



# DuPont™ Authority®

herbicide

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*“..... A Growing Partnership With Nature”*

## DUPONT™ AUTHORITY® HIGHLIGHTS

- AUTHORITY® provides selective preemergence weed control in soybeans of such difficult-to-control weeds as waterhemp, nightshades, morningglories, kochia, and lambsquarters.
- AUTHORITY® has a flexible rate range for full-season vs. planned sequential programs.
- AUTHORITY® may be tank mixed with DuPont™ CLASSIC®, DuPont™ CANOPY XL®, DuPont™ ASSURE® II and other products for increased weed control.
- AUTHORITY® may be applied 30 days Early Preplant for burndown of small emerged weeds.
- Always include a spray additive as recommended in the burndown section of this label.
- Apply in a minimum of 10 gal water per acre by ground using flat fan nozzles (25-40 psi) or hollow cone nozzles (40-60 psi). See Application Information.
- Consult label text for complete instructions. Always read and follow label directions for use.

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# DuPont™ Authority®

## herbicide

*Dispersible Granules*

<i>Active Ingredients</i>	<i>By Weight</i>
Sulfentrazone N-[2,4-dichloro-5-[4-(difluoromethyl)- -4,5-dihydro-3-methyl-5-oxo-1H-1,2,4- -triazol-1-yl]phenyl]methanesulfonamide	75%
<i>Inert Ingredients</i>	25%
TOTAL	100%

EPA Reg. No. 352- 590

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

### FIRST AID

**IF SWALLOWED:** Call 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice..

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing dust, vapor or spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

### PRECAUTIONARY STATEMENTS (cont'd) 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 A on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves Category A, (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all ≥14 mls.

Shoes plus socks.

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

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 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.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

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

Do not use on coarse soils classified as sand which have less than 1 % organic matter.

Surface water advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying 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-lying tile drainage systems that drain to surface waters.

### PHYSICAL/CHEMICAL HAZARDS

Do not use or store near heat or open flame.

## PRECAUTIONARY STATEMENTS - IMPORTANT

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides and seeds during storage.

### **Prior to using DuPont™ AUTHORITY® herbicide, consideration should be given to crop rotation plans.**

Crops other than soybeans may be extremely sensitive to low concentrations of AUTHORITY® remaining in the soil the next planting season. Choice of rotation crop is restricted following application of AUTHORITY® (see "rotational crop guidelines").

Thoroughly clean AUTHORITY® from application equipment immediately after use and prior to spraying crops other than soybeans. Failure to remove even small amounts of AUTHORITY® from application equipment may result in injury to subsequently sprayed crops.

## 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.

### **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.

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 long-sleeved shirt and long pants.

Chemical Resistant Gloves Category A, (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all  $\geq 14$  mls.

Shoes plus socks.

## FOR USE ON SOYBEANS ONLY

Do not apply by aerial application.

Do not feed treated soybean forage or soybean hay to livestock.

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

Do not apply AUTHORITY® more than 5.3 oz/A per season.

AUTHORITY® herbicide must be used only in accordance with recommendations on this label or in separately published DuPont recommendations.

## GENERAL INFORMATION

AUTHORITY® herbicide is a dispersible granule formulation, to be mixed with water and sprayed for selective preemergence weed control in soybeans. Preemergence and preplant incorporated applications of AUTHORITY® require rainfall or sprinkler irrigation to activate the herbicide. Degree of control and duration of effect depend on: rate used, weed spectrum, growing conditions at and following time of treatment, soil pH, texture, organic matter, soil moisture and precipitation.

## BIOLOGICAL ACTIVITY

AUTHORITY® controls weeds through the process of cell membrane disruption. Weeds emerging from soils treated with AUTHORITY® become necrotic (wilt and become brown or looked burned) and die shortly after exposure to light. Foliar contact with AUTHORITY® causes rapid desiccation and necrosis of exposed susceptible plant tissues.

Poor growing conditions such as excessive moisture, cool temperatures, and soil compaction or the presence of various pathogens may impact seedling vigor. Under these conditions, AUTHORITY®, like other soil-applied herbicides, can injure soybeans. However, these early injury symptoms are short lived and do not result in yield reductions.

