

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

S-METOLACHLOR	GROUP	15	HERBICIDE
METRIBUZIN	GROUP	5	HERBICIDE

## PREsidual®

Herbicide for control of certain grasses and broadleaf weeds in potatoes and soybeans

### ACTIVE INGREDIENTS:

S-metolachlor (CAS No. 87392-12-9).....58.2%

Metribuzin (CAS No. 21087-64-9).....13.8%

\*OTHER INGREDIENTS:.....28.0%

**TOTAL**.....100.0%

\*Contains petroleum distillates.

PREsidual is formulated as an emulsifiable concentrate (EC) containing 5.25 lbs. of S-metolachlor and 1.25 lbs. of metribuzin per gallon.

## KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

FIRST AID	
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>Do not give <b>any</b> liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>NOTE TO PHYSICIAN:</b> Contains petroleum distillates. Vomiting may cause aspiration pneumonia.	
<b>HOTLINE NUMBER:</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-424-7452 for emergency medical treatment information.	

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS, COMPLETE DIRECTIONS FOR USE, WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY.

**NET CONTENTS:** \_\_\_\_\_

**EPA Reg. No.:** 1381-272

**Manufactured for:**

Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164-0589  
2/0727/1

**EPA Est. No.:** \_\_\_\_\_

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

**WARNING/AVISO.** Causes substantial, but temporary eye injury. Harmful if swallowed. Do not get in eyes or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Contains petroleum distillates.

### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Protective eyewear
- Chemical-resistant gloves made of barrier laminate, butyl rubber ( $\geq 14$  mils), nitrile rubber ( $\geq 14$  mils), or Viton ( $\geq 14$  mils)
- Long-sleeved shirt and long pants
- Shoes plus socks

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

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

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 170.607(d-f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

#### Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

### Groundwater Advisory

S-metolachlor is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Metribuzin is a chemical which can travel (seep or leach) through soil and can contaminate groundwater which may be used as drinking water. Metribuzin has been found in groundwater as a result of agricultural use. Users are advised not to apply metribuzin where the water table (groundwater) is close to the surface and where the soils are very permeable, i.e., well-drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### **Surface Water Advisory**

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

### **Non-target Organism Advisory**

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

### **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 rinsate.

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

This product must 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.

### **Reporting Ecological Incidents**

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-855-494-6343.

### **Physical or Chemical Hazards**

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

## **DIRECTIONS FOR USE**

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

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.

### **Endangered Species Protection Requirements**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered

Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

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**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

### **AGRICULTURAL USE REQUIREMENTS**

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

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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, wear:

- Protective eyewear
- Coveralls
- Chemical-resistant gloves made of barrier laminate, butyl rubber ( $\geq 14$  mils), nitrile rubber ( $\geq 14$  mils), or Viton ( $\geq 14$  mils)
- Shoes plus socks

### **PRODUCT INFORMATION**

PREsidual is a soil applied, pre-emergent herbicide containing two active ingredients with different modes of action, which assists in the management of herbicide resistance.

Do not apply under conditions which 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:

- 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.
- Do not apply to impervious substrates, such as paved or highly compacted surfaces.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least  $\frac{1}{2}$  inch of rainfall has occurred between application and the first irrigation.

### **Mixing Instructions**

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean the spray equipment before using PREsidual. Vigorous agitation is necessary to maintain uniformity of the spray mixture. Maintain maximum agitation throughout the spraying operation. Do not allow spray mixture to stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

## Application in Water or Fluid Fertilizers

**PREsidual Alone:** Add 1/3 of the required amount of water or fluid fertilizer to the spray or mixing tank. With the agitator running, add PREsidual into the spray tank. Continue agitation while adding the remainder of the water or fluid fertilizer. Begin application of the spray solution after the PREsidual has completely dispersed in the water or fluid fertilizer. Maintain agitation until all of the mixture has been applied.

## Tank Mixtures

This product may be tank mixed with other products at appropriate rates as long as tank mixing is not prohibited by the label(s) of the tank mix partner products, or as otherwise noted within the specific crop use directions for this product, and the tank mix partner products are labeled for the timing and method of application for the use site to be treated. Do not exceed any label dosage rates.

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

If you have no previous experience mixing these products under your conditions, perform a compatibility test before attempting large-scale mixing (see the **Compatibility Test** section of this label).

