface, preplant incorporated, or preemergence.

   Preplant Surface-Applied: Follow the instructions for Metolachlor 8E alone under **Application Procedures** and under application instructions for Metolachlor 8E alone in corn. For minimum- and no-tillage systems in the following states: CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY, use the following rates:

   Medium soils - apply Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep® on medium soils at the following rates: 1.67 pts./A of Metolachlor 8E + 3.2-4.0 pts./A of AAtrex® 4L or Princep® 4L, or AAtrex® 4L + Princep® 4L combined.

   Fine soils - apply as follows: 1.67-2.0 pts./A of Metolachlor 8E + 4.0-5.0 pts./A of AAtrex® 4L or Princep® 4L, or AAtrex® 4L + Princep® 4L combined.

   Apply the tank mixtures as a split or single treatment in those states listed above and as indicated in the **Metolachlor 8E Alone – Preplant Surface-Applied** section of the label for corn.

   For coarse soils, apply 1.33 pts./A of Metolachlor 8E and 3.2 pts./A of AAtrex® 4L or Princep® 4L, or AAtrex® 4L + Princep® 4L combined.

   Preplant Incorporated or Preemergence: Follow the instructions for Metolachlor 8E alone under the **Application Procedures** section. Apply Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep®, using the appropriate rates from Table 1.

   Note: Do not apply more than the labeled rate for a given soil texture per year, either as a split or single treatment, or illegal residues may result.

   Shattercane and Wild Proso Millet – Partial Control

   The following applications may be made where Metolachlor 8E is applied in tank mixture or sequentially with other registered corn herbicides for more consistent partial control of shattercane or wild proso millet:

   (1) Apply 1.0-1.33 pts./A of Metolachlor 8E + 2.0 lbs. a.i./A of AAtrex® or Princep® preplant incorporated, followed by 1.0-1.33 pts./A of Metolachlor 8E preemergence. The preemergence application should be made during or after planting, but before weeds and corn emerge.

   (2) Apply Metolachlor 8E at 1.33 pts./A alone or in tank mixture with up to 2.0 lbs. a.i./A of AAtrex® or Princep®, preplant incorporated. For a given soil texture, do not exceed the total rate of triazine herbicide recommended in combination with Metolachlor 8E. Follow the preplant incorporated application 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 a preplant incorporated treatment of Eradicane® or Sutan® (or equivalent EPTC or butylate formulations) at labeled rates, followed by a preemergence application of Metolachlor 8E at 1.0-1.33 pts./A. Do not use Eradicane® or Sutan® on soils where rapid degradation has been shown to occur. The preemergence application should be made during or after planting, but before weeds and corn emerge.

Precaution: A shallow cultivation may be needed after the preemergence or postemergence application to help control any late emerging shattercane or wild proso millet.

Note: In soils with less than 6% organic matter, do not exceed a total of 2.0 lbs. a.i./A of metolachlor (2.0 pts. of Metolachlor 8E) in the preplant incorporated plus preemergence applications or crop injury may occur.

Table 1: Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep®, Preplant Incorporated or Preemergence – Corn (All Types)

Soil Texture	Broadcast Rates Per Acre			
	Less than 3% Organic Matter		3% Organic Matter or Greater	
	Metolachlor 8E + AAtrex® Nine-O* or Princep® Caliber 90*	OR Metolachlor 8E + AAtrex® Nine-O** + Princep® Caliber 90**	Metolachlor 8E + AAtrex® Nine-O* or Princep® Caliber 90*	OR Metolachlor 8E + AAtrex® Nine-O** + Princep® Caliber 90**
Coarse	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.
Medium	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.
Fine	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.***
Muck or Peat (soils with more than 20% organic matter)	**DO NOT USE**			

*When heavy infestations of crabgrass or fall panicum are expected, use Princep® in preference to AAtrex®. For soils having between 6% and 20% organic matter, Metolachlor 8E may be used up to 2.5 pts./A 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.

**Use equal rates of AAtrex® Nine-O and Princep® Caliber 90 in tank mixture with Metolachlor 8E 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 Table 1. Refer to Comment No. 2 following Chart 1 for AAtrex® 4L and Princep® 4L conversions.

***For cocklebur, yellow nutsedge, and velvetleaf control in 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 Metolachlor 8E.

2. Tank Mixture with AAtrex® - Postemergence

Weeds Controlled

barnyardgrass	yellow foxtail	prickly sida
(watergrass)	---	purslane
crabgrass	jimsonweed	ragweed
crowfootgrass	kochia	smartweed
fall panicum	lambsquarters	velvetleaf
giant foxtail	mustard	
green foxtail	pigweed	

Weeds Partially Controlled: cocklebur, morningglory, and yellow nutsedge

On coarse soils, apply 1.0 pt./A of Metolachlor 8E + 1.3 lbs./A of AAtrex® Nine-O*. On medium soils, apply 1.33 pts./A of Metolachlor 8E + 1.8 lbs./A of AAtrex® Nine-O. On fine soils, apply 1.33-1.67 pts./A of Metolachlor 8E + 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 inches in height. Poor weed control will generally result if applied to weeds larger than the 2-leaf stage.

Lay-by: Apply to corn plants when less than 12 inches tall. Apply to base of corn plants when corn is in excess of 5 inches. Over-the-top applications may be made to corn less than 5 inches tall. Some corn leaf burn may be observed but this should not affect later growth or yield. Do not apply this postemergence tank mixture in fluid fertilizer, or severe crop injury may occur.

*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 texture 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 Metolachlor 8E.

Tank mixtures of Metolachlor 8E + AAtrex® may be applied following use of any registered preplant surface-applied, preplant incorporated, or preemergence corn herbicide, including Metolachlor 8E + AAtrex®.

Note: The total Metolachlor 8E rate must not exceed 4.0 pts. or the AAtrex® rate more than 2.5 lbs. a.i./A during any one crop year, or illegal residues may result. Refer to the AAtrex® label for geographic, soil-texture, and rotational restrictions.

3. Tank Mixture with Banvel® or Albaugh Dicamba DMA Salt

Preemergence: 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.

Metolachlor 8E + Banvel® or Albaugh Dicamba DMA Salt, applied preemergence, will control lambsquarters, ragweed, smartweed, cocklebur*, jimsonweed*, morningglory*, and velvetleaf*.
*Partial control.

Apply Metolachlor 8E + Banvel® or Albaugh Dicamba DMA Salt preemergence. Broadcast 1.0 pt./A of Banvel® or Albaugh Dicamba DMA Salt with 1.33 pts./A of Metolachlor 8E on medium soils, or with 1.33-1.67 pts./A of Metolachlor 8E on fine soils. Do not apply on soils containing less than 2.5% organic matter or on coarse soils. Apply this tank mixture to the soil surface at planting or after planting, but before corn emerges. Plant corn at least 1.5 inches deep and apply behind planting equipment, avoid incorporation by the planter wheel or other seed covering device. Do not incorporate prior to corn

emergence. Do not disturb the soil more than ½ inch deep if it is necessary to rotary hoe to break the soil crust.

Postemergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV): When pigweed plants are less than 3 inches tall and before corn exceeds 5 inches in height, apply 1.0-1.5 pts. of Metolachlor 8E + 0.5-1.0 pt./A of Banvel® or Albaugh Dicamba DMA Salt or 1-2 pts./A of Banvel® II by ground equipment in a minimum of 20 gals. of spray per acre. Use the lower rate on coarse textured and low organic matter soils. Use the higher rate on fine textured and high organic matter soils.

Precautions: (1) Avoid drift to sensitive non-target plants, such as soybeans, during application or injury may occur. (2) Do not apply by aircraft. (3) Tank mixtures of Metolachlor 8E + Banvel® or Albaugh Dicamba DMA Salt may be applied to field corn only.

4. Tank Mixture with AAtrex® and Lorox® for Lambsquarters and Pigweed Control

To prolong control of lambsquarters and pigweed in DE, MD, NJ, NY, PA, VA, and WV, apply Metolachlor 8E preemergence in tank mix combination with AAtrex® + Lorox®. Apply Metolachlor 8E and AAtrex® according to the rates in Table 1 and Lorox® according to the following rates:

Soil Texture	**Broadcast Rate Per Acre**
Sandy Loam (1-3% organic matter)	0.67 lb. Lorox®
Sandy Loam (3-6% organic matter)	1.0 lb. Lorox®
Medium and fine textured soils (1-6% organic matter)	1.0 lb. Lorox®

Observe all directions for use, precautionary language, and limitations on the Metolachlor 8E, AAtrex®, and Lorox® labels when applying these products in tank mix combinations.

5. 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)

To prolong control of lambsquarters and pigweed, in addition to a broad spectrum of annual broadleaf and grass weeds, Metolachlor 8E in tank mix combination with AAtrex®* or Princep® + Prowl® 4E may be applied after planting, but before corn or weed emergence. Apply by ground equipment in a minimum of 10 gals. of water or 20 gals. of liquid fertilizer. Apply by air in a minimum of 5 gals. of water. Refer to Table 1 of this label for rates of Metolachlor 8E, AAtrex®, or Princep® to be applied. Apply Prowl® 4E according to the following rates in Table 2.

