



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

November 4, 2025

Terri Moss  
US Regulatory Specialist  
Corteva Agriscience LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Subject: Label Amendment - Registration Review Mitigation for Diclosulam  
Product Name: Strongarm  
EPA Registration Number: 62719-288  
Case Number: 471971  
Application Dates: February 12, 2020

Dear Terri Moss:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Diclosulam Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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 Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. 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 12 months from the date of this letter. After 12 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.

If you have any questions about this letter, please contact Caleb Carr by phone at 202-566-0636, or via email at [carr.caleb@epa.gov](mailto:carr.caleb@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'M. K. Muhammad-Perch', with a long, sweeping horizontal line extending to the right.

Maryam K. Muhammad-Perch, Team Lead  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

ENCLOSURE: Stamped label

**[Sub Label A: Bottled material]**

(Base label):

<b>DICLOSULAM</b>	<b>GROUP</b>	<b>2</b>	<b>HERBICIDE</b>
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**Strongarm®****HERBICIDE****For broadleaf weed control in peanuts and soybeans**

Active Ingredient:

diclosulam: N-(2,6-dichlorophenyl)-5-ethoxy-

7-fluoro[1,2,4]triazolo-[1,5-c]pyrimidine-

2-sulfonamide ..... 84%

Other Ingredients ..... 16%

Total ..... 100%

Contains 0.84 lb of active ingredient per pound of product

**Keep Out of Reach of Children****CAUTION****ACCEPTED****11/04/2025**Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under

EPA Reg. No. 62719-288

**First Aid****If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

**Precautionary Statements****Hazards to Humans and Domestic Animals****Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin • Avoid contact with eyes, skin, or clothing.****Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change 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 by cleaning of equipment or when disposing of equipment washwaters or rinsate.

This chemical and its transformation products demonstrate the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical can contaminate surface water through spray drift.

Under some conditions, this chemical, and/or its transformation products, may have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks post-application. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

**NON-TARGET ORGANISM ADVISORY STATEMENT:** 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.

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

**SURFACE WATER ADVISORY STATEMENT:** 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 months 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 diclosulam 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.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**(Storage and Disposal for rigid containers 5 gal or less)****Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. In case of leak or spill, contain material with

absorbent materials and dispose as waste.

**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:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### (Storage and Disposal for nonrigid containers any size)

##### **Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

**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:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### (Storage and Disposal for refillable rigid containers larger than 5 gal)

##### **Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

**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:** 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### (Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

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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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-288

EPA Est. \_\_\_\_\_

<sup>TM</sup>®Trademarks of Corteva Agriscience and its affiliated companies

**Produced for**  
**Corteva Agriscience LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

**NET WEIGHT** \_\_\_\_\_

(Label booklet cover):

DICLOSULAM	GROUP	2	HERBICIDE
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**Strongarm®****HERBICIDE****For broadleaf weed control in peanuts and soybeans**

Active Ingredient:

diclosulam: N-(2,6-dichlorophenyl)-5-ethoxy-

7-fluoro[1,2,4]triazolo-[1,5-c]pyrimidine-

2-sulfonamide ..... 84%

Other Ingredients ..... 16%

Total ..... 100%

Contains 0.84 lb of active ingredient per pound of product

**Keep Out of Reach of Children****CAUTION****Agricultural Use Requirements**

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(Page 1 through end):

## CAUTION

### First Aid

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

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- Shoes plus socks

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### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
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### Directions for Use

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

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

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

- Coveralls
- Waterproof gloves
- Shoes plus socks

### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

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

**Nonrefillable rigid containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Nonrefillable nonrigid containers:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refillable rigid containers larger than 5 gal:**

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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## Product Information

Strongarm® herbicide is a soil-applied product for control of broadleaf weeds in peanuts and soybeans. Strongarm may be applied preplant incorporated, preplant surface, or preemergence through cracking in peanuts. "Cracking" of soil occurs when soil is displaced by germinating seedlings just prior to

emergence. Strongarm may also be used postemergence in peanuts. A single postemergence application may be made in peanuts.

## Use Precautions

- Read and carefully follow all applicable directions, precautions and restrictions on labeling for other products used in combination with Strongarm.
- This 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.
- **Iron Chlorosis:** There are isolated areas of the country where soil-induced iron chlorosis routinely occurs. Severity of iron chlorosis symptoms may increase when Strongarm is soil applied in areas with a history of soil-induced iron chlorosis or other nutrient induced crop injury.

## Use Restrictions

- **Aerial application of this product is prohibited.**
- Do not allow livestock to graze treated areas or harvest forage or hay from treated areas.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- In peanuts, do not apply more than 0.45 oz (0.024 lb ai) of Strongarm per acre per year in any combination of preplant incorporated, preplant surface, preemergence through cracking, or postemergence applications.
- In soybeans, do not apply more than 0.6 oz (0.032 lb ai) of Strongarm per acre per year as a preplant incorporated, preplant surface, or preemergence application. Only a single soil application per growing season may be made in soybeans.
- **Preharvest Interval:** Do not harvest peanuts for 30 days following application.
- **Preharvest Interval:** Do not harvest soybeans for 125 days following application.
- Do not apply Strongarm to peanuts in the states of New Mexico, Oklahoma and Texas.

## Weed Resistance Management

For resistance management, Strongarm® is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Strongarm and other Group 2 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 Strongarm or other Group 2 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.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) 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 or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your company representative by calling 800-258-3033.

### **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 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, 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 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 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 wellhead setbacks and operational containment.