**Mixing Instructions (PREsidual + Tank Mix Partner):** Add 1/3 of the required amount of water or fluid fertilizer to the mix tank. Start the agitator running before adding any tank mix partners. In general, add tank mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquids such as PREsidual, and emulsifiable concentrates.

Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

When using PREsidual in tank mixtures with products packaged in water-soluble packaging:

- 1) Add all products in water-soluble packaging to the tank and mix with plain water before any other tank mix partner, including PREsidual. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.
- 2) Water-soluble packets will not properly dissolve in most spray solutions that contain fluid fertilizers.

PREsidual is compatible with most common tank mix partners. However, the physical compatibility of PREsidual with tank mix partners should be tested before use. To determine the physical compatibility of PREsidual with other products, use a jar test, as described below.

## Compatibility Test

A jar test is recommended before tank mixing to ensure compatibility of PREsidual with other pesticides. The following test assumes a spray volume of 25 gal./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.

## Test Procedure

- 1) Add 1.0 pt. of carrier (fertilizer or water) to each of 2 one qt. 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 (¼ tsp. is equivalent to 2.0 pt./100 gal. spray). Shake or stir gently to mix.

- 3) To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
- 4) After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15-30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) Slurry the dry pesticide(s) in water before addition, or (b) add ½ 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 in this label.

### Ground Application

Apply PREsidual alone or in tank mixtures by ground equipment in a minimum of 10 gallons of spray mixture per acre, unless otherwise specified.

Use sprayers that provide accurate and uniform application. Calibrate the sprayer before use at the beginning of the season. For PREsidual tank mixtures with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50-mesh.

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

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

### Center Pivot Irrigation Application

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

### Operating Instructions

- 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 backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
- 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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.

- 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.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Prepare a mixture with a minimum of 1-part 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.
- Meter into irrigation water during entire period of water application.
- Apply in ½ - 1 inch of water. Use the lower water volume (½ inch) on coarse-textured soils and the higher volume (1 inch) on fine-textured soils. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

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

### **Aerial Application**

Apply PREsidual in water using a minimum spray volume of 2 gal./A. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Make applications at a maximum height of 10 ft. above the crop canopy.

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.

### **Spray Drift Management**

#### **Mandatory Spray Drift Management**

##### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to select the nozzle and pressure that deliver coarse or coarser droplets (ASABE S641).
- For all other applications, applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S641).
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- If the wind speed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the wind speed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

##### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### **Boomless Ground Applications:**

- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### **Spray Drift Advisories**

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

### **Importance of Droplet Size**

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

#### **Controlling Droplet Size – Ground Boom**

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

#### **Controlling Droplet Size – Aircraft**

- **Adjust Nozzles** - Follow nozzle manufacturers' recommendations for setting up nozzles.
- Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **Boom Height – Ground Boom**

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

### **Release Height - Aircraft**

Higher release heights increase the potential for spray drift. Do not release spray at a height greater than 10 feet above the ground or vegetative crop canopy, unless a greater application 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 downward. 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.)

### **Shielded Sprayers**

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

### **Temperature and Humidity**

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



## Temperature Inversions

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

## Wind

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** 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.

## 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).

## Boomless Ground Applications

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

## Handheld Technology Applications:

Take precautions to minimize spray drift.

## Cleaning Equipment After Application

Because some non-labeled crops are sensitive to low rates of PREsidual, special attention must be given to cleaning equipment before spraying a crop other than those registered for use and on this label. Mix only as much spray solution as needed. Immediately after spraying, clean equipment thoroughly using the following procedure:

- 1) Flush tank, hoses, boom, and nozzles with clean water.
- 2) Prepare a cleaning solution of one gal. of household ammonia per 50 gal. of water. Many commercial spray tank cleaners may be used as well. Consult your Winfield Solutions, LLC representative for a partial listing of approved tank cleaners and more information about proper tank cleaning procedures. Do not use chlorine-based cleaners.
- 3) When available, use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. Completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly re-circulate the cleaning solution for **at least 15 minutes**. All visible deposits must be removed from the spraying system.
- 4) Flush hoses, spray lines, and nozzles for at least one minute with the cleaning solution.
- 5) Dispose of rinsate from steps 1 - 3 as described under the **Environmental Hazards** section of the **Precautionary Statements**.
- 6) Repeat steps 2 - 5.
- 7) Remove nozzles, screens, and strainers and clean separately in the ammonia cleaning solution after completing the above procedures.
- 8) Rinse the complete spraying system with clean water.