*Do not apply Metolachlor 8E in tank mix combination with AAtrex® 80W + Prowl®, as this combination is not compatible. Other AAtrex® formulations may be used.

Mixing Instructions: See Comment No. 1 following Chart 1.

Table 2: Prowl® 4E – Broadcast Rates Per Acre

	Percent Organic Matter in Soil		
Soil Texture	**Less Than 1.5%**	**1.5-3%**	**Over 3%**
Coarse	1.5-2.0 pts.	2.0 pts.	3.0 pts.
Medium	2.0 pts.	3.0 pts.	3.0 pts.
Fine	2.0 pts.	3.0 pts.	3.0 pts.

Observe all directions for use, precautionary language, 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.

6. Tank Mixture with AAtrex® or Princep®, AAtrex® + Princep®, with Gramoxone® Extra, Landmaster® BW, Roundup®, or Gly Star™ Original, for Minimum-Tillage or No-Tillage Systems

In minimum- 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, Roundup®, or Gly Star™ Original may be added to a tank mix of Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep®. See Comment No. 7 following Chart 1. The Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep® portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for **Metolachlor 8E + AAtrex® or Princep®, or Metolachlor 8E + AAtrex® + Princep® - Preplant Surface, Preplant Incorporated, or Preemergence**.

Application: Apply before, during, or after planting, but before corn emergence, at the rates specified below. Add Gramoxone® Extra, Landmaster® BW, Roundup®, or Gly Star™ Original 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 taller than 6 inches.

Note: 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, recommended rates for specific weeds, and other information concerning use.

Roundup® or Gly Star™ Original: See the Roundup®, Roundup® RT, or Gly Star™ Original label for weeds controlled, recommended rates, and other use directions.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Apply 1.0 pt./A of Metolachlor 8E 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** on coarse soils. On medium soils, apply 1.33 pts./A of Metolachlor 8E 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. On fine soils***, apply 1.33-1.67 pts./A of Metolachlor 8E 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® instead of AAtrex® when heavy infestations of crabgrass or fall panicum are expected.

**Use equal rates of AAtrex® Nine-O and Princep® Caliber 90 in tank mixture with Metolachlor 8E 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 Table 1. Refer to Comment No. 2 following Chart 1 for AAtrex® 4L and Princep® 4L conversions.

***For cocklebur, yellow nutsedge, and velvetleaf control in 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 Metolachlor 8E.

7. Tank Mixture with AAtrex®; or AAtrex® + 2,4-D; or AAtrex® + 2,4-D + Banvel® or Albaugh Dicamba DMA Salt for Minimum- and No-Tillage Systems

In minimum- and no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, Metolachlor 8E applied in combination with AAtrex® will kill most emerged small annual weeds. Apply Metolachlor 8E + AAtrex® before, during, or after planting, but before corn emergence, according to the rates in Table 1.

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. of carrier per acre.

Carriers such as nitrogen solutions and complete liquid fertilizers, applied prior to corn emergence will enhance burndown of existing weeds and 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 recommended rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply prior to weeds exceeding 3 inches in height. If alfalfa is present, add Banvel® or Albaugh Dicamba DMA Salt to the spray mixture at 0.33-0.5 pt./A and apply before alfalfa exceeds 6 inches in height.

Where fields contain existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy) exceeding 3 inches in height or when very dry conditions exist, add Gramoxone® Extra at the rate of 2.5 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, precautionary language, and limitations on the respective product labels when applying these products in tank mix combination.

8. Tank Mixture with Marksman® in Conservation Tillage – Field and Silage Corn

Metolachlor 8E + Marksman® will kill most emerged small annual weeds in conservation tillage systems where corn is planted directly into a cover crop or previous crop residue. Apply Metolachlor 8E + Marksman® before, during, or after planting, but prior to corn emergence on medium and fine soils with greater than 2.5% organic matter. Where fields have existing vegetation exceeding 3 inches in height or when very dry conditions exist, add Gramoxone® Extra at its standard rate. Metolachlor 8E + Marksman® may be applied postemergence to corn less than 3 inches tall and before weedy grasses exceed the 2-leaf stage.

Carriers such as nitrogen solutions and complete liquid fertilizers, applied prior to corn emergence will enhance burndown of existing weeds. 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, precautionary language and information regarding application and use in corn.

COTTON

Metolachlor 8E Alone

Application: Apply Metolachlor 8E preemergence only in AR, LA, MS, TN, and the bootheel of MO at the rate of 0.50-1.0 pts./A on sandy loams, 0.67-1.33 pts./A on medium soils, or 1.0-1.33 pts./A on fine soils. Metolachlor 8E may be applied preplant incorporated or preemergence in NM, OK, and Texas 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. Apply Metolachlor 8E postemergence to cotton and preemergence to weeds at 0.50-1.33 pts./A, according to the state limitations in the following **Postemergence** section. Do not use on sands and loamy sand.

Preplant Incorporated (NM, OK, and TX Only): Immediately before planting, at planting, or after planting, but before crop or weed emergence, apply Metolachlor 8E to the soil and incorporate into the top inch. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. If furrow irrigation is used or when a period of dry weather after application is expected, use a preplant incorporated application. 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. Plant cotton 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.

Note: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply Metolachlor 8E preplant incorporated at the maximum rate for the soil texture, whether applied alone or mixed with Caparol® 4L.

Preemergence: Prior to crop or weed emergence, apply to the soil surface at or after planting.

Postemergence: Apply Metolachlor 8E as a broadcast over-the-top application or directed to the soil surface, according to the rate and cotton height limitations listed by state. Metolachlor 8E will not control emerged weeds therefore; application before weeds emerge or after clean cultivation to remove existing weeds is necessary. Metolachlor 8E postemergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler irrigate after application with ½ - 1 inch of water (1/2 inch on coarse textured soils to 1 inch on fine textured soils) to incorporate Metolachlor 8E. In furrow-irrigated areas, apply Metolachlor 8E, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days following application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporate of Metolachlor 8E.

VA, NC, SC, GA, FL, and AL: Apply Metolachlor 8E at 1.0-1.33 pts./A when cotton is 3-12 inches tall.
TN, AR, MS, MO, and LA: Apply Metolachlor 8E at 0.5-1.33 pts./A when cotton is 3-12 inches tall.
TX, OK, NM, AZ, CA, and Clay Soils in AR: Apply Metolachlor 8E at 1.0-1.33 pts./A when cotton is 3-12 inches tall, but before August 1.

Multiple Applications: Multiple applications of Metolachlor 8E are effective when used as part of a weed control program where weed pressure is heavy, difficult to control species are expected, or reinfestation may occur. Apply as a preplant incorporated or preemergence treatment and follow with an application postemergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since Metolachlor 8E will not control emerged weeds. Cotton should be at least 3 inches tall at the postemergence timing. Apply Metolachlor 8E postemergence over a previous preplant or preemergence Metolachlor 8E application as shown in the following table:

	Multiple Metolachlor 8E Applications to Cotton		
State	**Preplant Incorporated or Preemergence pts./A**	+	**Postemergence and Height pts./A**
MS, LA, TN, AR, MO	0.5-1.33 (Preemergence Only)	+	0.5-1.33 to 3-12" Cotton
TX, OK, NM	1.0-1.33	+	1.0-1.33 to 3-12" Cotton before August 1
NC, VA	1.0-1.33 (Preemergence Only)	+	1.0-1.33 to 3-12" Cotton

To incorporate Metolachlor 8E in sprinkler-irrigated areas, sprinkler irrigate after application with ½-1 inch of water (1/2 inch on coarse textured soils to 1 inch on fine textured soils). In furrow-irrigated areas, apply Metolachlor 8E, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least ½ inch of rainfall does not occur within 10 days following application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporate of Metolachlor 8E.

Note: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply Metolachlor 8E preplant incorporated, preemergence, or postemergence to cotton and preemergence to weeds at the maximum rate for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2.0 pts./A on coarse soils or 2.67 pts./A of Metolachlor 8E on medium and fine soils during a growing season. These treatments may be applied over previous registered herbicide treatments.

Precautions: To avoid crop injury, (1) Do not apply Metolachlor 8E on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (2) To avoid concentration in the seed furrow, do not make broadcast applications of Metolachlor 8E 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; (3) In furrow-planted cotton, to avoid concentration in the furrow and potential injury, do not apply Metolachlor 8E postemergence until after first "knifing" or cultivation to level soil surface; (4) Do not apply over-the-top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not recommended in the cotton section of this label, or injury may occur; (5) Do not apply on Taloka silt loam; (6) Do not use in Gaines County, TX.

Note: Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.

