

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 29, 2018

John H. Cain Sr. Product Registration Manager E.I. du Pont de Nemours and Company c/o Stine-Haskell Research Center, PO Box 30 Newark, DE 19714

Subject: Label Amendment – Amending tank mixture directions and removes geographical

restrictions

Product Name: Dupont Firstshot SG Burndown Herbicide (With Totalsol Soluble

Granules)

EPA Registration Number: 352-755 Application Date: 12/19/2017 Decision Number: 537106

### Dear John Cain:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Page 2 of 2 EPA Reg. No. 352-755 Decision No. 537106

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at mellor.nathan@epa.gov.

Sincerely,

Erik Kraft, Product Manager 24 Fungicide and Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

Enclosure



# **DuPont™ FirstShot®SG**

# BURNDOWN HERBICIDE (WITH TOTALSOL® SOLUBLE GRANULES)

	THIFENSULFURON METHY and TRIBENURON METHY		HERBICIDE				
Active Ingredients By							
Thifensulfuron-methyl							
Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate							
Tribenuron-methyl							
Methyl 2-[[[N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate							
Other Ingredients							
TOTAL			100%				
Contains 0.25 lb Thifensulfuron Methyl per pound  Contains 0.25 lb Tribenuron Methyl per pound  ACCEPTE							
Contains 0.25 lb Tribenuron Methyl per pound							
EPA Reg. No. 352-755	EPA Est. No.	03/29/2018					
Nonrefillable Container	Refillable Container	Under the Federal Insecticide, Fungici and Rodenticide Act as amended, for t					
Net: <i>OR</i>	Net:	pesticide registered under EPA Reg. No. 352-755					

# KEEP OUT OF REACH OF CHILDREN CAUTION

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

#### **FIRST AID**

**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.

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 CAUTION

Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. For medical emergencies involving this product, call toll free 1-800-441-3637.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

Long-sleeved shirt and long pants

Chemical Resistant Gloves (including butyl rubber, natural rubber, neoprene rubber or nitrile rubber) ≥14 mls Shoes plus socks

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

#### **USER SAFETY RECOMMENDATIONS**

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

#### **ENVIRONMENTAL HAZARDS**

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

#### **Groundwater Advisory**

This product has properties and characteristics associated with chemicals detected in groundwater. This product may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### **Surface Water Advisory**

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

#### Windblown Soil Particles

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

#### 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 area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

# **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, including plants, soil, or water, is:

Coveralls

Chemical Resistant Gloves (including butyl rubber, natural rubber, neoprene rubber or nitrile rubber) ≥14 mls Shoes plus socks

DuPont<sup>™</sup> FIRSTSHOT® SG burndown herbicide (with TOTALSOL® soluble granules), also referred to below as FIRSTSHOT® SG or DuPont<sup>™</sup> FIRSTSHOT® SG, must be used in accordance with the directions for use on this label; in separately issued labeling or exemptions under FIFRA (Special Local Need Registrations; FIFRA Section 18 exemptions); or as otherwise permitted by FIFRA. Always read the entire label including the Limitation of Warranty and Liability.

#### PRODUCT INFORMATION

FIRSTSHOT® SG herbicide is a water soluble granule that is used for postemergence burndown weed control in the fallow period prior to planting. The best control is obtained when FIRSTSHOT® SG is applied to young, actively growing weeds. Base rate selection on weed spectrum and infestation intensity, weed size at application, environmental conditions at and following treatment and tank mix partners.

FIRSTSHOT® SG is noncorrosive, nonflammable, nonvolatile, and does not freeze. FIRSTSHOT® SG must be completely dissolved in water and applied as a uniform broadcast spray.

#### PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field, grove, or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- Avoid storage of pesticides near well sites.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

#### RESTRICTIONS

When using FirstShot® SG in tank mixes or sequential applications with other products containing thifensulfuron methyl and/or tribenuron methyl, do not exceed the following limits:

Use Area	Active Ingredient	Application Timing	Single	Maximum AI oz/A per Single Application	Maximum AI oz/A per Cropping Cycle & per Year	For All Applications Maximum AI oz/A per Year	Max # of Cropping Cycles	Maximum Number of Applications per Cropping Cycle & Year	Pre-Harvest Interval, Days
Burndown prior to planting (all crops)	Thifensulfuron Methyl	Minimum days prior to planting: Barley, rice, triticale and wheat - 0; Soybeans - 7†; Cotton, field corn and grain		0.2	0.25	0.75	2	2	NA
	Tribenuron Methyl	sorghum - 14; Other crops - 45 (see Clarification for more detail)		0.2	0.25	0.50			

- Do not use in season on any crop. FIRSTSHOT® SG burndown herbicide (with TOTALSOL® soluble granules) is only registered as a burndown treatment prior to planting.
- Do not graze livestock in treated areas. In addition, do not feed forage or hay from treated areas to livestock (harvested straw may be used for bedding and/or feed).

Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:

- Do not apply, 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.

# **PRECAUTIONS**

• Dry, dusty field conditions may result in reduced control in wheel track areas.

Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:

- Take all necessary precautions to avoid all direct or indirect contact (including spray drift) with non-target plants or areas.
- Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, triticale or oat.

#### WEED RESISTANCE MANAGEMENT

FIRSTSHOT® SG, which contains the active ingredients Thifensulfuron methyl and Tribenuron methyl is a group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

• Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.

- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of FIRSTSHOT® SG for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your DuPont representative, local retailer, or county extension agent.
- Contact your DuPont representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. Do not assume that each listed weed is being controlled by multiple sites of action. Products with multiple active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - 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; and
  - Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of FIRSTSHOT® SG and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-tocontrol weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- · Manage weeds in and around fields, during and after harvest to reduce weed seed production.

# **INTEGRATED PEST MANAGEMENT**

DuPont encourages 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. Base application of this product 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 systems in your area.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

DuPont™ FIRSTSHOT® SG is absorbed primarily through the foliage of plants, rapidly inhibiting the growth of susceptible weeds. One to 3 weeks after application to weeds (2 to 5 weeks for wild garlic), leaves of susceptible plants appear chlorotic, and the growing point subsequently dies.

The herbicidal action of FIRSTSHOT® SG may be affected from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions or cultural practices. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to FIRSTSHOT® SG.

#### **WEEDS CONTROLLED**

DuPont™ FIRSTSHOT® SG effectively controls the following weeds when used according to label directions:

Annual knawel
Annual sowthistle
Black mustard
Blue/Purple mustard
Broadleaf dock
Bur buttercup
Bushy wallflower/
Treacle mustard
Carolina geranium
Clasping pepperweed
Coast fiddleneck
Common buckwheat
Common chickweed

Common cocklebur \*
Common groundsel
Common lambsquarters
Common radish
Common ragweed \*
Common sunflower
Corn chamomile
Corn spurry

Cowcockle
Cress (mouse-ear)
Curly dock
False chamomile
Field chickweed
Field pennycress
Filaree (redstem, Texas)

Flixweed Green smartweed Henbit \* Ladysthumb London rocket Marshelder

Mayweed chamomile

Miners lettuce

Narrowleaf lambsquarters Nightflowering catchfly Pennsylvania smartweed

Pineappleweed Prickly lettuce ‡ Prostrate knotweed Prostrate pigweed Redmaids

Redroot pigweed

Tansymustard

Wild radish\*

Scentless chamomile/mayweed

Shepherd's-purse Slimleaf lambsquarters Smallflower buttercup Smallseed falseflax Stinking chickweed

Stinking mayweed/dogfennel Swinecress

Tarweed fiddleneck
Tumble/ Jim Hill mustard
Volunteer lentils
Volunteer peas
Volunteer sunflower
Wild chamomile
Wild garlic\*
Wild mustard

#### WEEDS PARTIALLY CONTROLLED\*\*

FIRSTSHOT® SG partially controls the following weeds when used according to label directions:

Catchweed bedstraw Cutleaf eveningprimrose\* Mallow (common, little)

Nightshade (cutleaf, hairy) Vetch\* (common, hairy)

- \* See SPECIFIC WEED PROBLEMS for more information.
- \*\*Partial control: A visual reduction of weed population as well as a significant loss of vigor. For better results, use the highest directed rate of FIRSTSHOT® SG per acre and include a tank mix partner including 2,4-D, a dicamba containing product, or a glyphosate containing product.
- ‡ Naturally occurring resistant biotypes of prickly lettuce, marestail and mayweed spp. are known to occur. See the Resistance section of this label for additional details.

#### **USE RATE**

Apply 0.5 to 0.8 oz FIRSTSHOT® SG burndown herbicide (with TOTALSOL® soluble granules) per acre as a burndown treatment to control emerged weeds prior to planting.