**Avoid all direct or indirect contact with non-target plants.** Do not apply near desirable vegetation and allow adequate distance between target area and desirable plants to minimize exposure.

**Do not apply under conditions that favor runoff or wind erosion of soil containing Strongarm to non-target areas. To prevent off-site movement due to runoff or wind erosion:**

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

**Do not apply when weather conditions favor drift to non-target sites. To minimize spray drift to non-target areas:**

- Use low pressure application equipment capable of producing a large droplet spray.
- Do not use nozzles that produce a fine droplet spray.
- Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
- Keep ground-driven spray boom as low as possible above the target surface.
- Spray when conditions are calm or wind speed is low. Do not spray when wind is gusting or steady wind speed is greater than 10 mph.

### Crop Rotation Intervals

Numbers in parentheses (-) refer to Specific Crop Rotation Information.

Crop	Rotation Interval <sup>1</sup> (Months)
soybeans, peanuts	no restriction
wheat, barley	4
oats, rye	6
snap beans	9
Cotton <sup>2,5</sup>	10 <sup>5</sup>
Corn <sup>3</sup> , rice, tobacco, sorghum	18
sugar beets, sunflowers and other crops not listed	30 <sup>4</sup>

#### Specific Crop Rotation Information:

<sup>1</sup>Minimum number of months that must pass before planting other crops after application of Strongarm at up to 0.45 oz (0.024 lb ai/acre) per acre in peanuts or soybeans.

<sup>2</sup>Strongarm applied at greater than 0.45 oz (0.024 lb ai/acre) per acre, as may occur with boom overlap or at field ends where spray equipment has slowed, may cause injury to rotational cotton the following season. Soils with a shallow hardpan (less than 10 inches) and/or loam soils may be more prone to carryover. Additionally, cotton grown under early season stress resulting from conditions such as excessively cool, wet, dry or crusted soils, may be particularly susceptible to rotational injury.

<sup>3</sup>The crop rotation interval for corn hybrids identified as "IR" is 10 months.

<sup>4</sup>Rotation to sugar beets, sunflowers, and all other crops not listed requires a 30-month rotation interval and a successful field bioassay.

<sup>5</sup>In North Carolina, the crop rotation interval for cotton is 18 months in the counties of Camden, Currituck, Pasquotank and Perquimans. In all other counties in North Carolina, the crop rotation interval for cotton is 10 months.

**Field Bioassay Instructions:** Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with Strongarm. Plant the strips perpendicular to the direction in which Strongarm was applied. Locate the strips so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury, stand reduction, or yield reduction, the field can be seeded with the test crop in the growing season following the bioassay. If visible injury, stand reduction, or yield reduction occurs, the test crop should not be seeded, and the bioassay must be repeated the next growing season.

### Mixing

Strongarm Application Rate (oz/acre)
0.15 (0.008 lb ai/acre)
0.3 (0.016 lb ai/acre)
0.45 (0.024 lb ai/acre)
0.5 (0.026 lb ai/acre)
0.55 (0.029 lb ai/acre)
0.6 (0.032 lb ai/acre)

**Strongarm - Alone**

Thorough mixing of water dispersible granules of Strongarm prior to and during application is required.

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load. If applied in liquid fertilizer, Strongarm **must be** pre-mixed with water to form a slurry and then added to the liquid fertilizer solution. Pre-mixing may also be used if making an application in water. See pre-mixing instructions below.
2. Start the agitation system.
3. Add the required amount of water dispersible granules by opening the bottle(s) and measuring the required amount and adding directly to the spray tank while agitating and allow time for the product to disperse or utilize a pre-mixing slurry as outlined below prior to pouring into the spray tank.
4. Postemergence or burndown application: Add any surfactant or other adjuvant material last.
5. Continue agitation while filling the spray tank to the required volume.
6. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying is resumed. Apply within 24 hours of mixing. Weed control may be reduced if the tank mix is allowed to stand for more than 48 hours.

**Pre-Mixing (Slurry Stir** (or shake if pre-mixed in a closed container) until the water dispersible granules are dispersed and then add to the spray tank or inductor through a 20 to 35 mesh screen. Rinse container used for pre-mixing and add rinsate to spray tank.

**Pre-Mixing with Other Products:** If pre-mixing is required for other dry or flowable products applied in tank mix combination with Strongarm, follow directions for pre-mixing provided in the respective product labels.

**Strongarm - Tank Mix**

If a broader spectrum of weed control is required, Strongarm may be tank mixed with labeled rates of other herbicides provided: (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

**Mixing Order for Tank Mixes:**

1. Fill the spray tank to 1/2 of the total spray volume required with water or liquid fertilizer.
2. Start the agitation system.
3. Add the required amount of water dispersible granules by opening the bottle(s) and measuring the required amount and adding directly to the spray tank while agitating and allow time for the product to disperse or utilize a pre-mixing slurry as described above prior to adding to the spray tank. If liquid fertilizer is being used as the spray carrier rather than water, pre-mix the water dispersible granules as described above before adding to the spray tank.
4. After adding Strongarm, add different formulation types in the following order: (1) formulation(s) packaged in water soluble packets; (2) any compatibility agent, if required; (3) other dry flowables; (4) wettable powders; (5) aqueous suspensions, flowables and liquids. Maintain agitation and fill spray tank to 3/4 of total spray volume and add: (6) emulsifiable concentrates, (7) solutions (i.e., fertilizers); and (8) surfactants. Allow time for complete mixing and dispersion after each addition.
5. Postemergence or burndown application: Add any surfactant or other adjuvant material last.
6. Finish filling the spray tank. Maintain continuous agitation during mixing and throughout application.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank-mixes. Sparger type agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be thoroughly agitated to resuspend the mixture before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.