## Impregnation Onto Dry Bulk Granular Fertilizers

Many dry bulk granular fertilizers may be impregnated or coated with PREsidual and used to control weeds. When applying PREsidual with dry bulk fertilizers, follow all directions for use, restrictions and precautions

on the PREsidual label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

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

Prepare the herbicide/fertilizer mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray PREsidual onto the fertilizer must be spaced to provide uniform spray coverage. Take care to aim the spray onto the fertilizer only, avoiding the walls of the blender.

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

Calculate the amount of PREsidual to be used by the following formula:

$$\frac{2,000}{\text{lbs. of fertilizer per acre}} \times \text{pt. of PREsidual per acre} = \text{pt. of PREsidual per ton of fertilizer}$$

### **Pneumatic (Compressed Air) Application**

High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixtures to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix PREsidual with Aromatic 200 at a rate of 2.0 - 2.5 pt./gal. of PREsidual. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

Mixtures of PREsidual and Aromatic 200 must be used on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. When impregnating PREsidual in a blender before application, a drier mixture can be obtained by substituting a drying agent for Aromatic 200. The use of a drying agent of 6/30 particle size is recommended. Drying agents are not advised for use with On-The-Go impregnation equipment.

### **Restrictions: To avoid potential for explosion,**

- 1) Do not impregnate PREsidual on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers.
- 2) Do not combine PREsidual with a single superphosphate (1-20-0) or triple superphosphate (0-46-0).
- 3) Do not use PREsidual on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

### **Application of Impregnated Dry Bulk Granular Fertilizer**

Apply 200 - 700 lb. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential in order to prevent possible crop injury to subsequent rotational crops. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil is advised to obtain satisfactory 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:** To help avoid rotational crop injury, make applications as early as possible, since PREsidual impregnated onto dry bulk fertilizers can be expected to last longer in the soil than PREsidual applied as a spray in water or fluid fertilizer.

**Table 1: Crop Rotation Intervals<sup>1,3</sup>**

Rotational Interval After Application of PREsidual <sup>2</sup>				
4 months	4½ Months	8 Months	12 Months	18 Months
Corn	Winter Barley Winter Wheat Alfalfa	Peas Rice <sup>4</sup> Spring Barley Spring Wheat	Asparagus Cotton Forage Grasses Lentils Sainfoin Sugarcane Tomatoes Other Crops not listed (except root crops)	Onions Sugar Beets and Other Root Crops

<sup>1</sup> Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed. Stand reductions may occur in some areas.

<sup>2</sup> Crop rotation restrictions do not include restrictions for the tank mix partner. Refer to the label of the other product for additional restrictions.

<sup>3</sup> Refer to the specific crop use sections for additional crop rotation precautions.

<sup>4</sup> Do not rotate rice after any application to a primary crop at greater than 1.0 lb. a.i. per acre of metribuzin per season.

## Replanting

If replanting is necessary in fields previously treated with PREsidual, the field may be replanted to soybeans or potatoes. Before replanting, refer to the specific crop use sections for precautions and restrictions.

## Activation

A small amount of rainfall or irrigation is required to activate PREsidual following application. In areas of low rainfall, follow a preemergence application with light irrigation of ¼ to ½ inch of water. Do not apply heavy irrigation immediately after application. As with many surface-applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

## Weed Resistance Management

PREsidual contains both a Group 15 herbicide (S-metolachlor) and a Group 5 herbicide (Metribuzin). Any weed population may contain plants naturally resistant to Group 15 and/or Group 5 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of this product or other Group 15 and Group 5 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Scout fields after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
  - A spreading patch of non-controlled plants of a particular weed species.
  - Surviving plants mixed with controlled individuals of the same species.

If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist, certified crop advisors, and/or Winfield Solutions, LLC representative for pesticide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.
- For further information or to report suspected resistance, contact your Winfield Solutions, LLC representative.