When applying 0.5 to 0.6 oz per acre, FIRSTSHOT® SG must be used in combination with another registered burndown herbicide (see TANK MIXTURES).

Use the 0.8 ounce per acre rate when weed infestation is heavy or when application timing and environmental conditions are marginal.

Sequential treatments of FIRSTSHOT® SG may be made provided the total amount of FIRSTSHOT® SG does not exceed 1.0 ounce per acre or two applications per year. Allow at least 30 days between applications. For example, 0.5 ounce in the fall followed by 0.5 ounce in the spring.

#### **SPRAY ADJUVANTS**

Always include a spray adjuvant with applications of FIRSTSHOT® SG. Glyphosate products differ in their adjuvant contents, see the manufacturer's surfactant specifications.

Consult your Ag dealer or applicator, local DuPont fact sheets, technical bulletins, and service policies prior to using an adjuvant system. If another herbicide is tank mixed with FIRSTSHOT® SG, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40CFR 1001).

#### Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- · Apply at 1% volume/volume (1 gal per 100 gal spray solution) or 2% volume/volume under arid conditions.
- · Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- · Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

#### **Nonionic Surfactant (NIS)**

- · Apply 0.25 to 0.50% volume/volume (2 pt to 4 pt per 100 gal of spray solution).
- · Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

## Ammonium Nitrogen Fertilizer

In addition to a spray adjuvant, an ammonium nitrogen fertilizer may be used. Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN), including 28%N or 32%N, or 2 lb/acre of a spray-grade ammonium sulfate (AMS). Use 4 qt/acre UAN or 4 lb/acre AMS under arid conditions.

#### **TANK MIXTURES**

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

DuPont™ FIRSTSHOT® SG may be used as a pre-plant burndown treatment alone or tank mixed with one or more herbicides registered for pre-plant burndown, including 2,4-D ester, dicamba products like "Banvel"/"Clarity", and glyphosate containing products including glufosinate and paraquat.

### SPECIFIC TANK MIXTURES

# FIRSTSHOT® SG plus Glyphosate for control or suppression of additional weed species before planting rice in the states of Arkansas, Louisiana, Missouri, and Mississippi:

A tank mixture of FIRSTSHOT® SG burndown herbicide (with TotalSol® soluble granules) at 0.8 ounces per acre in combination with glyphosate may be applied for improved control of weeds prior to planting rice. Rice may be planted any time after the application of FIRSTSHOT® SG with glyphosate, except on light textured soils, including sands, loamy sands and sandy loams and or on high pH soils (>7.9). On light textured soils and or high pH soils (>7.9), extend time to planting of rice by 7 additional days.

FIRSTSHOT® SG plus glyphosate will provide control of alligatorweed and suppression‡ of juncus, spikerush, bull tongue (lanceleaf arrowhead), red ludwigia, narrowleaf aster, and hyssop.

The addition of a nonionic surfactant (NIS) at 0.25% to 0.5% v/v (1 to 2 quarts per 100 gallons of spray) to FIRSTSHOT® SG plus glyphosate tank mix may improve weed control since glyphosate products differ in their adjuvant contents. Ammonium sulfate (AMS) may also be added to this tank mix if it is specified on the glyphosate label. See glyphosate label for specific surfactant and AMS directions.

Refer to the glyphosate label for further application information and use restrictions. Follow the label guidelines that are the most restrictive.

‡ Weed suppression is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the size of the weeds and the environmental conditions following treatment.

# FIRSTSHOT® SG plus Sharpen herbicide for control or suppression of weed species before planting soybeans in the states of Arkansas, Louisiana, and Mississippi:

A tank mixture of FIRSTSHOT® SG burndown herbicide (with TotalSol® soluble granules) at 0.5 ounces per acre in combination with Sharpen at 1.0 fluid ounces per acre may be applied for improved control of weeds prior to planting soybeans.

Soybeans may be planted one day after the application of FIRSTSHOT® SG plus Sharpen, on all soils other than coarse soils (sand, loamy sand, sandy loam) and or soils with a high pH (>7.9). Refer to the FIRSTSHOT® SG and Sharpen and any tank mix partner labels for information on weed species controlled adjuvant systems required, additional use directions, restrictions, rotational crop intervals and precautions. The most restrictive provision on any label shall apply.