**Tank Mixing Precautions:**

- 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.
- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been adequately cleaned. (See Spray Equipment Clean-Out Procedures.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of Strongarm and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible. Do not use the tank mix combination.

**Spray Equipment Clean-Out Procedures**

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank 1/2 full with water.
3. Add household ammonia at a rate of 1 gallon per 100 gallons of water. Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom. Drain tank.
4. Remove all spray nozzles and screens and clean separately.
5. If spray equipment will be used for pesticide application to crops sensitive to Strongarm, repeat steps 1 to 3. Exterior surfaces of spray equipment should also be thoroughly cleaned.
6. Rinsate may be disposed of on site according to label use directions or at an approved waste disposal facility.

**MANDATORY SPRAY DRIFT MANAGEMENT****Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**Boomless Ground Applications**

- Applicators are required to use a medium or coarser droplet size (ASABE S572/3) for all applications.
- Do not apply when wind speeds exceed 10 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.

**BOOM HEIGHT – Ground Boom**

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

**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 application 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 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 increased 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.

**Boomless Ground Applications**

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

**Handheld Technology Applications**

- Take precautions to minimize spray drift.

**Application with Dry Bulk Fertilizer (Soil Application Only)**

Dry bulk fertilizer may be impregnated or coated with Strongarm. Soil applications of dry bulk fertilizer impregnated with Strongarm provides weed control equal to the same rates of Strongarm applied in liquid carriers. Follow label directions for Strongarm regarding rates per acre, special instructions, precautions and limitations for soil application.

Most absorbent dry fertilizers can be used for impregnation with Strongarm. Pure ammonium nitrate and/or limestone will not absorb the herbicide and are not suitable for impregnation with Strongarm. Absorbent fertilizer blends containing a mixture of ammonium nitrate and/or limestone as part of the fertilizer mixture may be impregnated.



Apply 300 to 700 lb of fertilizer/herbicide mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential for satisfactory weed control and to prevent possible crop injury. Non-uniform application may result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow soil incorporation of the mixture may improve weed control.

Compliance with all federal and state regulations relating to blending pesticide mixtures with dry bulk fertilizer, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

### Impregnation

Strongarm must be pre-mixed with water to form a slurry prior to impregnation of dry bulk fertilizer. For best results, use a minimum of 6 fl oz of water for each individual 0.45 oz of product. A small amount of a silicon-based defoaming agent may also be needed. Make sure Strongarm is completely and uniformly dispersed in water. Add sufficient water to adjust the total volume of the mixture to deliver a spray volume of 0.5 to 1 gallon of fertilizer per ton. Nozzles used to spray Strongarm onto the fertilizer should be placed to provide uniform spray coverage. Use constant agitation to keep the spray mixture suspended.

### Herbicide Combinations with Strongarm on Dry Bulk Fertilizer

To prepare concentrated tank mixtures of Strongarm with emulsifiable concentrate formulations, the Strongarm/water pre-mix should be added to the liquid mixing tank first. If additional water is required, this should be added next, followed by the emulsifiable concentrate. Care should be taken to avoid over-saturating the dry fertilizer with liquid. For this reason the volume of water in the mixing tank should be roughly equivalent to the volume of emulsifiable concentrate added to the mixing tank. Depending upon the specific dry fertilizer blend and the emulsifiable concentrate application rates, it may be necessary to increase the fertilizer application rates to avoid over-saturating the dry fertilizer. Over-saturation can result in a mixture with poor flow properties and increase residues of Strongarm left in the blending equipment.

Spray nozzle selection and placement are critical for uniform spray coverage. The spray time is no less than 3 to 5 minutes per batch. Nozzle placement should minimize spray overlap in the blender and also avoid spraying the mixer walls. For best results, use a suitable in-line (no finer than 100 mesh) screen to avoid spray blockages. Any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender may be used.

Calculate amounts of Strongarm with the following formula:

$$\frac{2000}{\text{lb of fertilizer per acre}} \times \text{oz/acre of Strongarm} = \text{oz of product per ton of fertilizer}$$

### Example:

$$\frac{2000}{300 \text{ lb of fertilizer per acre}} \times 0.45 \text{ oz/acre of Strongarm} = 3 \text{ oz of product (Strongarm) per ton of fertilizer}$$

**Note:** Thoroughly clean dry fertilizer blending and application equipment prior to use with other herbicides. It is important to thoroughly clean the blender, herbicide spray tank, and spraying apparatus. Rinse the sides of the blender and the herbicide tank with water. Clean spraying apparatus prior to preparing fertilizer/herbicide mixtures for crops other than peanuts or soybeans (see Spray Equipment Clean Out Procedures). If the following crop is peanuts or soybeans, flushing may be accomplished by running one to two loads of dry fertilizer, which must be used only in peanuts or soybeans. Inspect the equipment carefully for any spray build-up or deposits from earlier batches and wash or remove as appropriate.

**If the following crop is not peanuts or soybeans**, at a minimum, two dry flush batches are required. Both flushes should fill at least 50% of the blender's capacity. A third flush may be necessary if the blender batch of Strongarm was "wet" due to over-saturating the fertilizer, or if the subsequent application is for a crop known to be highly sensitive to Strongarm.