Metolachlor 8E Combinations

1. Tank Mixture with Caparol® 4L

Metolachlor 8E tank mixtures with Caparol® 4L may be applied preplant incorporated or preemergence in water or fluid fertilizer. Mix only the amount of spray solution that will be applied in one operation when fluid fertilizer is used as the carrier for Metolachlor 8E, either alone or in combination with Caparol® 4L. These mixtures should not be allowed to stand without agitation. Only water may be used as a carrier for postemergence directed application.

In addition to the weeds controlled by Metolachlor 8E alone, Metolachlor 8E + Caparol® 4L, applied preplant incorporated or preemergence, also controls the following weeds: junglerice, wild oats, annual morningglory, groundcherry, hairy nightshade, lambsquarters, malva, mustard, prickly sida (teaweed), purslane, ragweed, and shallow-germinating seedlings of cocklebur and coffeeweed. As a postemergence directed application, Caparol® provides postemergence control and residual control of weeds on its label, while Metolachlor 8E provides residual control of weed species on its label. Metolachlor 8E does not control emerged weeds.

Preplant Incorporated or Preemergence: Using the appropriate rate from Table 3, apply Metolachlor 8E + Caparol® 4L, either preplant incorporated or preemergence. Cotton should be planted below the zone of incorporation; i.e., at least 1.0 inch on fine soils and 1.5 inches on coarse and medium soils. If incorporated before planting, use a planter that will result in a minimum of soil disturbance.

Table 3: Metolachlor 8E + Caparol® 4L – Cotton (NM, OK, TX)

Use Areas	Soil Texture	Broadcast Rates Per Acre	
		Metolachlor 8E	Caparol® 4L
All	Sand, loamy sand	DO NOT USE	
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.

Postemergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO): Metolachlor 8E may be tank mixed with Caparol® 4L in water and applied postemergence directed in cotton for control of emerged weeds listed on the Caparol® 4L label and residual preemergence control of weeds controlled by Metolachlor 8E and Caparol® 4L. Application may also be made after cultivation for residual preemergence control. Provided the maximum label rate of any product is not exceeded, these treatments may be applied over previous registered treatments, including Metolachlor 8E. Do not apply over-the-top of cotton, or injury may occur.

Apply Metolachlor 8E + Caparol® 4L in a minimum of 20 gals. of spray volume per acre. Follow the directions, limitations, and precautionary language on the Caparol® 4L label when Caparol® is applied as a postemergence-directed application. Refer to the directions, limitations, and precautionary language for use of Metolachlor 8E under the **Cotton-Metolachlor 8E Alone-Postemergence Section**.

Precautions: (1) To avoid concentration in the seed furrow, do not make broadcast applications of Metolachlor 8E + 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, (2) Do not apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (3) Do not apply in cut areas of newly leveled fields, or in areas of excess salt; (4) Do not apply to glandless cotton varieties; (5) Do not apply on Taloka silt loam; (6) Do not use in Gaines County, TX.

Note: Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.

Refer to the Caparol® 4L label for further instructions and limitations.

2. Tank Mixture with Cotoran® DF

Metolachlor 8E may be applied in tank mixture with Cotoran® DF preemergence for control of those weeds controlled by Metolachlor 8E alone and those listed on the Cotoran® DF label. Spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge will also be controlled by this combination. Apply to the soil surface at planting or after planting, but before crop or weed emergence, using the appropriate rates from Table 4. The tank mixture may be applied postemergence to cotton, but preemergence to weeds, or it may be applied postemergence to both cotton and broadleaf weeds for control of weeds on the Cotoran® label. Apply as a directed, semi-directed, or over-the-top spray. Metolachlor 8E will not control emerged weeds, but will provide preemergence control of species on its label.

Mixing Instructions: Incompatibility between Metolachlor 8E and Cotoran® DF may occur. To overcome this condition, fill the spray tank ¼ full with water or fluid fertilizer and start agitation, add the Cotoran® DF and allow it to become dispersed. Add X-77 at 0.5% volume/volume final spray (4 pts./100 gals.), then add the Metolachlor 8E and finally the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform suspension. Do not use fluid fertilizer as a carrier for postemergence applications.

Table 4: Metolachlor 8E + Cotoran® DF – Cotton

	Broadcast Rates Per Acre		
	Metolachlor 8E		**Cotoran® DF***
Soil Texture	**AR, LA, MS, Bootheel of MO, and TN**	**Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX**	**(lbs.)**
Sand, loamy sand	DO NOT USE		
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

*When using Cotoran® 4L, use equivalent rates. Multiply lbs. of Cotoran® DF by 1.7 to get pts. of Cotoran® 4L.

Postemergence: This tank mixture may be applied postemergence to cotton but preemergence to weeds or postemergence to both cotton and weeds for control of weeds on the Cotoran® label. Apply as a directed, semi-directed, or over-the-top spray. Metolachlor 8E does not control emerged weeds, but does provide preemergence control of species on its label. Make applications when cotton is in the 3 to 12-inch stage. Where rates are given for Cotoran® DF, use the higher rate when applying postemergence to weeds that are 2 inches or less. These treatments may be applied over previous registered treatments, including Metolachlor 8E, provided the maximum label rate of any product is not exceeded.

Precautions: (1) Do not apply Metolachlor 8E + Cotoran® on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (2) To avoid concentration in the seed furrow, do not make broadcast applications of Metolachlor 8E + Cotoran® 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; (3) The use of Cotoran® following the use of a systemic insecticide at planting may result in crop injury; (4) Do not apply on Taloka silt loam; (5) Do not use in Gaines County, TX.

Refer to the Cotoran® labels for further instructions, precautions, and limitations.

Note: Do not feed treated forage or gin trash to livestock or graze treated areas to avoid possible illegal residues.

3. Tank Mixture of Metolachlor 8E or Metolachlor 8E + Cotoran® with Gramoxone® Extra, Roundup®, or Gly Star™ Original for Minimum- and No-Tillage Systems

Where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues in minimum- or no-tillage systems, the contact herbicides Gramoxone® Extra, Roundup®, or Gly Star™ Original may be added to a tank mixture of either Metolachlor 8E or Metolachlor 8E + Cotoran®. The Gramoxone® Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds when used as directed. Roundup® or Gly Star™ Original combinations will control emerged annual and perennial weeds when applied as directed on the Roundup® or Gly Star™ Original labels. The Metolachlor 8E and Metolachlor 8E + Cotoran® portion of the tank mixture provides preemergence control of the weeds listed on this label in the Metolachlor 8E and Metolachlor 8E + Cotoran® sections, respectively.

Refer to each product label used in the tank mixture for planting details, application instructions, geographical restrictions and all other precautions and limitations. Refer to the **Mixing Instructions** under the **Tank Mixture with Cotoran® DF** section.

Application: Application may be made before, during, or after planting but before cotton emerges at the rates specified below. Apply Metolachlor 8E at 0.85-1.0 pt./A on sandy loams, medium, and fine textured soils. Refer to Table 4 for the Cotoran® DF rates.

Add Gramoxone® Extra, Roundup®, or Gly Star™ Original 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 taller than 6 inches.

Note: Do not apply combinations containing Gramoxone® Extra in suspension-type liquid fertilizer, as the activity of paraquat will be reduced.

Roundup® or Gly Star™ Original: Refer to the Roundup® or Gly Star™ Original label for weeds controlled, recommended rates, and other use directions.

Note: Do not apply Metolachlor 8E + Cotoran® 4L + Roundup® or Gly Star™ Original in tank mixture due to compatibility problems.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Precautions: (1) Crop injury may result if heavy rains occur soon after application, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed; (2) Refer to the Cotoran® labels and the **Tank Mixture with Cotoran® DF** section of this label for further instructions, precautions, and limitations; (3) Do not use in Gaines County, TX.

4. Tank Mixture with MSMA, MSMA + Caparol®, or MSMA + Cotoran®

Metolachlor 8E may be tank mixed with MSMA in water and applied postemergence directed for control of emerged weeds listed on the MSMA product label and residual preemergence control of weeds controlled by Metolachlor 8E. The addition of Caparol® or Cotoran® will add control of weed species on their respective labels.

Postemergence-Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and Bootheel of MO): When cotton is 3 to 12-inches high, apply Metolachlor 8E + MSMA postemergence-directed according to the directions, limitations, and precautions on the MSMA product label and the directions, limitations, and precautions for use of Metolachlor 8E in the section for **Cotton – Metolachlor 8E Alone – Postemergence.** Do not apply after first cotton bloom. Treatments may be applied over previous registered treatments, including Metolachlor 8E, provided the maximum label rate of any product is not exceeded. Caparol® or Cotoran® may be added to the Metolachlor 8E + MSMA tank mixture according to the respective label directions for application to 3 to 12-inch cotton. Follow the mixing instructions for Metolachlor 8E + Caparol® or Cotoran® when these products are used, then add the MSMA product.

Do not use Metolachlor 8E in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixtures with Metolachlor 8E in cotton.