# FIRSTSHOT® SG plus Command 3ME herbicide for ground and aerial application to control broadleaf weeds prior to planting rice in the state of Louisiana:

FIRSTSHOT® SG burndown herbicide (with TotalSol® soluble granules) is for the control of annual broadleaf weeds in a burndown application prior to planting rice. For ground and aerial application with Command 3ME herbicide, FIRSTSHOT® SG can be applied with other registered preplant burndown products listed on the FIRSTSHOT® SG or Command 3ME labels. Apply FIRSTSHOT® SG as a postemergence treatment to young, actively growing weeds. See the FirstShot® SG Federal label for complete application and weed size specifications and the Command Federal 24(c) label including the SPECIAL PRECAUTION FOR RICE. FIRSTSHOT® SG may be applied as a preplant burndown at any time prior to planting rice. Apply FIRSTSHOT® SG at 0.5 to 0.8 ounces of product per acre. Refer to the tank mix partner labels for specific use rate instructions for each. Follow the most restrictive label directions. Refer to product labels for adjuvant use.

Read and follow all manufacturer's label instructions for the companion herbicide. If those instructions conflict with this label, follow the most restrictive labeling (for example planting interval after application), or do not tank mix the herbicide with DuPont<sup>TM</sup> FIRSTSHOT® SG.

### SPECIFIC WEED PROBLEMS

Applications of FIRSTSHOT® SG alone may not provide adequate control of certain problem weeds. Acceptable control of these species can be achieved by tankmixing FIRSTSHOT® SG with one or more herbicides labeled for burndown applications.

Common cocklebur, common ragweed, cutleaf eveningprimrose, marestail, prickly lettuce, vetches (common, hairy), wild garlic, wild radish: For control use FIRSTSHOT® SG 0.6-0.8 ounce per acre in combination with 2,4-D ester 0.5-1.0 lb active ingredient per acre or dicamba (Banvel/Clarity) 0.25 lb active ingredient per acre. The addition of glyphosate, paraquat, or Ignite to the above specified tankmixes will improve control of many species. If glyphosate-resistant marestail or common ragweed is known or suspected to be present, use the highest specified rate of dicamba or 2,4-D ester in glyphosate tankmixes.

**Carolina geranium, henbit:** For control apply FIRSTSHOT® SG 0.6-0.8 ounce per acre in combination with glyphosate, paraquat, or Ignite. The addition of 2,4-D ester 0.5-1.0 lb active ingredient per acre or dicamba (Banvel/Clarity) 0.25 lb active ingredient per acre may improve control of heavy populations, stressed weeds, and larger weeds.

When preplant intervals for hormone products (dicamba and 2,4-D ester) preclude their use in FIRSTSHOT® SG combinations for control of problem weeds, apply FIRSTSHOT® SG 0.6-0.8 ounce per acre tankmixed with glyphosate, paraquat or Ignite to achieve control or suppression of these species.

#### **CROP ROTATION**

Labeled crops may be planted at specified time intervals following application of labeled rates of FIRSTSHOT® SG burndown herbicide. Use the time intervals listed below to determine the required time interval before planting.

#### Time Interval Before Planting\*(days after treatment with FIRSTSHOT® SG)

Стор	Days	
Barley, Rice**, Triticale,		
and Wheat (including durum)	0	
Soybeans	7†	
Cotton, Field Corn, and Grain Sorghum	14	
Peanuts	30	
Any other crop	45	

<sup>\*</sup> Refer to individual product labels to determine rotational crop restrictions when tank mixtures are used.

†When FIRSTSHOT® SG is applied at 0.5 oz/a the application may be made within 3 days after planting but prior to soybean emergence.

Where FIRSTSHOT® SG is used on light textured soils, including sands, loamy sands and sandy loams, extend time to planting by 7 additional days.

Where FIRSTSHOT® SG is used on high pH soils (>7.9), extend time to planting by 7 additional days.

#### APPLICATION INFORMATION

#### PRODUCT MEASUREMENT

FIRSTSHOT® SG burndown herbicide (with TOTALSOL® soluble granules) is measured using the FIRSTSHOT® SG volumetric measuring cylinder. The degree of accuracy of this cylinder varies by  $\pm 7.5\%$ . For more precise measurement, use scales calibrated in ounces.