Alternately, an effective cleaning procedure is rinsing the blenders with a bleach or ammonia solution. The resulting rinsate can be mixed with the fertilizer used for flushing, but at no more than 1 gallon of rinsate per ton of fertilizer.

## Peanuts

**(All States Except New Mexico, Oklahoma and Texas)**

Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform spray coverage. For best results, use a spray volume of 10 gallons or more per acre for soil applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. It is not recommended to use screens in spray lines and nozzles finer than 50 mesh (100 mesh is finer than 50 mesh).

### Application Rates and Broadleaf Weeds Controlled by Soil Applications

Strongarm will not control known ALS resistant biotypes of weeds listed below. **Note:** Numbers in parentheses (-) refer to footnotes following table.

Weeds Controlled		Strongarm (oz/acre)
bristly starbur	Pennsylvania smartweed	0.45 (0.024 lb ai/acre/acre)
common cocklebur	prickly sida	
common lambsquarters	redroot pigweed	
common ragweed	smooth pigweed	
common sunflower	spurge species	
eclipta	spurred anoda	
devil's-claw	shining tickweed	
Florida beggarweed	tropic croton	
giant ragweed	velvetleaf	
morningglory species	Virginia copperleaf	
nutsedge species <sup>1, 2</sup>	wild poinsettia	
palmer amaranth		

<sup>1</sup>Heavy infestations may require postemergence application of complimentary herbicides following a soil application of Strongarm for season-long control.

<sup>2</sup>The level of nutsedge control provided by Strongarm can vary depending upon weed density and soil or environmental conditions (especially soil moisture).

### Application Methods for Soil Applications

Strongarm may be used in various tillage programs including strip till, no till and conventional tillage operations. Application of Strongarm on soils with greater than 5% organic matter may result in reduced weed control and require subsequent postemergence applications of other herbicides appropriate for specific weeds. Do not use on peat or muck soils. Season-long control of severe weed infestations may require a postemergence application of complimentary herbicides following application of Strongarm.

For best results, fields should be clean-tilled and weed-free. Apply Strongarm as close as possible to planting. If irrigation is available, immediately apply 0.25 to 0.5 inches of water (apply a minimum of 0.5 inches of water if soil conditions are dry). Cultivation, a tank mixture, or applications of postemergence herbicides may also be needed to achieve the desired level of control. If cultivation is required, it should be shallow to avoid excessive movement of treated soil and to avoid exposing weed seed buried deep within the soil.

**Note:** Environmental and soil factors can influence the performance and selectivity of any herbicide treatment. Rainfall of 0.5 inches or greater is required for optimum weed control by most soil herbicides, including Strongarm. When incorporated, Strongarm and other herbicides will perform most optimally when evenly distributed in the surface soil. When emergence of the planted crop is delayed due to unusually cool and/or wet conditions, factors such as pH, disease, and nutrient deficiencies can contribute to reduced crop tolerance to a soil-applied herbicide.

**Preplant Incorporated Application:** Apply Strongarm alone or in tank mix combination with other herbicides registered for preplant incorporated application to peanuts. Apply to a seedbed that is relatively free of clods. Incorporate the herbicide(s) into the top 1 to 3 inches of the final seedbed using equipment that provides thorough soil mixing. For best results, do not use a stalk chopper as an incorporation implement because poor weed control and/or crop injury can result. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Proper moisture is needed to activate Strongarm and maintain weed control. When Strongarm is applied in tank mix combination with other herbicide(s), follow the incorporation directions for the tank mix partner(s). Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

**Preplant Surface Application:** Apply Strongarm alone or in tank mix combination with other herbicide(s) registered for preplant soil surface application to peanuts. Apply to a seedbed that is relatively free of clods. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Soil surface applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into soil where weed germination occurs. Under dry soil conditions, a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. If rainfall is not anticipated, shallow incorporation (i.e., 2 inches deep) prior to planting should be done to place Strongarm in contact with germinating weeds. Even with incorporation, water is still needed for activation of Strongarm. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. For minimum-tillage, no tillage, or reduced tillage systems when weeds are present at the time of application, apply in a tank mix combination with a contact herbicide such as Gramoxone Max, Roundup WeatherMAX, Glyphomax® XRT herbicide, or Durango® herbicide. **Note:** Reduced weed control in the planted row may occur if untreated soil is exposed during the planting operation if surface applications are not incorporated prior to planting.

**Preemergence Application:** Apply after planting through cracking. For optimum results, Strongarm should be applied at or near planting, prior to germination of weeds. Preemergence applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into the soil where weed germination occurs. Under dry soil conditions a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. Strongarm may be applied alone or in tank mix combination with other herbicide(s) registered for preemergence application to peanuts. When applied in tank mix combination, follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Do not rely on Strongarm for postemergence control of emerged weeds.

**Burndown Application:** When used as a no-till burndown application, Strongarm provides foliar control of specific broadleaf weeds (bristly starbur, common cocklebur, common and giant ragweed, common sunflower, Florida beggarweed, morningglory species, tropic croton, and velvetleaf) and residual control of broadleaf weeds listed above for soil applied applications. For optimum results, apply Strongarm within two weeks of planting. If applied as a burndown application in tank mix combination with another herbicide(s), use only adjuvants that are recommended for the tank mix partner(s). When tank mixing with other herbicide(s), a jar test for compatibility is always recommended (see Compatibility Testing in the Mixing section). When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

**Postemergence Application:** Apply Strongarm as a broadcast spray when weeds are in the 1 to 4 leaf stage and actively growing. Applications made to larger weeds or to weeds under stress may result in unsatisfactory control. Optimum weed control is obtained by applying Strongarm under favorable growing

conditions (i.e., adequate soil moisture and temperature). Applications may occur from peanut cracking through pegging.