## RAINFALL ACTIVATION FOR PREEMERGENCE ACTIVITY

Best results are obtained if AUTHORITY® is applied to moist soil and followed by rainfall or irrigation before weeds germinate. Several small rainfalls of less than 1/4" each are not as beneficial as one large rainfall of 1/2 to 1". On dry soil, more moisture may be required for activation before weed emergence. If moisture is insufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means. When sufficient moisture is received after dry conditions, AUTHORITY® will provide control of susceptible germinating weeds.

## EARLY PRE-PLANT, PREEMERGENCE AND PREPLANT INCORPORATED USE DIRECTIONS

### APPLICATION METHODS

Do not apply DuPont™ AUTHORITY® after the soybean crop has emerged or severe injury or death of the crop will occur.

#### **Preplant Incorporated**

Uniformly incorporate AUTHORITY® or AUTHORITY® tankmixes no deeper than the top 1-2" of soil prior to planting soybeans. Use equipment suited to proper incorporation into the top 1-2 inches of soil, e.g.: Do-all, field cultivator, or rotterra. AUTHORITY® can be tank mixed with "Command" 4EC and applied preplant incorporated. Refer to the "Command" label for specific use instructions. If tank-mixed with a grass herbicide such as a Dinitroaniline (DNA) like "Treflan", "Sonalan", or "Prowl" or an acetanilide such as "Dual Magnum", "Dual II Magnum", "Frontier", or "Lasso", follow label instructions for proper incorporation of the grass herbicide into the top 1 to 2" of soil. Improper soil incorporation can result in erratic weed control or crop injury. If soil is dry, rainfall (~1") is required to activate preplant incorporated herbicides such as AUTHORITY® before weed emergence.

NOTE: Consult "Lasso", "Dual Magnum", "Dual Magnum II", "Frontier", "Prowl", "Treflan", "Sonalan", or "Command" labels for additional weeds controlled, use rates and instructions, when AUTHORITY® is used in conjunction with these herbicides.

#### **Early Pre-plant or Preemergence**

AUTHORITY® can be applied early pre-plant or preemergence in combination with herbicides such as DuPont™ CANOPY XL®, DuPont™ CLASSIC®, "Command" 3ME, "Lasso", "Sencor", "Boundary", "Dual" Magnum, "Dual" II Magnum, "Frontier", "Prowl" or following the use of a preplant incorporated herbicide such as "Treflan" or "Sonalan". Consult labels for rates and use instructions.

### USE RATES

#### **Early Pre-Plant, Preplant Incorporated, or Preemergence**

Apply AUTHORITY® herbicide at 4-5.3 ounces per acre. Use the higher rates when early applications are planned, heavy weed pressures are known to exist or in soils with high organic matter content (>4.0%).

### APPLICATION TIMING

AUTHORITY® may be applied up to 30 days before planting, at planting, or after planting but before soybeans emerge, unless otherwise specified on DuPont supplemental labeling. Application after soybean plants emerge will cause injury or death of the crop.

### WEEDS CONTROLLED

When used as directed AUTHORITY® at 4-5.3 oz/A will provide preemergence control of the following species:

Black Nightshade	Nightshade, eastern black,
Carpetweed	hairy
Copperleaf, Hophornbeam	Pigweed**, redroot, smooth
Groundcherries, smooth,	Palmer Amaranth*
clammy (seedling only)	Purslane, common
Jimsonweed	Russian thistle
Kochia*	Smellmelon
Lambsquarter**	Spotted spurge
Morningglory, entireleaf,	Waterhemp*, common, tall
ivyleaf, pitted***,	
smallflower, tall	

\* includes ALS and triazine resistant strains

\*\* includes triazine resistant strains

\*\*\*weed species which can germinate deep in the soil such as Pitted Morningglory or other weeds which may emerge at various times during the growing season, may require a cultivation or an application of CLASSIC® or DuPont™ SYNCHRONY® STS® herbicides for season long control.

When used as directed AUTHORITY® at 4-5.3 oz/A will provide partial preemerge control of the following weeds:

Biennial Wormwood	Velvetleaf†
Bristly starbur	Venice Mallow
Cocklebur	Barnyardgrass
Copperleaf Virginia	Fall Panicum
Florida beggarweed	Foxtail species
Florida Pusley	Goosegrass
Marshelder	Johnsongrass, seedling
Prickly Sida†	Large Crabgrass
Ragweed, Common	Signalgrass, broadleaf
Smartweed, Pennsylvania	Wild Buckwheat
Smell melon	Yellow Nutsedge

† for improved control, use 5.3 oz/acre.