**Table 2: Weeds Controlled/Suppressed by PREsidual**

**Annual Broadleaves\***

Anoda, spurred	Lambsquarters, common	<i>Sesbania</i> spp.
Beggarweed, Florida	Lettuce, prickly	Shepherd's-purse
Carpetweed	Mallow, Venice	Sicklepod
Chickweed, common	Mustard spp.	Sida, prickly/teaweed
Cocklebur**	Nightshade, black	Smartweed, Pennsylvania
Copperleaf, hophornbeam	Nightshade, hairy**	Spurge, spotted
<i>Galinsoga</i> spp.	Pennycress, field	Starbur, bristly
Henbit	Pepperweed, Virginia	Sunflower, common**
Jimsonweed	Pigweed spp.	Thistle, Russian
Knotweed spp.	Purslane, common	Velvetleaf**
Kochia (in soybean)	Pusley, Florida	Waterhemp spp.
Kochia (in potato)**	Ragweed, common**	
Ladysthumb	Redweed	

**Annual Grasses**

Barnyardgrass	Panicum, fall
Bluegrass, annual	Rice, red

Crabgrass spp.	Sandbur spp.**
Crowfootgrass	Seedling Johnsongrass**
Cupgrass, prairie	Shattercane**
Cupgrass, southwestern	Signalgrass, broadleaf
Foxtail spp.	Texas Panicum**
Goosegrass	Witchgrass
Junglerice	

### **Sedges**

Yellow nutsedge (in potato)  
 Yellow nutsedge\*\* (in soybean)

### **Volunteer Crops**

Barley\*\*  
 Sorghum\*\*  
 Wheat\*\*

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\* Except triazine-resistant biotypes other than Galinsoga spp., black nightshade, pigweed spp. and waterhemp spp.

\*\* Suppression only. Suppression means significant activity, but not always at a level considered acceptable for commercial weed control.

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## **CROPS**

### **POTATOES (EXCEPT CALIFORNIA)**

PREsidual may be used for preemergence weed control prior to or after potato emergence. PREsidual has some postemergence activity on weeds, but the consistency and spectrum of weed control is much better preemergence to weeds. There is an increased risk of crop injury with preplant incorporated applications.

The application rates for PREsidual for use in potatoes are provided below (**Table 3** and **Table 4**). When a rate range is given, use the lower rate within the range on the more coarse-textured soils listed within that group and/or where weed pressures are known to be light; use the high end of the rate range on the more fine-textured soils listed within that group and/or where the weeds pressures are known to be heavy.

See **Table 2** for a listing of weeds controlled/suppressed by PREsidual.

#### **Restrictions:**

- 1) Do not apply more than two treatments per year.
- 2) For potatoes grown in soils with organic matter between 3% and 10% do not apply more than 5.1 pints (3.35 lbs. a.i. S-metolachlor; 0.80 lb. a.i. metribuzin) per acre/year.
- 3) For potatoes grown in soils with organic matter between 0.5% and 3.0% do not apply more than 4.95 pints (3.25 lbs. a.i. S-metolachlor; 0.77 lb. a.i. metribuzin) per acre/year.
- 4) Do not apply PREsidual to muck or peat soils.
- 5) Do not apply more than 1.0 lb. a.i. of metribuzin per acre/year from any source.
- 6) **Pre-harvest Interval (PHI):** Do not harvest within 60 days of the last PREsidual application.
- 7) Do not apply after June 30 in Idaho, Oregon, or Washington if the treated land will be planted to a crop other than potatoes in the fall.

8) Do not apply PREsidual to sweet potatoes or yams.

**Precautions:**

- 1) To avoid crop injury, make postemergence applications only on russeted or white skinned varieties of potatoes that are not early maturing. Avoid postemergence applications on Atlantic, Bellchip, Centennial, Chipbelle, Shepody and Superior varieties. Preemergence applications on these varieties may cause crop injury under adverse weather conditions, on coarse soils, under high soil pH and with higher use rates.
- 2) Potato varieties may vary in their response to a given herbicide application. When using PREsidual for the first time on a particular variety, always determine crop tolerance before using on a field-scale.
- 3) The planting of sensitive crops such as lettuce, cole crops and cucurbits during the next growing season following application of PREsidual may result in injury to that crop.
- 4) Certain cereal varieties are sensitive to metribuzin and are not advised to be planted during the next growing season unless the following cultural practices occur:
  - a) Potato vines left in the row as a result of harvest must be uniformly distributed over the soil surface prior to plowing, and
  - b) Plow with a moldboard plow to a depth sufficient to mix the upper 8 inches of soil.
- 5) Crop injury may occur if PREsidual is applied as a preplant incorporated application in potatoes.
- 6) Applying PREsidual postemergent when the weather in the next 3 days is predicted to be cool, wet or cloudy, may cause crop injury.