PEANUTS

Metolachlor 8E Alone

Using the appropriate rate specified below, apply Metolachlor 8E either preplant incorporated, postplant incorporated, preemergence, or lay-by.

Preplant Incorporated or Preemergence: Follow the instructions for use of Metolachlor 8E alone under **Application Procedures.**

Postplant Incorporated: Prior to peanut germination, apply and shallowly incorporate Metolachlor 8E into the soil after planting. Incorporation depth and incorporating implements must be kept above the seed, or seed will be damaged.

Lay-by: Apply Metolachlor 8E to the soil immediately after the last normal cultivation.

Apply Metolachlor 8E alone, preplant incorporated, postplant incorporated, preemergence, or lay-by, 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 preemergence for partial control of Florida beggarweed.

Notes: (1) Metolachlor 8E alone may be applied as directed after any of the following preplant incorporated herbicides when used according to their label recommendations: Balan™ at 3.0-4.0 qts./A; Treflan™ E.C. at 1.0 pt./A; Vernam® at 2.33-3.0 pts./A; Sonalan™ at 1.25-3.0 pts./A; Pursuit® at 0.25 pt./A; or Prowl® at 1.0-2.0 pts./A. (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) Do not apply within 90 days of harvest, or illegal residues may result.

Metolachlor 8E Combinations

1. Tank Mixture with Balan™ L.C.

Metolachlor 8E + Balan™ tank mixture applied preplant incorporated controls those weeds listed under the **Metolachlor 8E Applied Alone** and those weeds listed on the Balan™ label.

For ground application, apply 1.0-1.33 pts./A of Metolachlor 8E + 3.0-4.0 qts./A of Balan™ in a minimum of 10 gals. of spray volume, or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the recommended procedures on the Balan™ label for soil preparation and incorporation into this tank mixture. Apply and incorporate Metolachlor 8E + Balan™ up to 14 days prior to planting.

Note: Follow all restrictions and precautions on the Balan™ label.

2. Multiple Applications

Metolachlor 8E is most effective when used as follows in areas where weed pressure is heavy or where species difficult to control are expected.

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

1st Application: Apply Metolachlor 8E preplant incorporated as directed under **Peanuts- Metolachlor 8E Alone** or apply Metolachlor 8E + Balan™ preplant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply Metolachlor 8E any time from preemergence up to "ground cracking" at 1.0-2.0 pts./A for extended control of weeds not yet emerged. Refer to the **Metolachlor 8E Applied Alone** section for a list of weeds controlled.

3rd Application: Apply Metolachlor 8E at lay-by as directed under **Peanuts - Metolachlor 8E Alone.** Use only when late germinating weeds are expected to be a problem. Refer to the **Metolachlor 8E Applied Alone** section for a list of weeds controlled.

Notes: (1) Do not apply more than the equivalent of 2.67 pts. of Metolachlor 8E per acre during any one year, or illegal residues may result; (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application; (3) Do not apply within 90 days of harvest, or illegal residues may result.

Southwest Only (NM, OK, TX)

1st Application: Apply Metolachlor 8E preplant incorporated or preemergence or at-cracking as directed previously in this section. Refer to the respective section for weeds controlled.

2nd Application: Apply Metolachlor 8E at lay-by as directed under **Peanuts - Metolachlor 8E Alone** on this label. Use only when late germinating weeds are expected to be a problem. Refer to the **Metolachlor 8E Applied Alone** section for a list of weeds controlled.

Notes: (1) Do not apply more than the equivalent of 2.67 pts. of Metolachlor 8E per acre during any one year, or illegal residues may result; (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application; (3) Do not apply within 90 days of harvest, or illegal residues may result.

3. Tank Mixture or Sequentially with Pursuit®

A tank mixture or sequential treatment of Metolachlor 8E and Pursuit® controls all weeds controlled by Metolachlor 8E alone and by Pursuit® alone. Refer to the **Metolachlor 8E Applied Alone** section for weeds controlled by Metolachlor 8E and to the Pursuit® label for weeds controlled by Pursuit®.

Refer to this label and the Pursuit® label for application methods, timings, rates, restrictions, and precautions. Use according to the most restrictive label. Do not exceed the label rate of either product. Metolachlor 8E does not control emerged weeds.

4. Tank Mixture with Sonalan™

A tank mixture of Metolachlor 8E and Sonalan™ will control all weeds controlled by Metolachlor 8E alone and Sonalan™ alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E and to the Sonalan™ label for weeds controlled by Sonalan™.

Apply Metolachlor 8E + Sonalan™ preplant incorporated using the appropriate rate from Table 5. Refer to the Sonalan™ label for recommended soil preparation procedures. Refer to the Peanut Sonalan™/Metolachlor 8E Tank Mixture label for incorporation specifications.

Table 5: Metolachlor 8E + Sonalan™ - Peanuts

Soil Texture	Broadcast Rates Per Acre			
	Southeast		NM, OK, TX	
	Metolachlor 8E	Sonalan™	Metolachlor 8E	Sonalan™
Coarse	1.0-1.33 pts.	1.25-2.0 pts.	0.85-1.33 pts.	1.25-2.0 pts.
Medium	1.0-1.33 pts.	1.75-2.50 pts.	0.85-1.33 pts.	1.75-2.50 pts.
Fine	1.0-1.33 pts.	2.25-3.0 pts.	0.85-1.33 pts.	2.25-3.0 pts.

Note: Observe and follow all use directions, limitations, precautions, and information regarding application to peanuts on the Metolachlor 8E and Sonalan™ labels.

5. Tank Mixture with Prowl®

A preplant incorporated application of Metolachlor 8E + Prowl® controls all weeds controlled by Metolachlor 8E alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species listed on the Prowl® label. Apply Metolachlor 8E + Prowl® by ground or 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. Apply and incorporate after bed formation if peanuts will be planted on beds. Refer to the incorporation instructions of the respective labels for additional directions.

Apply Metolachlor 8E + Prowl® preplant incorporated using the appropriate rates from Table 6.

Table 6: Metolachlor 8E + Prowl® - Peanuts

Soil Texture	Broadcast Rates Per Acre	
	NM, OK, TX	Other Peanut Growing States
	Metolachlor 8E + Prowl®	Metolachlor 8E + Prowl®
Sand, loamy sand	0.85 + 1.0-1.5 pts.	1.0-1.33 + 1.5-2.0 pts.
Sandy loam	0.85-1.0 + 1.0-1.5 pts.	1.0-1.33 + 1.5-2.0 pts.
Fine soil	1.33 + 1.0-1.5 pts.	1.33 + 1.5-2.0 pts.

Note: Observe and follow all use directions, limitations, precautions, and information regarding application to peanuts on the Metolachlor 8E and Prowl® labels.

6. Tank Mixture or Sequentially with Starfire®

Metolachlor 8E + Starfire® applied at ground cracking or sequentially will control or suppress small (1-6 inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Metolachlor 8E Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire® with the appropriate Metolachlor 8E rate from the **Peanuts-Metolachlor 8E Alone** section by ground equipment in a minimum spray volume of 20 gals./A. A second application may be made 28 days after ground cracking. Refer to the **Peanuts-Metolachlor 8E Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are recommended. A second Starfire® application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

7. Tank Mixture or Sequentially with Starfire® + Basagran®

Control of problem broadleaf weeds such as prickly sida, cocklebur, smartweed, and bristly starbur may be improved by the addition of Basagran® to the Metolachlor 8E + Starfire® tank mix. A tank mixture of Metolachlor 8E + Starfire® + Basagran® applied at ground cracking or sequentially will control or suppress small (1-6 inch) emerged annual grass and broadleaf weeds and provide residual control of weeds species listed in the **Metolachlor 8E Applied Alone** section of this label. Apply 1.0 pt./A of Basagran® + 11 fl. oz./A of Starfire® with the appropriate Metolachlor 8E rate from the **Peanuts-Metolachlor 8E Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application may be made 28 days after ground cracking. Refer to the **Peanuts-Metolachlor 8E Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are recommended. A second Starfire® + Basagran® application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

8. Tank Mixture or Sequentially with Starfire® + Butyrac® 200 or Butoxone® 200

Control of problem weeds such as sicklepod, morningglory, and cocklebur may be improved by the addition of Butyrac® 200 or Butoxone® 200 to the Metolachlor 8E + Starfire® tank mix. Metolachlor 8E + Starfire® + Butyrac® 200 or Butoxone® 200 applied at ground cracking or sequentially will control or suppress small (1-6 inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Metolachlor 8E Applied Alone** section of this label. Apply 11 fl. oz./A of Starfire® + 8-16 fl. oz./A (0.125-0.25 lb./A) of Butyrac® 200 or Butoxone® 200 with the appropriate Metolachlor 8E rate from the **Peanuts-Metolachlor 8E Alone** section in a minimum spray volume of 20 gals./A with ground equipment. A second application may be made 28 days after ground cracking. Refer to the **Peanuts-Metolachlor 8E Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are recommended. A second Starfire® + Butyrac® 200 or Butoxone® 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