For weeds claimed under partial control, a preemergence tankmix partner, or a sequential application of one or more post emerge soybean herbicides such as SYNCHRONY® STS®, CLASSIC® or DuPont™ ASSURE® II will be necessary to provide season long control of these weeds. To select the post emerge herbicide(s), identify the weeds that need to be controlled and consult the appropriate product labels. In "Roundup Ready" soybeans, a glyphosate-containing herbicide approved for soybeans, may be used to provide season long control of these weeds.

## PRE-PLANT BURNDOWN OF BROADLEAF WEEDS AND ANNUAL GRASSES - USE DIRECTIONS

In addition to providing season-long preemergence control of certain broadleaf weeds and partial control of other broadleaf weeds and annual grasses, 3-5.3 oz/A DuPont™

AUTHORITY® will provide burndown control of the following **broadleaf weeds up to 3” and annual grasses up to 1”**.

Annual grasses	Smallflower buttercup
Catchweed bedstraw	Smartweed Pennsylvania
Deadnettle, red or purple	Smell melon
Henbit	Speedwell, field and purslane
Kochia	Star-of-Bethlehem
Lambsquarter	Waterhemp, common and tall

- For burndown control of Dandelion, Maretail, Prickly lettuce, Giant ragweed, Common ragweed, Pennycress, Small-flowered Bittercress, Shepherd’s purse and Tansy mustard, add 1 pint 2,4-D LVE. Alternatively, or in addition, 0.33 oz DuPont™ CLASSIC® or 1-3 oz. DuPont™ CANOPY XL® may be added to improve burndown of these weeds (see Supplemental labeling).
- For burndown control of chickweed, add “Sencor” or a glyphosate-containing herbicide.
- For burndown control, apply 3 to 5.3 oz AUTHORITY® with:
  - crop oil concentrate at 1% v/v (1 gallon per 100 gallons of spray mix), and
  - use flat fan nozzles and sufficient water volume so as to thoroughly wet the weeds.

For burndown of larger than 1” annual grasses or broadleaf weeds exceeding 3”, or for burndown of weeds not listed above, AUTHORITY® may be tankmixed with one or more of the following:

DuPont™ ASSURE® II	Glyphosate-containing products
2,4-D (LVE)†	registered for soybeans
“Gramoxone Extra”	
“Sencor”	

To select the proper tankmix product, identify the weeds which need to be controlled and consult the product labels to determine which product is needed. Consult the companion tankmix herbicide label for use instructions, rates, precautions, restrictions, and other use information.

For AUTHORITY® tank mixes with glyphosate-containing herbicides, substitute 0.25% NIS for 1% COC. The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase performance.

†2,4-D (LVE) is the isoctyl (2-ethylhexyl) ester of 2,4-Dichlorophenoxyacetic acid. This product is sold under a variety of trade names. It has a minimum preplant interval of 7-30 days based on the rate used. Consult the label of the product for specific information on this interval.

## AUTHORITY® + ASSURE® II TANKMIXES FOR EARLY PRE-PLANT BURNDOWN OF GRASSES IN SOYBEANS IN NO-TILL

AUTHORITY® may be tankmixed with ASSURE® II herbicide or ASSURE® II + 2,4-D (LVE) to provide early pre-plant burndown control of small foxtails, barnyardgrass, shattercane, fall panicum, volunteer corn, and wild proso millet.

- For grass up to 3” in height, use 2.5 oz ASSURE® II per acre.
- For grass >3” up to 5” in height, use 5 oz ASSURE® II per acre.

### Timing of Applications

- AUTHORITY® + ASSURE® II tankmix may be applied from no more than 30 days before planting up to just before soybean emergence.
- AUTHORITY® + ASSURE® II + 2,4-D (LVE) tankmix may be applied between 7 days and no more than 30 days before planting, but no earlier than 30 days before planting, depending on the rate of 2,4-D (LVE) used.

Consult the 2,4-D label for the appropriate pre-plant interval based on the rate used.

### To apply AUTHORITY® + ASSURE® II tankmixes:

- use flat fan nozzles only.
- must include a petroleum based crop oil concentrate at a rate of 1 gallon per 100 gallons of spray solution (1% v/v).
- an ammonium nitrogen fertilizer may be added but is not required for performance.