**Preemergence Applications**

Apply with ground spray equipment, aerial spray equipment, or by center pivot irrigation equipment which is capable of making a uniform broadcast application. Apply after planting but before crop emergence, or apply after drag-off if this operation is part of the usual cultural practice.

**Table 3: PREsidual Preemergence Use Rates in Potatoes**

Soil Texture	0.5 to 3% Organic Matter Pt./A	Over 3% Organic Matter Pt./A
<b>COARSE</b> <sup>1</sup> (Sand, loamy sand, sandy loam)	1.5 - 2.0	2.0 - 2.4
<b>MEDIUM or FINE</b> (Loam, silt loam, silt, sandy clay, sandy clay loam, silty clay, silty clay loam, clay, clay loam)	2.4 - 2.75	2.75 - 2.9

<sup>1</sup>On soils that classify as a “sand” texture do not use more than 1.5 pt./A of PREsidual, or more than 0.5 lb. a.i./A of metribuzin in total, or crop injury may occur.

**Postemergence Applications**

Apply postemergence only in center pivot irrigation water, after drag-off if that is a usual cultural practice, but not closer than 60 days before harvest. Refer to the **Center Pivot Irrigation Application** section of this label for application information.

**Table 4: PREsidual Postemergence Use Rates in Potatoes (for application in center pivot irrigation water only)**

Soil Texture	0.5% Organic Matter and Above Pt./A
<b>COARSE</b> <sup>1</sup> (Sand, loamy sand, sandy loam)	1.5
<b>MEDIUM or FINE</b> (Loam, silt loam, silt, sandy clay, sandy clay loam, silty clay, silty clay loam, clay, clay loam)	1.5 - 2.2

<sup>1</sup>Crop injury may occur on soils that classify as a “sand” texture and have less than 0.5% organic matter.

### **Tank Mixtures With Other Products Registered for Use in Potatoes**

For preemergence applications in potatoes, PREsidual may be tank mixed with other pesticide products registered for use in this way and timing in potatoes.

For postemergence applications (center pivot irrigation applications only), i.e. where potato vines are exposed, there may be increased risk of crop injury from certain product mixtures. At this application timing, tank mix PREsidual only with pesticide products which allow tank mixing and postemergence chemigation on their product label.

See the **Tank Mix** section on this label for further information on tank mixing.

### **SOYBEANS (EXCEPT CALIFORNIA)**

PREsidual may be applied preplant surface, preplant incorporated, preemergence, as a sequential application, or as a postemergence directed (see state limitations) to control weeds listed on this label.

See **Table 2** for a listing of weeds controlled/suppressed by PREsidual.

### **Grazing and Feeding Treated Soybean Plants**

Do not graze or feed soybean plants to livestock if they have received a post-emergent (directed application) treatment. For other applications, treated soybean plants may be grazed or fed to livestock 40 days after the last application of PREsidual.

### **Rate Ranges**

Where a rate range is shown, use the lower rate on soils that are coarse-textured and/or low in organic matter. Use the higher rate on soils that are relatively fine-textured and/or high in organic matter.

### **Replanting**

If replanting is necessary in fields previously treated with PREsidual, the field may be replanted to soybeans. Minimum tillage is advised. Excessive tillage will reduce residual weed control. Do not apply a second treatment as injury to soybeans may occur.

### **Precautions**

Injury to soybeans or reduced weed control may occur when PREsidual is used under the following conditions. Avoid these conditions wherever possible.

- 1) When soils have a calcareous surface area or a pH of 7.5 or higher.
- 2) Due to the sensitivity of certain soybean varieties, do not apply PREsidual on varieties that are not confirmed as being tolerant to metribuzin. Consult the seed supplier for information on its tolerance to metribuzin (an active ingredient in PREsidual) before using PREsidual.
- 3) When applied in conjunction with soil-applied organic phosphate pesticides.
- 4) Uneven application or improper incorporation of PREsidual can decrease the level of weed control and/or increase the level of crop injury.
- 5) When applied to any soil with less than 0.5% organic matter.
- 6) Where soil incorporation is deeper than recommended.
- 7) When sprayers were not calibrated accurately.
- 8) When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days.
- 9) When soybeans are planted less than 1½" deep, particularly when PREsidual is applied preemergence.
- 10) Where high soil levels of atrazine are present.
- 11) When using poor quality soybean seed.