9. Tank Mixture or Sequentially with Basagran®

Applied at ground cracking or sequentially, a tank mixture of Metolachlor 8E + Basagran® will control species on the Basagran® label and provide residual control of species listed in the **Metolachlor 8E Applied Alone** section of this label. Depending on weed species and stage of growth as specified on the Basagran® label, apply 1.0-2.0 pts./A of Basagran® in 20 gals./A, with the appropriate Metolachlor 8E rate from the **Peanuts-Metolachlor 8E Alone** section. A second application may be made before peanut pegging. Refer to the **Peanuts-Metolachlor 8E Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are recommended. A second Basagran® application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

10. Tank Mixture or Sequentially with Basagran® + Butyrac® 200 or Butoxone® 200

A tank mixture of Metolachlor 8E + Basagran® + Butyrac® 200 or Butoxone® 200 applied at ground cracking or sequentially will control species on the Basagran® label and on the Butyrac® or Butoxone® labels, especially morningglories. Depending on weed species and stage of growth as specified on the Basagran® label, apply 1.5-2.0 pts./A of Basagran® + 8 fl. oz./A of Butyrac® 200 or Butoxone® 200 in 20 gals./A with the appropriate Metolachlor 8E rate from the **Peanuts-Metolachlor 8E Applied Alone** section. A second application may be made before peanut pegging. Refer to the **Peanuts-Metolachlor 8E Combinations-Multiple Applications** section of this label for geographical areas where multiple applications are recommended. A second Basagran® + Butyrac® 200 or Butoxone® 200 application may be made in all peanut growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

11. Tank Mixture or Sequentially with Storm®

Metolachlor 8E + Storm® applied at ground cracking through 2 expanded tetrafoliate leaves or Metolachlor 8E applied according to the directions for **Metolachlor 8E Alone** section followed by an at-cracking through postemergence treatment of Storm® as specified on its label will control species on the Storm® label and provide residual control of species listed in the **Metolachlor 8E Applied Alone** section of this label. Metolachlor 8E does not control emerged weeds. Refer to the **Peanuts-Metolachlor 8E Alone** section and to the Storm® label and follow all directions, limitations, and restrictions for each product.

POD CROPS

Metolachlor 8E Alone

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), lentils, and lupines (sweet, white, white sweet, and grain).

Apply a preplant incorporated or preemergence application of Metolachlor 8E using the appropriate rate specified below.

Preplant Incorporated or Preemergence: Follow the instructions for use of Metolachlor 8E alone under **Application Procedures**. For coarse soils with less than 3% organic matter, apply 1.0-1.33 pts./A of Metolachlor 8E or 1.33 pts./A if organic matter is 3% or greater. For medium soils, apply 1.33-1.67 pts./A of Metolachlor 8E. For fine soils, apply 1.33-1.67 pts./A of Metolachlor 8E if organic matter content is less than 3% or 1.67-2.0 pts./A if organic matter content is 3% or greater.

*Use only preemergence applications on English peas. Do not use on English peas in northeastern U.S., or injury may occur.

Note: To avoid illegal residues, do not cut for hay within 120 days following Metolachlor 8E application. Do not apply more than 2.0 pts./A of Metolachlor 8E during any one crop year.

Metolachlor 8E Combinations

Note: Do not cut for hay within 120 days following application when applying in combination on pod crops or illegal residues may result.

1. Tank Mixture and Sequential Applications with Eptam® – Beans (Green or Dry)

This tank mixture controls all weeds controlled by Metolachlor 8E alone and by Eptam® alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E alone and to the Eptam® label for weeds controlled by Eptam®.

Preplant Incorporated: Follow the instructions for use of Metolachlor 8E alone under **Application Procedures**.

Sequential: Apply Eptam® alone preplant incorporated as specified on the Eptam® label. Follow with a preemergence application of Metolachlor 8E at rates specified for Metolachlor 8E alone, during planting (behind the planter) or after planting but before weed or crop emergence. Refer to the **General Information** section of this label and to the Eptam® label for weather, cultural practices, and all other precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam® 7E* with Metolachlor 8E as specified. For coarse soils, apply 0.85 pt./A of Metolachlor 8E if organic matter content is less than 3%, or 1.0 pt./A if organic matter content is 3% or greater. For medium soils, apply 1.0 pt./A of Metolachlor 8E if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. For fine soils, apply 1.33 pts./A of Metolachlor 8E if organic matter is less than 3%, or 1.33-1.67 pts./A if organic matter is 3% or greater.

*Refer to the Eptam® label for rate limitations depending on geographical area, and for species and variety restrictions.

Precaution: Do not exceed 3.5 pts./A of Eptam® 7E on small white beans or green beans grown on coarse textured soil.

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

A tank mix of Metolachlor 8E + Treflan™ applied preplant incorporated controls those weeds listed under **Metolachlor 8E Applied Alone** and those weeds listed for Treflan™ alone on the Treflan™ label. Metolachlor 8E + Treflan™ may be applied by ground or aerial equipment and incorporated up to 14 days prior to planting. Follow the recommended procedures on this label and on the respective Treflan™ label using equipment that provides uniform 2-inch incorporation.

Apply Metolachlor 8E + Treflan™ using the appropriate Metolachlor 8E rate specified for Metolachlor 8E 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.

Note: Follow all restrictions and precautions on the respective Treflan™ label and in the **Pod Crops – Metolachlor 8E Alone** section of this label.

POTATOES

Metolachlor 8E Alone

For control of weeds listed under the **General Information** section, apply Metolachlor 8E either incorporated, preemergence, or after hilling/lay-by, according to the directions specified below. When a range of rates is given, use the lower rate on soils relatively coarse textured or low in organic matter and 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 Metolachlor 8E 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. Avoid bringing untreated soil to the surface during planting and later cultural practices. Postplant incorporated application may be made any time after planting to drag-off, but before potatoes emerge. Use an implement that evenly distributes Metolachlor 8E in the top 2 inches of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Preemergence: Apply Metolachlor 8E at 1.0-2.0 pts./A, either after planting as a preemergence, delayed preemergence, after drag-off or hilling treatment, but prior to weed emergence. Up to 2.67 pts./A of Metolachlor 8E alone may be used where soil organic matter content is between 6% and 20%.

After Hilling/Lay-by: Apply 1.67 pts./A of Metolachlor 8E after hilling/at lay-by to control Metolachlor 8E sensitive species for the remainder of the growing season. This application will not control emerged weeds. This application may be applied over a previous Metolachlor 8E application, but do not exceed 3.7 pts./A of Metolachlor 8E in a single crop season.

Precautions: (1) Do not use on muck or peat soils. If cool, wet soil conditions occur after application, Metolachlor 8E may delay maturity and/or reduce yield of Superior and other early maturing potato varieties. To avoid crop injury, (2) Do not use on sweet potatoes or yams; (3) Do not apply both as a preemergence and an incorporated treatment; and (4) Do not use in Kern County, CA.

Note: Potatoes should not be harvested within 60 days after the at-planting to drag-off application, or within 40 days after a lay-by application, after treatment with Metolachlor 8E, or illegal residues may result.

Metolachlor 8E Combinations

1. Tank Mixture with Sencor®

In addition to the weeds controlled by Metolachlor 8E alone, Metolachlor 8E applied in tank mix combination with, or sequentially with, any of the registered Sencor® 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.

Metolachlor 8E at 1.0-2.0 pts./A plus the labeled Sencor® use rate may be used preemergence through last hilling. For coarse soils, apply 1.0-1.33 pts./A of Metolachlor 8E 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 and use the higher rate on soils relatively fine textured or high in organic matter. Avoid exposing untreated soils as effectiveness will be reduced. Metolachlor 8E does not control emerged weeds. Refer to the Sencor® label for precautionary statements, restrictions, application information, and weeds controlled.

Precautions: (1) To avoid such conditions as chlorosis, minor necrosis, or leaf distortion, postemergence application to potatoes should be made only as a directed or semi-directed spray. To avoid crop injury, (2) Do not use Metolachlor 8E + Sencor® on potatoes in Kern County, CA; (3) Do not apply to sweet potatoes or yams and (4) Do not use this tank mixture on muck or peat soils.

Notes: Illegal residues may result if potatoes treated with Metolachlor 8E in tank mixture with Sencor® are harvested within 60 days after application. Potatoes may not be harvested within 40 days after a lay-by application of Metolachlor 8E or illegal residues may result.

2. Metolachlor 8E + Lorox® Tank Mixture (East of the Rocky Mountains)

Metolachlor 8E may be applied in a tank-mix combination with any of the registered Lorox® formulations as a preemergence broadcast application to potatoes. Apply according to the rates in Table 7 to the soil surface after planting and before crop emergence or after final drag-off.