## PLANNED PROGRAM: reduced rate preemergence followed by postemergence - using directions of a postemergence herbicide

### REDUCED USE RATE

#### Early Pre-Plant, Preplant Incorporated, or Preemergence

AUTHORITY® may be applied at a reduced rate of 3 oz/A for early season control of the weeds listed below. For full season control of these weeds, 3 oz AUTHORITY® must be followed by an application of one or more postemergence herbicides such as DuPont CLASSIC®, DuPont™ SYNCHRONY® STS®, or ASSURE® II, or “Flexstar”<sup>14</sup>, “Pursuit”<sup>14</sup>, or “Raptor”<sup>14</sup>.

“Roundup Ultra Max”, or other glyphosate-containing products registered for soybeans may be used postemergence after 3 oz AUTHORITY®, if the soybeans are “Roundup Ready”. Read and follow the manufacturer’s label for use instructions, rates, precautions, restrictions, and other use information.

## APPLICATION TIMING

Three ounces of DuPont™ AUTHORITY® may be applied up to 30 days before planting, at planting, or after planting but before soybeans emerge, unless otherwise specified on DuPont supplemental labeling. Application after soybean plants emerge will cause injury or death of the crop.

## WEEDS CONTROLLED

Early Season control or suppression from 3 oz/acre AUTHORITY®:

### Early Season Control

Black Nightshade  
Carpetweed  
Groundcherries, smooth and clammy (seedling only)  
Kochia\*  
Lambsquarter\*\*  
Morningglory, entireleaf, ivyleaf, tall, smallflower  
Nightshade, eastern black and hairy  
Pigweed\*\*, redroot and smooth  
Palmer amaranth\*  
Russian thistle  
Waterhemp\*, common and tall

### Early Season Suppression

Biennial wormwood  
Cocklebur  
Copperleaf, hophornbeam  
Florida beggarweed  
Jimsonweed  
Marshelder  
Morningglory, pitted\*\*\*  
Prickly Sida  
Purslane, common  
Ragweed, common  
Smartweed, Pennsylvania  
Smellmelon  
Velvetleaf  
Venice Mallow  
Wild buckwheat  
Yellow nutsedge  
Annual grasses

\* includes ALS and triazine resistant strains

\*\* includes triazine resistant strains

\*\*\* Weed species which can germinate deep in the soil such as Pitted Morningglory or other weeds which may emerge at various times during the growing season, may require a cultivation or an application of DuPont™ CLASSIC® or DuPont™ SYNCHRONY® STS® herbicides for season long control.

## ROTATIONAL GUIDELINES FOR ALL AUTHORITY® APPLICATIONS

When used as described, the table describes the minimum length in months from the time of AUTHORITY® application until AUTHORITY® treated soil can be replanted to the crops listed in the table. When a recommended tank mix is used, consult the tankmix partner labels for recropping instructions and follow the directions that are most restrictive.

Crop	Recrop Interval in Months
Soybeans§	Anytime
Tobacco	Anytime
Wheat, Barley, Oats, Rye, Triticale	4
Field Corn *	10
Rice	10
Sorghum,	10
Alfalfa	12
Dry Beans	12
Other Cereal crops**	12
Cabbage, Clover, Cotton, Cucumber, Flax, Lentils, Mustard, Peanuts***, Pumpkin, Sweet Corn, Watermelon	18†
Sugar Beets, Canola (Carrot, Onion, Potato), any other crop not listed	30†

\* Field Corn is defined to include only that corn grown for grain or silage, popcorn, and seed corn.

\*\* Other Cereal crops include Buckwheat, Pearl Millet, Proso Millet, Teosinte, & Wild Rice.

\*\*\* Soil pH must not exceed 7.0. The AUTHORITY® rate must not exceed 5 oz in AL, AR, GA, LA, MS, or TX or 4 oz in DE, KY, MD, MO (bootheel), NJ, NC, SC, TN, VA or WV. If these conditions are not met, recrop to peanuts is 30 months.

† Crops that have rotational intervals greater than 12 months after an AUTHORITY® application are the result of crop injury concerns.

§ Do not feed treated soybean forage or soybean hay to livestock.