**Restriction:** Do not exceed 3.71 lbs. a.i. per acre per year of S-metolachlor containing products.

## Tank Mixing

PREsidual may be tank mixed with other products at appropriate rates as long as tank mixing is not prohibited by the label(s) of the tank mix partner products, or as otherwise noted within the soybean section of this label and the tank mix partner products are labeled for the timing and method of application.

See the **Tank Mix** section on this label for further information on tank mixing.

### **PREsidual Foundation Program for a Planned 2-Pass Weed Control Systems (preplant incorporated or preemergence application followed by other herbicide)**

PREsidual may be applied preplant incorporated or preemergence at 1.5 - 1.8 pt./A on all soils to reduce competition from the weeds listed in **Table 2** for a 30-day period when followed by a planned postemergence weed control treatment. **On soils with pH above 7.0, use the 1.5 pt./A rate only.** Recommended postemergence treatments include any product or combination of products labeled to control the specific weeds remaining in the field, including glyphosate products (for use only on glyphosate tolerant soybean varieties). Follow all application directions for PREsidual used alone, either preplant incorporated or preemergence. For the postemergence herbicide application, consult the selected postemergence herbicide manufacturer's label for weeds controlled, weed size, application rate, additional use directions, precautions, and limitations before use. See the **Tank Mix** section on this label for further information on tank mixing.

### **PREsidual in Conventional Tillage Systems**

**Preplant Incorporated Application:** Incorporate PREsidual uniformly into the top 2 inches of soil within 14 days before planting using a disk, field cultivator, rolling cultivator, or similar implement. Apply PREsidual preplant incorporated if furrow irrigation is used or when a period of dry weather after application is expected. If soybeans are planted on beds, apply and incorporate the tank mixture after bed formation.

**Preemergence Application:** Dry weather following preemergence application of PREsidual may reduce effectiveness. If weeds develop, cultivate uniformly with shallow tilling equipment such as a rotary hoe that will not damage soybeans.

For information on applying product in fluid or dry fertilizer, refer to **Application in Water or Fluid Fertilizers** or **Impregnation Onto Dry Bulk Granular Fertilizers** and **Application of Impregnated Dry Bulk Granular Fertilizer** on this label.

**Table 5: PREsidual Use Rates - Conventional Tillage Systems (Broadcast Rate)**

Soil Texture	0.5 to 3% Organic Matter (Pt./A)	Over 3% Organic Matter <sup>2</sup> (Pt./A)
<b>COARSE</b> <sup>1</sup> (Loamy sand, sandy loam)	1.2 - 1.5 <sup>3</sup>	1.5 - 1.8
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	1.8 - 2.1	2.1 - 2.4
<b>FINE</b> (Silty clay, silty clay loam <sup>4</sup> , clay, clay loam)	2.4 - 2.7	2.4 - 3.0

<sup>1</sup> Do not use on sand soils. On coarse-textured soils, do not use on loamy sand soils with less than 2% organic matter.

<sup>2</sup> For preplant incorporated application, use the lower rate.

<sup>3</sup> For Southern and Southeastern states, see section below **In Coarse (Light) Soils (Table 6)**

<sup>4</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. When using PREsidual, treat this soil as "fine-textured."

**Precaution:** On soils with pH above 7.0, soybean injury caused by the metribuzin in PREsidual may occur at rates higher than 1.5 pt./A. To avoid injury, do not use PREsidual at rates greater than 1.5 pt./A on soils above pH 7.0.



## In Coarse (Light) Soils

(Only in AL, AR, FL, GA, LA, MS, MO, NC, OK, SC, TN, TX, VA)

PREsidual may be applied as a preplant incorporated or preemergence application in coarse-textured, low organic matter soils in the states listed above. Refer to the appropriate sections of this label for specific directions on use, precautions, and restrictions.

**Table 6: PREsidual Preemergence Application (Broadcast Rates)**

Soil Texture	Organic Matter	PREsidual <sup>2</sup> (Pt./A)
<b>COARSE</b> (Sand <sup>1</sup> , loamy sand, sandy loam)	0.5% or above	1.2 - 2.1

<sup>1</sup>Do not use on sand with less than 1% organic matter.

<sup>2</sup>Use the higher rate under heavy weed pressures and/or on soils higher in organic matter. For maximum control of sicklepod, use a preemergence application.