Strongarm may be applied alone or in tank mix combination with other postemergence herbicide(s) registered for use in peanuts. Applications of Strongarm must include either a crop oil concentrate or a nonionic surfactant.

**Application Rates and Broadleaf Weeds Controlled by Postemergence Applications:** Strongarm will not control known ALS resistant biotypes of weeds listed below.

Weeds Controlled	Strongarm (oz/acre)
common cocklebur common ragweed Florida beggarweed hemp sesbania morningglory species nutsedge species prickly sida smartweed spurge species spurred anoda velvetleaf	0.15 - 0.45 (0.008 – 0.024 lb ai/acre/acre)

**Adjuvant Systems for Postemergence Application:** Use in combination with one of the following adjuvant systems approved for application to growing crops:

- Nonionic surfactant (0.125 to 0.25% v/v)
- Nonionic surfactant (0.125 to 0.25% v/v) plus urea ammonium nitrate solution (2.5% v/v); dry ammonium sulfate may be used at a rate of 2 lb per acre as a substitute for urea ammonium nitrate.
- Crop oil concentrate or methylated seed oil (1.2% v/v)
- Crop oil concentrate or methylated seed oil (1.2% v/v) plus urea ammonium nitrate solution (2.5% v/v)

**Note:** Use of crop oil concentrate or methylated seed oil plus urea ammonium nitrate is preferred when weeds are under drought stress, but may increase crop injury.

**Tank Mix Applications:** When applied in tank mix combination with other herbicide(s), follow applicable use instructions, including application rates, precautions and restrictions for each product used in the tank mixture, including use of adjuvants.

#### **Minimum Tillage, No Tillage, Strip Tillage, or Other Reduced Tillage Systems**

In these tillage systems where peanuts are planted directly into a cover crop, stale seedbed, or previous crop residues, a burndown herbicide such as Gramoxone Max, Roundup WeatherMAX, Glyphomax XRT, or Durango may be tank mixed with Strongarm to control existing weeds. Do not rely on Strongarm for postemergence control of emerged weeds. Apply before, during (behind the planter), or after planting through cracking. If applying at cracking, insure that any tank mix partner being used is labeled for this application. When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

#### **Strongarm Followed by Postemergence Application**

Weeds and grasses not controlled by Strongarm may be controlled with postemergence herbicide products. Follow the postemergence manufacturer's label for application rates, weeds controlled, applicable use directions, precautions and limitations before use.

## Soybeans

Strongarm is a soil-applied product for control of broadleaf weeds in soybeans. A single preplant incorporated, preplant surface, or preemergence application may be made.

Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform spray coverage. For best results use a spray volume of 10 gallons or more per acre for soil applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. It is not recommended to use screens in spray lines and nozzles finer than 50 mesh (100 mesh is finer than 50 mesh).

### Application Rates and Broadleaf Weeds Controlled by Soil Applications

Strongarm will not control known ALS resistant biotypes of weeds listed below. **Note:** Numbers in parentheses (-) refer to footnotes following table.

Weeds Controlled		Strongarm (oz/acre)
bristly starbur	Pennsylvania smartweed	0.45 – 0.6 (0.024 – 0.032 lb ai/acre)
common cocklebur	prickly sida	
common lambsquarters	redroot pigweed	
common ragweed	smooth pigweed	
common sunflower	spurge species	
eclipta	spurred anoda	
devil's-claw	shining tickweed	
Florida beggarweed	tropic croton	
giant ragweed	velvetleaf	
morningglory species	Virginia copperleaf	
nutsedge species <sup>1,2</sup>	wild poinsetta	
palmer amaranth		

<sup>1</sup>Heavy infestations may require postemergence application of complimentary herbicides following a soil application of Strongarm for season-long control.

<sup>2</sup>The level of nutsedge control provided by Strongarm can vary depending upon weed density and soil or environmental conditions (especially soil moisture).

### Application Methods for Soil Applications

Strongarm may be used in various tillage programs including strip till, no till and conventional tillage operations. Application of Strongarm on soils with greater than 5% organic matter may result in reduced weed control and require subsequent postemergence applications of other herbicides appropriate for specific weeds. Do not use on peat or muck soils. Season-long control of severe weed infestations may require a postemergence application of complimentary herbicides following application of Strongarm.

For best results, fields should be clean-tilled and weed-free. Apply Strongarm as close as possible to planting. If irrigation is available, immediately apply 0.25 to 0.5 inches of water (apply a minimum of 0.5 inches of water if soil conditions are dry). Cultivation, a tank mixture, or applications of postemergence herbicides may also be needed to achieve the desired level of control. If cultivation is required, it should be shallow to avoid excessive movement of treated soil and to avoid exposing weed seed buried deep within the soil.

**Note:** Environmental and soil factors can influence the performance and selectivity of any herbicide treatment. Rainfall of 0.5 inches or greater is required for optimum weed control by most soil herbicides, including Strongarm. When incorporated, Strongarm and other herbicides will perform most optimally when evenly distributed in the surface soil. When emergence of the planted crop is delayed due to unusually cool and/or wet conditions, factors such as pH, disease, and nutrient deficiencies can contribute to reduced crop tolerance to a soil-applied herbicide.