Table 7: Metolachlor 8E + Lorox® - Potatoes (East of the Rocky Mountains)

Soil Texture	Broadcast Rates Per Acre			
	1% to Less Than 3% Organic Matter		3-5% Organic Matter	
	Metolachlor 8E	Lorox®*	Metolachlor 8E	Lorox®*
Coarse Sandy loam	1.0 pt.	1.0-1.5 lbs.	1.33 pts.	1.5-2.0 lbs.
Medium Loam, silt loam, silt	1.33 pts.	1.5-2.0 lbs.	1.67-2.0 pts.	2.0-2.5 lbs.

*When using Lorox® L or Lorox® DF, use equivalent rates. One pt. of Lorox® L equals 1 lb. of Lorox® DF.

Precautions: To avoid crop injury, (1) Do not use on sands or loamy sands, and (2) Do not incorporate or spray over the top of emerged potatoes.

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

3. Tank Mixture with Prowl® 4E

A tank mixture of Metolachlor 8E + Prowl® 4E will control problem species such as kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl® 4E Alone label in addition to the weeds controlled by Metolachlor 8E alone. Apply Metolachlor 8E + Prowl® 4E preemergence, preemergence incorporated, or early postemergence, according to the specific directions on the Prowl® 4E label, using the rates in Table 8.

Table 8: Metolachlor 8E + Prowl® 4E – Potatoes

Soil Texture	Broadcast Rates Per Acre	
	Less Than 3% Organic Matter	Greater Than 3% Organic Matter
	Metolachlor 8E + Prowl® 4E	Metolachlor 8E + Prowl® 4E
Coarse	1.0-1.33 pts. + 1.0-1.5 pts.	1.0-1.33 pts. + 1.0-1.5 pts.
Medium	1.33 pts. + 1.5-2.0 pts.	1.33-1.67 pts. + 2.0-3.0 pts.
Fine	1.33-1.67 pts. + 2.0-3.0 pts.	1.67-2.0 pts. + 3.0 pts.

*When using other Prowl® formulations, use equivalent rates of active ingredient.

Refer to this labeling and the respective Prowl® label and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

4. Tank Mixture with Prowl® 4E + Eptam®

This tank mixture will control those species found on the Prowl® 4E and Eptam® labels in addition to those weeds controlled by Metolachlor 8E alone. Refer to the Metolachlor 8E + 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 Metolachlor 8E, 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

Metolachlor 8E Alone

Preplant Incorporated or Preemergence: Follow the instructions for use of Metolachlor 8E alone under **Application Procedures**. For coarse soils, apply 1.0-1.33 pts./A of Metolachlor 8E if organic matter content is less than 3%, or 1.33 pts./A if organic matter is 3% or greater. For medium soils, apply 1.33-1.67 pts./A of Metolachlor 8E. For fine soils, if the organic matter content is less than 3%, apply 1.33-1.67 pts./A of Metolachlor 8E or, if organic matter content is 3% or greater, apply 1.67-2.0 pts./A.

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

Metolachlor 8E Alone

Using the appropriate rate specified below, apply Metolachlor 8E as a preplant surface, preplant incorporated, or preemergence application. Apply Metolachlor 8E alone only when the sorghum seed has been properly treated by the seed company with Concep® or Screen®.

Preplant Surface-Applied: Refer to the instructions for use of Metolachlor 8E under **Application Procedures**. For minimum- and no-tillage systems only in CO, IA, IL, KS, MO, NE, and SD, Metolachlor 8E may be applied up to 45 days before planting. Use only split applications for treatments made 30-45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. For medium soils, apply 1.5 pts./A of Metolachlor 8E or 1.67 pts./A on fine soils. Treatments made less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of Metolachlor 8E on coarse soils not more than 2 weeks prior to planting. Irrigation is recommended under dry conditions after application to move Metolachlor 8E into the soil.

Preplant Incorporated or Preemergence: Refer to the instructions for Metolachlor 8E under **Application Procedures**. Broadcast 1.0-1.33 pts./A of Metolachlor 8E on coarse soils, 1.33-1.50 pts./A on medium soils, or 1.33-1.67 pts./A on fine soils.

Precautions: (1) Metolachlor 8E will severely injure the crop if sorghum seed is not properly treated with Concep® or Screen®; (2) Injury may occur following the use of Metolachlor 8E under high soil moisture conditions prior to sorghum emergence. The sorghum crop will normally outgrow this effect; (3) Do not use Metolachlor 8E on sorghum grown under dry mulch tillage, or injury may occur; (4)

Except for the split preplant surface treatment, do not make more than one application per year, or illegal residues may result.

Metolachlor 8E Combinations

Metolachlor 8E tank mixtures with AAtrex® may be applied in water or fluid fertilizer. Apply Metolachlor 8E 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) – All restrictions and rate limitations on the AAtrex® label must be followed if more restrictive/prohibitive than those on this label if applying Metolachlor 8E in tank mixture with AAtrex®. If AAtrex® is/must be applied at lower rates than those recommended on this label, broadleaf weed control may be affected. Refer to the AAtrex® label for weeds controlled at the reduced rates.

Precautions: (1) Sorghum injury may occur if applications of Metolachlor 8E + AAtrex® are made on highly alkaline soils or on eroded areas where calcareous subsoils are exposed; (2) Crop may be severely injured if sorghum seed is not properly treated with Concep® or Screen®; (3) Injury may occur following the use of Metolachlor 8E + AAtrex® under high soil moisture conditions prior to sorghum emergence. The crop will normally outgrow this effect; (4) Do not use Metolachlor 8E + AAtrex® on sorghum grown under dry mulch tillage, or injury may occur; (5) Except for the split preplant surface treatment, do not make more than one application per year, or illegal residues may result.

1. Tank Mixture with AAtrex®

When applied either preplant surface, preplant incorporated, or preemergence, Metolachlor 8E + AAtrex® will control the following broadleaf weeds in addition to the weeds controlled by Metolachlor 8E alone: cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Preplant Surface-Applied: Refer to the instructions for use of Metolachlor 8E under **Application Procedures**. For minimum- and no-tillage systems in IA, IL, eastern KS, MO, NE, and SD, Metolachlor 8E + AAtrex® may be applied up to 45 days prior to planting. Use only split applications for treatments made 30-45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. For medium soils with 1.5% organic matter or greater, apply 1.50 pts./A of Metolachlor 8E + 1.7-2.0 lbs./A of AAtrex® Nine-O*. Apply 1.50 pts./A of Metolachlor 8E + 1.7-2.0 lbs./A of AAtrex® Nine-O on fine soils with less than 1.5% organic matter, or apply 1.67 pts./A of Metolachlor 8E + 2.0-2.2 lbs./A of AAtrex® Nine-O on fine soils with 1.5% organic matter or greater. Treatments may be made as split or single application when applied less than 30 days prior to planting. Irrigation after application is recommended under dry conditions to move Metolachlor 8E + AAtrex® Nine-O into the soil.

Precautions: To avoid crop injury, (1) Do not use on coarse soils and (2) Do not use on medium soils with an organic matter content less than 1.5%.

Preplant Incorporated or Preemergence: Refer to the instructions for use of Metolachlor 8E under **Application Procedures**. For medium soils with 1.5% organic matter or greater, apply 1.0 pt./A of Metolachlor 8E + 1.3 lbs./A of AAtrex® Nine-O*. For fine soils with less than 1.5% organic matter, apply 1.0 pt./A of Metolachlor 8E + 1.3 lbs./A of AAtrex® Nine-O or, on fine soils with 1.5% organic matter or greater, apply 1.2-1.33 pts./A of Metolachlor 8E + 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.

Precautions: To avoid crop injury, (1) Do not use on coarse soils; (2) Do not use on medium soils with less than 1.5% organic matter; (3) Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf

Coast and Blacklands areas; and (4) Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

2. **Tank Mixture of Metolachlor 8E or Metolachlor 8E + AAtrex®, with Gramoxone® Extra, Landmaster® BW, Roundup®, or Gly Star™ Original, for Minimum-Tillage or No-Tillage Systems**

In minimum- 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 Gramoxone® Extra, Landmaster® BW, Roundup®, or Gly Star™ Original may be added to a tank mix of Metolachlor 8E or Metolachlor 8E + AAtrex®. See Comment No. 7 following Chart 1. The Metolachlor 8E or Metolachlor 8E + AAtrex® portion of the tank mixture provides preemergence control of the weeds listed on this label under the respective sections.

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

Application: Apply before, during, or after planting, but before sorghum emergence, at the appropriate rates listed under **Grain or Forage Sorghum – Metolachlor 8E Alone** or **Metolachlor 8E Combinations – Metolachlor 8E + AAtrex®**, respectively. Add Gramoxone® Extra, Landmaster® BW, Roundup®, or Gly Star™ Original 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 taller than 6 inches.

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

Roundup® or Gly Star™ Original: See the Roundup®, Roundup® RT, or Gly Star™ Original label for weeds controlled, recommended rates, and other use directions.

Apply in a minimum of 20 gals. of water per acre with conventional spray equipment.

SOYBEANS

Metolachlor 8E Alone

Using the appropriate rate specified below, apply Metolachlor 8E either preplant surface-applied, preplant incorporated, or preemergence.