**Precaution:** On soils with pH above 7.0, soybean injury caused by the metribuzin in PREsidual may occur at rates higher than 1.5 pt./A. To avoid injury, do not use PREsidual at rates greater than 1.5 pt./A on soils above pH 7.0.

### **Burndown Weed Control**

PREsidual can be used as part of a burndown herbicide program for control of existing vegetation prior to soybean emergence in conservation tillage (reduced- tillage/no-till) systems.

PREsidual may be tank mixed with other herbicides registered for the same use and timing for control of emerged weeds prior to crop emergence. Apply PREsidual burndown tank mixes before planting or prior to crop emergence. See the **Tank Mix** section on this label for further information on tank mixing.

### **Application**

PREsidual may be applied up to 30 days before planting or preemergence. Apply only by ground equipment when PREsidual is used for burndown of existing vegetation in conservation tillage systems. Use the high end of the rate range for PREsidual applications made 14 - 30 days before planting. Refer to **Table 7** for rates of PREsidual. Refer to the tank mix product labels for rates and use directions. Follow all label directions, restrictions, and precautions for tank mix partners. Where differences arise, the more restrictive language must be followed.

Refer to the **Product Information** section of this label for additional information, precautions, and limitations.

### **Restrictions for Burndown Weed Control in Soybeans:**

- 1) Do not apply these treatments after crop emergence.
- 2) Burndown application may only be made by ground.
- 3) Soybean plants or hay treated with PREsidual as a burndown treatment may be grazed or fed to livestock 40 days after application. Follow the most restrictive preharvest interval of all products used in a tank mixture.

### **PREsidual Use Rates For Reduced and No-Till Systems**

#### **Preplant Surface Application**

PREsidual may be used in reduced-till and no-till systems. Applications may be made up to 30 days before planting or after planting, but before soybean emergence.

Residual herbicides may be tank mixed for additional weed control. If weeds are present at time of application, burndown herbicides may be added to the tank mixes (see **Burndown Weed Control** section). Refer to the tank mix product labels for rates and use directions. See the **Tank Mix** section on this label for further information on tank mixing.

**Table 7: PREsidual Use Rates for Reduced-Till and No-Till Systems (Broadcast Rates)**

Soil Texture	PREsidual (Pt./A <sup>1</sup> )
<b>COARSE</b> <sup>2</sup> (Loamy sand, sandy loam)	1.2 - 2.1
<b>MEDIUM</b> (Loam, silt loam, silt, sandy clay, sandy clay loam)	2.1 - 3.0
<b>FINE</b> (Silty clay, silty clay loam <sup>3</sup> , clay, clay loam)	2.7 - 3.6

<sup>1</sup> Use the lower rate within the range for low residue level or soils with less than 3% organic matter. Use the higher rate within the range for high residue level or soils with greater than 3% organic matter.

<sup>2</sup> Do not use on sand soils. On coarse-textured soils, do not use on loamy sand soils with less than 2% organic matter.

<sup>3</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. When using PREsidual, treat this soil as “fine-textured.”

### **PREsidual Sequential Application**

An early preplant (surface-applied or shallow incorporated) application of PREsidual, followed by a preemergence application of PREsidual after planting but before soybean emergence, will provide more consistent control of broadleaf and grass weeds than a single application.

A sequential application will decrease the need for tillage and/or burndown herbicides for the control of existing vegetation before planting, while providing residual control of weeds after planting.

### **Application**

An early preplant application may be made 15 - 30 days before planting soybeans. Follow this application with a preemergence overlay application of PREsidual after planting but before crop emergence. Follow directions on this label for sequential applications from 0 - 14 days before planting.

Where a rate range is listed, use the higher rates (a) in fields with a history of severe weed pressure, (b) when the time between early preplant and preemergence overlay applications approaches the maximum 30 days, (c) when the organic matter content of the soil is over 3%, and/or (d) when heavy crop residues are present on the soil surface.

When weeds exceed 1 - 1.5 inches in height or diameter at application, use a burndown herbicide, such as glyphosate, paraquat, or 2,4-D LVE.

**Weeds Controlled:** In addition to weeds controlled by PREsidual alone, the sequential application improves control of the following annual broadleaf weeds: buffalobur, cocklebur, common ragweed, velvetleaf, and sunflower.