**Area of Use:** Use of Strongarm in soybeans is limited to the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri (bootheel only), New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. Do not apply Strongarm in soybeans in other geographic areas.

**Preplant Incorporated Application:** Apply Strongarm alone or in tank mix combination with other herbicides registered for preplant incorporated application to soybeans. Apply to a seedbed that is relatively free of clods. Incorporate the herbicide(s) into the top 1 to 3 inches of the final seedbed using equipment that provides thorough soil mixing. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Proper moisture is needed to activate Strongarm and maintain weed control. When Strongarm is applied in tank mix combination with other herbicide(s), follow the incorporation directions for the tank mix partner(s). Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

**Preplant Surface Application:** Apply Strongarm alone or in tank mix combination with other herbicide(s) registered for preplant soil surface application to soybeans. Apply to a seedbed that is relatively free of clods. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Soil surface applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into soil where weed germination occurs. Under dry soil conditions, a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. If rainfall is not anticipated, shallow incorporation (i.e., 2 inches deep) prior to planting should be done to place Strongarm in contact with germinating weeds. Even with incorporation, water is still needed for activation of Strongarm. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. For minimum-tillage, no tillage or reduced tillage systems when weeds are present at the time of application, apply in a tank mix combination with a contact herbicide such as glyphosate (Glyphomax XRT, Durango or Roundup WeatherMAX). **Note:** Reduced weed control in the planted row may occur if untreated soil is exposed during the planting operation if surface applications are not incorporated prior to planting.

**Preemergence Application:** Apply after planting but prior to crop or weed emergence. For optimum results, Strongarm should be applied at or near planting, prior to germination of weeds and emergence of the crop. Preemergence applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into the soil where weed germination occurs. Under dry soil conditions a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. Strongarm may be applied alone or in tank mix combination with other herbicide(s) registered for preemergence application to soybeans. When applied in tank mix combination, follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Do not rely on Strongarm for postemergence control of emerged weeds.

**Burndown Application:** When used as a no-till burndown application, Strongarm provides foliar control of specific broadleaf weeds (bristly starbur, common cocklebur, common and giant ragweed, common sunflower, Florida beggarweed, morningglory species, tropic croton, and velvetleaf) and residual control of broadleaf weeds listed above for soil applied applications. For optimum results, apply Strongarm within two weeks of planting. If applied as a burndown application in tank mix combination with another herbicide(s), use only adjuvants that are recommended for the tank mix partner(s). When tank mixing with other herbicide(s), a jar test for compatibility is always recommended (see Compatibility Testing in the Mixing section). When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

#### **Minimum Tillage, No Tillage, Strip Tillage, or Other Reduced Tillage Systems**

In these tillage systems where soybeans are planted directly into a cover crop, stale seedbed, or previous crop residues, a contact herbicide such as Starfire or Roundup may be tank mixed with Strongarm to control existing weeds. Apply before, during (behind the planter), or after planting, but before the crop emerges. When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

**Strongarm Followed by Postemergence Application**

Weeds and grasses not controlled by Strongarm may be controlled with postemergence herbicide products. Follow the postemergence manufacturer's labels for application rates, weeds controlled, applicable use directions, precautions and limitations before use.

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**Terms and Conditions of Use**

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If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

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**Warranty Disclaimer**

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Corteva Agriscience warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions for use, subject to the inherent risks set forth below. To the extent consistent with applicable law, Corteva Agriscience MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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**Inherent Risks of Use**

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It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application or other factors, all of which are beyond the control of Corteva Agriscience or the seller. Corteva Agriscience will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by Corteva Agriscience. To the extent consistent with applicable law, all such risks associated with non-directed use shall be assumed by buyer and/or user.

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**Limitation of Remedies**

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To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, tort, strict liability, or other legal theories), shall be limited to, at Corteva Agriscience's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of product used.

To the extent consistent with applicable law, Corteva Agriscience shall not be liable for losses or damages resulting from handling or use of this product unless Corteva Agriscience is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, in no case shall Corteva Agriscience be liable for consequential, incidental or special damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Corteva Agriscience or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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EPA accepted \_\_\_/\_\_\_/\_\_\_

**[Sub Label B: Water soluble packets]**

(Base label):

<b>DICLOSULAM</b>	<b>GROUP</b>	<b>2</b>	<b>HERBICIDE</b>
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# Strongarm<sup>®</sup>

## HERBICIDE

**For broadleaf weed control in peanuts and soybeans****Active Ingredient:**

diclosulam: N-(2,6-dichlorophenyl)-5-ethoxy-7-fluoro[1,2,4]triazolo-[1,5-c]pyrimidine-2-sulfonamide .....	84%
Other Ingredients .....	16%
Total .....	100%

Contains 0.84 lb of active ingredient per pound of product

**Keep Out of Reach of Children****CAUTION****First Aid**

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

**Precautionary Statements****Hazards to Humans and Domestic Animals**

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin • Avoid contact with eyes, skin, or clothing.**

**Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change 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 by cleaning of equipment or when disposing of equipment washwaters or rinsate.

This chemical and its transformation products demonstrate the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical can contaminate surface water through spray drift.

Under some conditions, this chemical, and/or its transformation products, may have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks post-application. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

**NON-TARGET ORGANISM ADVISORY STATEMENT:** 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.

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

**SURFACE WATER ADVISORY STATEMENT:** 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 months 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 diclosulam 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.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Storage and Disposal**

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**Pesticide Storage:** Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F.