Preplant Surface-Applied, Preplant Incorporated, or Preemergence: Follow the instructions for the use of Metolachlor 8E alone under **Application Procedures**.

Preplant Surface-Applied

(1) **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 the state of IL):** For 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. On soils having greater than 2.5% organic matter in minimum-till or no-tillage systems, use 1.67-2.0 pts./A on medium textured and 2.0 pts./A on fine textured soils. Do not apply while ground is frozen. 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. **Note:** If a spring application is made, the total rate of the fall application plus the spring application must not exceed the maximum total rate for soybeans, or illegal residues may result.

(2) 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 use only on medium and fine textured soils with minimum- or no-tillage systems. Apply 2/3 the recommended rate of Metolachlor 8E (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. If applying less than 30 days prior to planting, applications may be made as either a split or single treatment. For coarse soils, apply 1.33 pts./A not more than 2 weeks prior to planting.

Preplant Incorporated or Preemergence: For coarse soils, apply 1.0-1.33 pts./A of Metolachlor 8E if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. Apply 1.33-1.67 pts./A of Metolachlor 8E on medium textured soils. For fine soils, apply 1.33-1.67 pts./A of Metolachlor 8E if the organic matter content is less than 3%, or 1.67-2.0 pts./A if the organic matter content is 3% or greater.

Notes: Metolachlor 8E may be used up to 2.67 pts./A on soybeans as a preplant surface-applied, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20%. Do not exceed a total rate of 2.67 pts./A applied to soybeans during any one crop year.

Metolachlor 8E Combinations

Water or fluid fertilizer may be used as a carrier for Metolachlor 8E in combination with Sencor®, Lorox®, Canopy®, Pursuit®, Scepter®, Sonalan™, or Command®.

Note: Metolachlor 8E may be used up to 2.5 pts./A on soils having organic matter content between 6% and 20% for the all of the following combinations. The total Metolachlor 8E rate applied to soybeans during any one crop year should not exceed 2.67 pts./A.

1. Tank Mixture with Sencor®

In addition to the weeds controlled by Metolachlor 8E alone, Metolachlor 8E + Sencor® 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 Metolachlor 8E + Sencor® preplant incorporated or preemergence, using the appropriate rates from Table 9.

Preplant Incorporated or Preemergence: Follow the instructions for use of Metolachlor 8E alone under **Application Procedures**.

Sequential: Apply Metolachlor 8E alone Preplant Incorporated, as specified in Table 9 for this tank mixture. Follow this application with a preemergence application of Sencor® during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Refer to the Sencor® labels for planting details and soybean variety restrictions.

Table 9: Metolachlor 8E + Sencor® – Soybeans

Soil Texture**	Broadcast Rates Per Acre					
	0.5% to Less Than 3% Organic Matter			3% Organic Matter or Greater		
	Metolachlor 8E	+	Sencor® DF*	Metolachlor 8E	+	Sencor® DF*
Coarse Loamy sand (over 2% organic matter), sandy loam	0.85-1.0 pt.	+	0.33 lb.	1.0 pt.	+	0.5 lb.

Medium	1.0-1.33 pts.	+	0.5 lb.	1.33 pts.	+	0.67 lb.***
Fine	1.33 pts.	+	0.67 lb.	1.33-1.67 pts.	+	0.67 lb.
Mississippi Delta only Silty clay, clay	1.33 pts.	+	1.0 lb.	1.33-1.67 pts.	+	1.0 lb.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE					

*When using Sencor® 4, multiply lbs. of DF by 1.5 to get pts./A.
**On all sand and on loamy sand with less than 2% organic matter, do not use this tank mixture preemergence or the sequential treatment. Do not use the tank mixture preplant incorporated on any sand, loamy sand, or sandy loam, or crop injury may occur.
***Use 0.5 lb./A if applied preplant incorporated.

Precautions: (1) Crop injury may occur if the tank mix or sequential application is used on soil with less than 0.5% organic matter or on alkaline soil with a pH over 7.4; (2) Crop injury may result if heavy rains occur soon after application, especially in poorly drained areas where water stands for several days.

2. Tank Mixture with Lorox®

In addition to the weeds controlled by Metolachlor 8E alone, Metolachlor 8E + Lorox®, applied preemergence, also controls the following broadleaf weeds: cocklebur*, jimsonweed*, lambsquarters, morningglory*, prickly sida, ragweed, smartweed, velvetleaf*, Venice mallow, and wild mustard.

*Partially controlled.

Preemergence: Make application during planting (behind planter) or after planting, but before weed or soybean emergence. Refer to the Lorox® label for planting details. Apply the appropriate rates from Table 10.

Precaution: Crop injury may occur if used on soil with less than 0.5% organic matter.

Table 10: Metolachlor 8E + Lorox® - Soybeans

Soil Texture*	Broadcast Rates Per Acre					
	0.5% to Less Than 3% Organic Matter			3% Organic Matter or Greater		
	Metolachlor 8E	+	Lorox® DF***	Metolachlor 8E	+	Lorox® DF***
Coarse**	0.85 pt.	+	1 lb.	1.0 pt.	+	1-1.5 lbs.
Medium	1.0 pt.	+	1.0-1.5 lbs.	1.33 pts.	+	1.5-2.0 lbs.
Fine	1.33 pts.	+	2.0 lbs.	1.33-1.67 pts.	+	2.5-3.0 lbs.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE					

*Do not use on sand, gravelly soils, or exposed subsoils.
**Do not use on loamy sand, except in northeastern U.S. on loamy sand with greater than 1% organic matter.
***When using Lorox® L or Lorox® DF, use equivalent rates. One pt. of Lorox® L equals 1 lb. of Lorox® DF.

3. Tank Mixture with Treflan™

A tank mix of Metolachlor 8E + Treflan™ applied preplant incorporated controls those weeds listed under the **Metolachlor 8E Applied Alone** section and those weeds listed for Treflan™ alone on the Treflan™ label. Metolachlor 8E + Treflan™ may be applied by ground or aerial equipment and

incorporated up to 14 days prior to planting. Follow the recommended procedures on this label and on the respective Treflan™ label using equipment that provides uniform 2-inch incorporation.

Apply Metolachlor 8E + Treflan™ using the appropriate rate from the **Soybeans - Metolachlor 8E 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 Table 11.

Table 11: Metolachlor 8E + Treflan™ - Organic Matter Content Less Than 3%

Soil Texture	Broadcast Rates Per Acre		
	Metolachlor 8E	Treflan™ E.C.**	
	Less Than 3% Organic Matter	Organic Matter	
		Less than 2%	2-3%
Coarse*	0.85-1.0 pt.	1.0 pt.	1.5 pts.
Medium	1.0 pt.	1.5 pts.	1.5 pts.
Fine	1.33 pts.	2.0 pts.	2.0 pts.

*Where a range of rates is provided for Metolachlor 8E, 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.

Note: Follow all restrictions and precautions in the **Soybeans – Metolachlor 8E Alone** section of this label and the respective Treflan™ label.

4. Tank Mixture with Scepter®

A tank mixture of Metolachlor 8E + Scepter® controls all weeds controlled by Metolachlor 8E alone and by Scepter® alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E 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 Metolachlor 8E + Scepter® preplant incorporated or preemergence, using the rates in Table 12. Follow the use directions under the **Application Instructions** on the Scepter® label. Apply and incorporate within 30 days before planting for preplant incorporated applications. Observe all other precautions and limitations on the Scepter® label.

Table 12: Metolachlor 8E + Scepter® - Soybeans

Soil Texture	Broadcast Rates Per Acre			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	Metolachlor 8E	Scepter®	Metolachlor 8E	Scepter®
Coarse	0.85 pt.	0.67 pt.	1.0 pt.	0.67 pt.
Medium	1.0 pt.	0.67 pt.	1.33 pts.	0.67 pt.
Fine	1.33 pts.	0.67 pt.	1.33-1.67* pts.	0.67 pt.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			

*If heavy weed infestations are expected, use the higher rate of Metolachlor 8E.

Note: (1) Do not harvest within 90 days of application, and (2) Do not graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.

5. Tank Mixture with Canopy®

A tank mixture of Metolachlor 8E + Canopy® controls all weeds controlled by Metolachlor 8E alone and by Canopy® alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E and to the Canopy® label for weeds controlled by Canopy®.

Using the appropriate rate from Table 13, apply this tank mixture preplant incorporated or preemergence.

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

Preemergence: Apply after planting, but before soybean emergence.

Note: Follow all directions for use, variety restrictions, limitations, precautions, information regarding application to soybeans, and rotational restrictions on the Metolachlor 8E and Canopy® labels.

Table 13: Metolachlor 8E + Canopy® - Soybeans

	Broadcast Rates Per Acre		
	Less Than 3% Organic Matter	3% or More Organic Matter	
Soil Texture	Metolachlor 8E	Metolachlor 8E	Canopy®
Coarse	0.85 pt.	1.0 pt.	*
Medium	1.0 pt.	1.33 pts.	*
Fine	1.33 pts.	1.33-1.67 pts.	*

*Refer to the Canopy® label for the appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

Precaution: 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 on the Canopy® label.