**Table 8: Sequential Application (Broadcast Rates)**

Soil Texture <sup>1</sup>	Early Preplant Application PREsidual (Pt./A)	- Followed By -	Preemergence Overlay Application PREsidual (Pt./A)
<b>COARSE</b> <sup>1</sup> (Sand, loamy sand, sandy loam)	1.2 - 1.8	- followed by -	0.3 - 0.9
<b>MEDIUM</b> (Loam, silt loam, sandy clay loam, silt, sandy clay)	1.5 - 2.1	- followed by -	0.6 - 1.2
<b>FINE</b> (Silty clay loam <sup>2</sup> , clay loam, silty clay, clay)	1.8 - 2.4	- followed by -	0.9 - 1.5

<sup>1</sup> On coarse-textured soils, do not use on sand soils with less than 1% organic matter. However, on coarse-textured soils with a calcareous surface area or a pH of 7.5 or higher, do not use on sand soils

with less than 2% organic matter, or on loamy sand or sandy loam soils with less than 1% organic matter.

<sup>2</sup> Silty clay loam soils are transitional soils and may be classified as medium-textured soils in some regions of the U.S. When using PREsidual, treat this soil as “fine-textured.”

**Restriction:** Do not to exceed 3.9 pints (2.56 lbs. a.i. S-metolachlor; 0.61 lb. a.i. Metribuzin) of PREsidual per acre per year.

**Postemergence Directed Application (AR, LA, MO – Bootheel only, MS, TN)**

PREsidual can be applied postemergence directed to soybeans to provide residual control of weeds that emerge after crop emergence in the states of Arkansas, Louisiana, Missouri - Bootheel only, Mississippi and Tennessee. A postemergence directed spray of PREsidual can be applied to soybeans in addition to a preemergence or preplant application of PREsidual according to label directions. The total amount of PREsidual applied must not exceed 3.9 pints per acre per year.

See **Table 9** below for PREsidual postemergence directed rates according to soil type and organic matter level.

**Table 9: PREsidual Rates for Postemergence Directed Application (Broadcast Rates)**

Soil Texture	Broadcast Rate Per Acre	
	0.5% to less than 3% organic matter	3% organic matter or greater
<b>Coarse</b> Loamy sand, sandy loam (over 2% organic matter)	1.3 pt.	1.5 pt.
<b>Medium</b>	1.5 - 2.0 pt.	2 pt.
<b>Fine</b>	2 pt.	2 pt.
<b>Mississippi Delta only</b> Silty clay, clay	2 pt.	2 pt.

A postemergence directed application of PREsidual will provide residual preemergence weed control of the weeds listed in **Table 2**.

Apply in 10 to 20 gallons of water per acre in a 6 to 8 inch band on each side of the row when soybeans are at least 8 inches tall. Do not allow the directed spray to contact more than the lower ¼ to ⅓ of soybean plants. Soybean leaves contacted by the spray will be killed or severely injured. Do not apply directly to soybeans or serious injury will occur.

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

**Post-Directed Application Tank Mixes - Glyphosate Tolerant Soybeans Only**

Postemergence directed applications of PREsidual can be tank mixed with glyphosate in glyphosate-tolerant soybeans only. See the **Tank Mix** section on this label for further information on tank mixing.

**Postemergence Directed Applications – Restrictions**

- 1) Do not exceed a total of 3.9 pints (2.56 lbs. a.i. S-metolachlor; 0.61 lb. a.i. Metribuzin) per acre per year of PREsidual.
- 2) Do not exceed 3.71 lbs. a.i. per acre per year of S-metolachlor containing products.
- 3) Do not graze or feed treated soybean forage, hay, or straw to livestock.
- 4) **Pre-harvest Interval (PHI):** Do not apply within 75 days of soybean harvest.
- 5) Do not apply PREsidual to sandy loam or loamy sand soils with less than 2% organic matter.

## STORAGE AND DISPOSAL

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

### **PESTICIDE STORAGE:**

Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Contain spillage or leakage and absorbed with clay granules, sawdust, or equivalent material for disposal.

### **PESTICIDE DISPOSAL:**

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

**CONTAINER HANDLING:** Use the handling instructions below appropriate for container size and type.

**Nonrefillable container equal to or less than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Nonrefillable container greater than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Refillable container:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call  
CHEMTREC 1-800-424-9300.**

### **WARRANTY DISCLAIMER**

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