**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:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-288

EPA Est. \_\_\_\_\_

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**Produced for**  
**Corteva Agriscience LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

**NET WEIGHT** \_\_\_\_\_

(Label booklet cover):

DICLOSULAM	GROUP	2	HERBICIDE
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**Strongarm®****HERBICIDE****For broadleaf weed control in peanuts and soybeans**

Active Ingredient:

diclosulam: N-(2,6-dichlorophenyl)-5-ethoxy-

7-fluoro[1,2,4]triazolo-[1,5-c]pyrimidine-

2-sulfonamide ..... 84%

Other Ingredients ..... 16%

Total ..... 100%

Contains 0.84 lb of active ingredient per pound of product

**Keep Out of Reach of Children****CAUTION****Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

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EPA Est. \_\_\_\_\_

™®Trademarks of Corteva Agriscience and its affiliated companies

**Produced for****Corteva Agriscience LLC****9330 Zionsville Road****Indianapolis, IN 46268****NET WEIGHT** \_\_\_\_\_

(Page 1 through end):

## CAUTION

### First Aid

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin • Avoid contact with eyes, skin, or clothing.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- 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.

### ENGINEERING CONTROLS STATEMENT

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard [40 CFR 170.607(d)]. Mixers and loaders handling this product while it is enclosed in intact water soluble packets may elect to wear reduced PPE of long-sleeved shirt, long pants, shoes, socks, a chemical-resistant apron, and chemical-resistant gloves. When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down."

### User Safety Recommendations

Users should:

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

This chemical and its transformation products demonstrate the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical can contaminate surface water through spray drift.

Under some conditions, this chemical, and/or its transformation products, may have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several weeks post-application. Vulnerable conditions include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

**NON-TARGET ORGANISM ADVISORY STATEMENT:** 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.

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

**SURFACE WATER ADVISORY STATEMENT:** 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 months 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 diclosulam 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.

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## Directions for Use

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

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

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

- Coveralls

- Waterproof gloves
- Shoes plus socks

### Storage and Disposal

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**Pesticide Storage:** Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F.

**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:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

### Product Information

Strongarm® herbicide is a soil-applied product for control of broadleaf weeds in peanuts and soybeans. Strongarm may be applied preplant incorporated, preplant surface, or preemergence through cracking in peanuts. "Cracking" of soil occurs when soil is displaced by germinating seedlings just prior to emergence. Strongarm may also be used postemergence in peanuts. A single postemergence application may be made in peanuts.

### Use Precautions

- Read and carefully follow all applicable directions, precautions and restrictions on labeling for other products used in combination with Strongarm.
- This 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.
- **Iron Chlorosis:** There are isolated areas of the country where soil-induced iron chlorosis routinely occurs. Severity of iron chlorosis symptoms may increase when Strongarm is soil applied in areas with a history of soil-induced iron chlorosis or other nutrient induced crop injury.

### Use Restrictions

- **Aerial application of this product is prohibited.**
- Do not allow livestock to graze treated areas or harvest forage or hay from treated areas.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- In peanuts, do not apply more than 0.45 oz (0.024 lb ai) of Strongarm per acre per year in any combination of preplant incorporated, preplant surface, preemergence through cracking, or postemergence applications.
- In soybeans, do not apply more than 0.6 oz (0.032 lb ai) of Strongarm per acre per year as a preplant incorporated, preplant surface, or preemergence application. Only a single soil application per growing season may be made in soybeans.
- **Preharvest Interval:** Do not harvest peanuts for 30 days following application.
- **Preharvest Interval:** Do not harvest soybeans for 125 days following application.
- Do not apply Strongarm to peanuts in the states of New Mexico, Oklahoma and Texas.

### Weed Resistance Management

For resistance management, Strongarm® is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Strongarm and other Group 2 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 Strongarm or other Group 2 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.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) 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 or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your company representative by calling 800-258-3033.

**Instructions for Using Water Soluble Packages Directly into Spray tanks:**

Water Soluble Packages (WSPs) are designed to dissolve in water. Agitation may be used, if necessary, to help dissolve the WSP. Failure to follow handling and mixing instructions can increase your exposure to the pesticide products in WSPs. WSPs, when used properly, qualify as a closed mixing/loading system under the Agricultural Worker Protection Standard [40 CFR 170.607(d)].

**Handling Instructions**

Follow these steps when handling pesticide products in WSPs.

1. Mix in spray tank only.
2. Handle WSP(s) in a manner that protects package from breakage and/or unintended release of contents. If package is broken, put on PPE required for clean-up and then continue with mixing instructions.
3. Keep the WSP(s) in outer packaging until just before use.
4. Keep the WSP dry prior to adding to the spray tank.
5. Handle with dry gloves and according to the label instructions for PPE.
6. Keep WSP intact. Do not cut or puncture WSP.
7. Reseal the WSP outer packaging to protect any unused WSP(s).

**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 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or



moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, 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 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 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 wellhead setbacks and operational containment.

**Avoid all direct or indirect contact with non-target plants.** Do not apply near desirable vegetation and allow adequate distance between target area and desirable plants to minimize exposure.

**Do not apply under conditions that favor runoff or wind erosion of soil containing Strongarm to non-target areas. To prevent off-site movement due to runoff or wind erosion:**

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

**Do not apply when weather conditions favor drift to non-target sites. To minimize spray drift to non-target areas:**

- Use low pressure application equipment capable of producing a large droplet spray.
- Do not use nozzles that produce a fine droplet spray.
- Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
- Keep ground-driven spray boom as low as possible above the target surface.
- Spray when conditions are calm or wind speed is low. Do not spray when wind is gusting or steady wind speed is greater than 10 mph.