#### **MIXING INSTRUCTIONS**

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. While agitating, add the required amount of FIRSTSHOT® SG
- 3. Continue agitation until the FIRSTSHOT® SG is fully dissolved, at least 5 minutes.
- 4. Once the FIRSTSHOT® SG is fully dissolved, maintain agitation and continue filling tank with water.
- 5. As the tank is filling, add tank mix partners (if desired) then add the required volume of nonionic surfactant. Always add surfactant last. Do not use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0, as rapid product degradation can occur. Spray solutions of pH 6.0-8.0 allow for optimum stability of FIRSTSHOT® SG.
- 6. Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly reagitate before using.
- 7. Apply FIRSTSHOT® SG spray mixture within 24 hours of mixing to avoid product degradation.
- 8. If FIRSTSHOT® SG and a tank mix partner are to be applied in multiple loads, fully dissolve the FIRSTSHOT® SG in clean water either in the spray tank or a separate mixing tank prior to adding the tank mix partner.

#### GROUND APPLICATION

For optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flat-fan nozzles, use a spray volume of at least 5 gal per acre (GPA).

For flood nozzles on 30" spacings, use at least 10 GPA, flood nozzles no larger than TK10 (or the equivalent), and a pressure of at least 30 psi. For 40" nozzle spacings, use at least 13 GPA; for 60" spacings use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

"Raindrop RA" and air induction nozzles are not recommended for DuPont™ FIRSTSHOT® SG applications, as weed control performance may be reduced.

Use screens that are 50-mesh or larger.

#### AERIAL APPLICATION

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at 5 GPA.

See the **Spray Drift Management** section of this label.

<sup>\*\*</sup>When FIRSTSHOT® SG is applied at 0.5 oz/a the application may be made prior to or immediately after planting but prior to rice emergence. When FIRSTSHOT® SG is applied at greater than 0.5 oz/a but less than or equal to 0.8 oz/a, rice may be planted immediately after this application, except on light textured soils, including sands, loamy sands and sandy loams and or on high pH soils (>7.9). On light textured soils and high pH soils (>7.9), extend time to planting of rice by 7 additional days.

#### SPRAY EQUIPMENT

For specific application equipment, refer to the manufacturer's directions for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to the crop.

Do not make applications using equipment and/or spray volumes or during weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift refer to Spray Drift Management section of label.

The spray equipment must be cleaned before FIRSTSHOT® SG is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products.

#### AT THE END OF THE DAY

It is recommended that during periods when multiple loads of FIRSTSHOT® SG herbicide are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

#### AFTER SPRAYING FIRSTSHOT® SG AND BEFORE SPRAYING CROPS

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of FIRSTSHOT® SG as follows:

- 1. Empty the tank and drain the sump completely.
- 2. Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
- 3. Repeat step 2.
- 4. Remove the nozzles and screens and clean separately in a bucket containing water.

The rinsate solution may be applied in preplant application specified on this label. Do not exceed the maximum-labeled use rate. If cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

#### Notes:

- 1. Always start with a clean spray tank.
- 2. Steam-cleaning aerial spray tanks facilitate the removal of any caked deposits.
- 3. When FIRSTSHOT® SG is tank mixed with other pesticides, examine all cleanout procedures for each product and the most rigorous procedure must be followed.
- 4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products must be followed as per the individual labels.

#### MANDATORY SPRAY DRIFT MANAGEMENT

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

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Aerial Applications:**

- Do not release spray at a height greater than 10 feet above the 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 use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT MANAGEMENT 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.

#### 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**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. 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. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

#### SHIELDED SPRAYERS

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

## **TEMPERATURE AND HUMIDITY**

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

#### **TEMPERATURE INVERSIONS**

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

#### WIND

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

# Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **Handheld Technology Applications:**

• Take precautions to minimize spray drift.

#### DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution.

Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

#### STORAGE AND DISPOSAL

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

Pesticide Storage: Store product in original container only. Store in a cool, dry place.

**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: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

#### Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with DuPont™ FIRSTSHOT® SG burndown herbicide (with TotalSol® soluble granules) containing thifensulfuron methyl and tribenuron methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. *Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

All Other Refillable Containers: Refillable container. Refilling Container: Refill this container with DuPont™ FIRSTSHOT® SG burndown herbicide (with TotalSol® soluble granules) containing thifensulfuron methyl and tribenuron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont at the number below for instructions. *Disposing of Container*: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

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