## APPLICATION INFORMATION

### Equipment/Spray Volumes

**Ground Application:** Apply uniformly by ground equipment with a properly calibrated low pressure (20 to 40 psi) fixed-boom sprayer equipped with fan-type nozzles and screens no finer than 50 mesh. Use 10 to 40 gals of water per acre.

**Continuous agitation in the spray tank is required to keep the material in suspension.** Avoid overlap and shut off spray booms while starting, turning, slowing or stopping, as injury to the crop may result.

### Spray Tank Preparation

It is important that spray equipment is clean and free of existing pesticide deposits before using AUTHORITY®. Follow the spray tank cleanout procedures specified on the label of product previously sprayed. If no cleanout procedure is provided, follow the cleanout procedure in the **SPRAYER CLEANUP** section of this label.

### Mixing Instructions

1. Fill the tank 1/4 to 1/3 full of water.
2. Start agitation system, add AUTHORITY® and continue adding water.
3. **AUTHORITY® should be thoroughly mixed with water in the spray tank before adding any other material.** As the tank is filling and after AUTHORITY® has dissolved, add (in order): other herbicide(s), the required spray adjuvant, and the nitrogen fertilizer where required.
4. Apply AUTHORITY® spray preparation within 24 hours of mixing to avoid product degradation, settling and difficulty in resuspending.
5. If the mixture has settled, thoroughly reagituate before using.

## PROPER HANDLING INSTRUCTIONS

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

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 rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad; which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at least 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-specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding well-head setbacks and operational containment.

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

Do not use flood irrigation to apply or incorporate this product.

Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

### **Sprayer Cleanup**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of DuPont™ AUTHORITY® as follows:\*

1. Drain tank; thoroughly hose down the interior surfaces of the tank; then flush tank, boom, and hoses with clean water for a minimum of 5 minutes.
2. Partially fill the tank with water and add one of the cleaning agents listed below. Complete filling the tank with water, then flush the cleaning solution through the boom, hoses, and nozzles. Add water to completely fill the tank and allow to agitate or recirculate for at least 15 minutes. Again, flush the boom, hoses and nozzles, and drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing water and the cleaning agent.
4. Repeat Step 2.
5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the boom and hoses.

NOTE: Use any of the following cleaning agents. Carefully read and follow the individual cleaning agent instructions.

1. One gallon of household ammonia (contains 3% active) per 100 gallons of water.
2. Nutra-Sol
3. Loveland Tank and Equipment Cleaner
4. Protank Cleaner
5. Chem-Tank Cleaner and Neutralizer
6. Incide-Out
7. Tank-Aid

\*A steam cleaning of fiberglass or stainless steel aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.

## **SPRAY DRIFT MANAGEMENT**

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

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

### **IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **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** sections of this label.

### **Controlling Droplet Size - General Techniques**

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **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.

### **BOOM HEIGHT**

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

**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 hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.



## **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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.

## **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## **AIR ASSISTED GROUND FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

## **RESISTANCE MANAGEMENT**

When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant weed biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. These resistant weed biotypes may not be adequately controlled. Cultural practices such as tillage, preventing weed escapes from going to seed, and using herbicides with different modes of action within and between crop seasons can aid in delaying the proliferation and possible dominance of herbicide resistant weed biotypes.

## **INTEGRATED PEST MANAGEMENT**

DuPont recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

## **IMPORTANT PRECAUTIONS**

1. Because most crops are highly sensitive to DuPont™ AUTHORITY®, all direct or indirect contact (such as spray drift) to crops or to land scheduled to be planted to crops other than soybeans should be avoided.
2. Do not apply AUTHORITY® if there are visible signs of cracking due to soybean emergence, or serious crop injury may result.
3. Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, or drought may weaken soybean seedlings and increase the possibility of crop injury.

## STORAGE AND DISPOSAL

**Storage:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

**Product Disposal:** Do not contaminate water, food, or feed by disposal. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal: For Plastic Containers:** 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. **For Fiber Sacks:** Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities. **For Fiber Drums With Liners:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner. **For Bags Containing Water Soluble Packets:** Do not reuse the outer box or the resealable plastic bag. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by open burning. If burned, stay out of smoke. If the resealable plastic bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above. **For Metal Containers (non aerosol):** Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. **For Paper and Plastic Bags:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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