6. Tank Mixture with Command®*

A tank mixture of Metolachlor 8E + Command® controls all weeds controlled by Metolachlor 8E alone and by Command® alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E and to the Command® label for weeds controlled by Command®.

Using rates in Table 14, apply Metolachlor 8E + Command® preplant incorporated. Observe and follow all Command® application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

***Note:** Before making applications, read and strictly follow all use directions, limitations, precautions, and information regarding application to soybeans, and rotational restrictions on the Metolachlor 8E and Command® labels.

Table 14: Metolachlor 8E + Command® - Soybeans

Soil Texture	Broadcast Rates Per Acre			
	Metolachlor 8E		Command® 4E	
	0.5-3% Organic Matter	Greater than 3% Organic Matter	Northern Area	Southern Area
Coarse	0.85 pt.	1.0 pt.	1.5-2.0 pts.	2.0-2.5 pts.
Medium	1.0 pt.	1.33 pts.	1.5-2.0 pts.	2.0-2.5 pts.
Fine	1.33 pts.	1.33-1.67 pts.	1.5-2.0 pts.	2.0-2.5 pts.

7. Tank Mixture with Sonalan™

A tank mixture of Metolachlor 8E + Sonalan™ controls all weeds controlled by Metolachlor 8E alone and by Sonalan™ alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E and to the Sonalan™ label for weeds controlled by Sonalan™.

Using the appropriate rate from Table 15, apply Metolachlor 8E + Sonalan™ preplant incorporated.

Preplant Incorporated: Follow the recommended soil preparation procedures for Sonalan™. Refer to the Sonalan™/Metolachlor 8E Tank Mixture label for incorporation specifications.

Sequential: Sonalan™ may be applied alone as a preplant incorporated application as specified on the Sonalan™ label followed with a preemergence application of Metolachlor 8E during planting (behind the planter) or after planting, but before weed or soybean emergence.

Table 15: Metolachlor 8E + Sonalan™ - Soybeans

Soil Texture	Broadcast Rates Per Acre			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	Metolachlor 8E	Sonalan™	Metolachlor 8E	Sonalan™
Coarse	1.0-1.33 pts.	1.25-2.0 pts.	1.33 pts.	1.25-2.0 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.	2.25-3.0 pts.	1.67-2.0 pts.	2.25-3.0 pts.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			

*Apply Sonalan™ at 3.0 pts./A on medium and 3.5 pts./A on fine textured soils and follow with 2 incorporation passes where eastern black nightshade is being treated on these soils.

Note: Follow all directions for use, limitations, precautions, and information regarding application to soybeans on the Metolachlor 8E and Sonalan™ labels.

8. Tank Mixture with Pursuit®

A tank mixture of Metolachlor 8E + Pursuit® controls all weeds controlled by Metolachlor 8E alone and by Pursuit® alone. Refer to the **Metolachlor 8E Applied Alone** section of this label for weeds controlled by Metolachlor 8E 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.

Using the rates in Table 16, apply Metolachlor 8E + Pursuit® early preplant, preplant incorporated, or preemergence after planting. Application may be made in water or liquid fertilizer. Follow all directions for use under Soil Applications on the Pursuit® label. Apply within 30 days of planting for early preplant and preplant incorporated applications.

Note: Follow all directions for use, limitations, precautions, and information regarding application to soybeans and rotational restrictions on the Metolachlor 8E and Pursuit® labels.

Table 16: Metolachlor 8E + Pursuit® - Soybeans

Soil Texture	Broadcast Rates Per Acre		
	Less Than 3% Organic Matter	3% or More Organic Matter	
	Metolachlor 8E	Metolachlor 8E	Pursuit®
Coarse	0.85 pt.	1.0 pt.	0.25 pt.
Medium	1.0 pt.	1.33 pts.	0.25 pt.
Fine	1.33 pts.	1.33-1.67 pts.	0.25 pt.

Sequential: Early preplant, preplant incorporated, or preemergence after planting, apply Metolachlor 8E at 0.85 pt./A on coarse soils and 1.0 pt./A on medium and fine textured soils. Follow with a sequential postemergence application of Pursuit® to control emerged weeds according to the Pursuit® label. Metolachlor 8E will improve the consistency and level of control from Pursuit® on most grass species. Refer to the Pursuit® postemergence label for a listing of weeds controlled, application rates, and growth stage limitations.

9. Tank Mixture with Sencor®, Scepter®, Lorox®, Canopy®, or Pursuit®, plus Gramoxone® Extra, Roundup®, or Gly Star™ Original for Minimum- or No-Tillage Systems

Where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues in minimum- or no-tillage systems, the contact herbicides Gramoxone® Extra, Roundup®, or Gly Star™ Original, may be added to a tank mix of either Metolachlor 8E + Sencor®, Metolachlor 8E + Scepter®, Metolachlor 8E + Lorox®, Metolachlor 8E + Canopy®, or Metolachlor 8E + Pursuit®.

When used as directed, the Gramoxone® Extra portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Roundup® or Gly Star™ Original combinations will control emerged annual and perennial weeds when applied as directed on the Roundup® or Gly Star™ Original labels. The Metolachlor 8E + Sencor®, Scepter®, Lorox®, Canopy®, or Pursuit® portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for Metolachlor 8E + Sencor®, Metolachlor 8E + Scepter®, Metolachlor 8E + Lorox®, Metolachlor 8E + Canopy®, and Metolachlor 8E + Pursuit®, respectively.

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

Application: These tank mixtures may be applied before, during, or after planting but make applications before soybean emergence at the rates specified below. Add Gramoxone® Extra, Roundup®, or Gly Star™ Original 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 taller than 6 inches.

Note: Do not apply combinations containing Gramoxone® Extra in suspension type liquid fertilizers, as the activity of paraquat will be reduced.

Roundup® or Gly Star™ Original: See the Roundup®, Roundup® RT, or Gly Star™ Original label for weeds controlled, recommended rates, and other use directions.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Metolachlor 8E + Sencor®* + Gramoxone® Extra, Roundup® or Gly Star™ Original

Apply 1.0 pt./A of Metolachlor 8E + 0.33-0.5 lb./A of Sencor® on loamy sand with over 2% organic matter. On medium soils, apply 1.33 pts./A of Metolachlor 8E + 0.5-0.67 lb./A of Sencor®. For fine soils, apply 1.33-1.67 pts./A of Metolachlor 8E + 0.67 lb./A of Sencor®.

*When using Sencor® 4, multiply lbs. of DF by 1.5 to get pts./A

Precautions: To avoid crop injury, (1) 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. (2) Crop injury may result if heavy rains occur soon after application, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.

Metolachlor 8E + Scepter® + Gramoxone® Extra, Roundup® or Gly Star™ Original

Apply 1.0 pt./A of Metolachlor 8E + 0.67 pt./A of Scepter® on coarse soils. For medium soils, apply 1.33 pts./A of Metolachlor 8E + 0.67 pt./A of Scepter®. For fine soils, apply 1.67 pts./A of Metolachlor 8E + 0.67 pt./A of Scepter®.

Notes: (1) Do not harvest within 90 days of application, and (2) Do not graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.

Metolachlor 8E + Lorox® + Gramoxone® Extra, Roundup® or Gly Star™ Original

On coarse soils*, apply 1.0 pt./A of Metolachlor 8E + 1.0-1.5 lbs./A of Lorox® DF**. For medium soils, apply 1.33 pts./A of Metolachlor 8E + 1.0-2.0 lbs./A of Lorox® DF. For fine soils, apply 1.33-1.67 pts./A of Metolachlor 8E + 2.0-3.0 lbs./A of Lorox® DF.

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

Precaution: Crop injury may occur if used on soil containing less than 0.5% organic matter.

Metolachlor 8E + Canopy® + Gramoxone® Extra, Roundup® or Gly Star™ Original

Use this tank mixture only where soils have 0.5-5% organic matter. Apply 1.0 pt./A of Metolachlor 8E on coarse soils (except sand), 1.33 pts./A of Metolachlor 8E on medium soils, and 1.33-1.67 pts./A of Metolachlor 8E on fine soils. Refer to the Canopy® label for the appropriate rate according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

Precaution: Except as noted on the Canopy® label, 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 on the Canopy® label.

Metolachlor 8E + Pursuit® + Gramoxone® Extra, Roundup® or Gly Star™ Original

Apply 1.0 pt./A of Metolachlor 8E + 0.25 pt./A of Pursuit® on coarse soils. For medium soils, apply 1.33 pts./A of Metolachlor 8E + 0.25 pt./A of Pursuit®. For fine soils, apply 1.67 pts./A of Metolachlor 8E + 0.25 pt./A of Pursuit®.

CONDITIONS OF SALE AND WARRANTY

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