### Crop Rotation Intervals

Numbers in parentheses (-) refer to Specific Crop Rotation Information.

Crop	Rotation Interval <sup>1</sup> (Months)
soybeans, peanuts	no restriction
wheat, barley	4
oats, rye	6
snap beans	9
Cotton <sup>2, 5</sup>	10 <sup>5</sup>
Corn <sup>3</sup> , rice, tobacco, sorghum	18
sugar beets, sunflowers and other crops not listed	30 <sup>4</sup>

### Specific Crop Rotation Information:

<sup>1</sup>Minimum number of months that must pass before planting other crops after application of Strongarm at up to 0.45 oz (0.024 lb ai) per acre in peanuts or soybeans.

<sup>2</sup>Strongarm applied at greater than 0.45 oz (0.024 lb ai) per acre, as may occur with boom overlap or at field ends where spray equipment has slowed, may cause injury to rotational cotton the following season. Soils with a shallow hardpan (less than 10 inches) and/or loam soils may be more prone to carryover.



Additionally, cotton grown under early season stress resulting from conditions such as excessively cool, wet, dry or crusted soils, may be particularly susceptible to rotational injury.

<sup>3</sup>The crop rotation interval for corn hybrids identified as "IR" is 10 months.

<sup>4</sup>Rotation to sugar beets, sunflowers, and all other crops not listed requires a 30-month rotation interval and a successful field bioassay.

<sup>5</sup>In North Carolina, the crop rotation interval for cotton is 18 months in the counties of Camden, Currituck, Pasquotank and Perquimans. In all other counties in North Carolina, the crop rotation interval for cotton is 10 months.

**Field Bioassay Instructions:** Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with Strongarm. Plant the strips perpendicular to the direction in which Strongarm was applied. Locate the strips so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury, stand reduction, or yield reduction, the field can be seeded with the test crop in the growing season following the bioassay. If visible injury, stand reduction, or yield reduction occurs, the test crop should not be seeded, and the bioassay must be repeated the next growing season.

## Mixing

Application Rate (oz/acre)	Acres per Individual Bubble Packet
0.15 (0.008 lb ai/acre)	0.75
0.3 (0.016 lb ai/acre)	1.5
0.45 (0.024 lb ai/acre)	1
0.5 (0.026 lb ai/acre)	0.9
0.55 (0.029 lb ai/acre)	0.82
0.6 (0.032 lb a/acre)	0.75

**Formula:** Acres to be treated ÷ acres/packet = number of packets

### Sample Calculation:

Acres to be treated = 31

Rate needed = 0.3 oz per acre

Acres/packet = 1.5 acres per packet

31 acres ÷ 1.5 acres per packet = 20.66 packets (20.66 packets rounded up to nearest whole number of packets = 21 packets)

## Mixing Instructions

Follow the steps below when mixing this product, including if tank mixed with other pesticide products. If being tank mixed, the mixing directions 1 through 9 below take precedence over the mixing directions of the other tank mix products. WSPs may, in some cases, be mixed with other pesticide products so long as the directions for use of all mixed products do not conflict. Do not tank mix this product with products that prohibit tank mixing or have conflicting mixing directions.

1. If a basket or strainer is present in the tank hatch, remove prior to adding the WSP to the tank.
2. Fill tank with water to approximately one-third to one-half of the desired final volume of spray.
3. Stop adding water and stop any agitation.
4. Place intact/unopened WSP(s) into the tank.

5. Do not spray water from a hose or fill pipe to break or dissolve the WSP(s).
6. Start mechanical and recirculation agitation from the bottom of tank without using any overhead recirculation, if possible. If overhead recirculation cannot be turned off, close the hatch before starting agitation.
7. Dissolving the WSP(s) may take up to 5 minutes or longer, depending on water temperature, water hardness and intensity of agitation.
8. Stop agitation before tank lid is opened.
9. Open the lid to the tank, exercising caution to avoid contact with dusts or spray mix, to verify that the WSPs have fully dissolved and the contents have been thoroughly mixed into the solution.
10. Do not add other allowed products or complete filling the tank until the bags have fully dissolved and pesticide is thoroughly mixed.
11. Once the WSP have fully dissolved and any other products have been added to the tank, resume filling the tank with water to the desired level, close the tank lid, and resume agitation.
12. Use the spray solution when mixing is complete.
13. Maintain agitation of the diluted pesticide mix during transport and application.
14. It is unlawful to use any registered pesticide, including WSPs, in a manner inconsistent with its label.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank-mixes. Sparger type agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be thoroughly agitated to resuspend the mixture before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

#### **Tank Mixing Precautions:**

- 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.
- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been adequately cleaned. (See Spray Equipment Clean-Out Procedures.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of Strongarm and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible. Do not use the tank mix combination.

#### **Spray Equipment Clean-Out Procedures**

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank 1/2 full with water.
3. Add household ammonia at a rate of 1 gallon per 100 gallons of water. Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom. Drain tank.
4. Remove all spray nozzles and screens and clean separately.
5. If spray equipment will be used for pesticide application to crops sensitive to Strongarm, repeat steps 1 to 3. Exterior surfaces of spray equipment should also be thoroughly cleaned.
6. Rinsate may be disposed of on site according to label use directions or at an approved waste disposal facility.

## **MANDATORY SPRAY DRIFT MANAGEMENT**

### **Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height n more than 4 feet above the ground.
- For applications prior to emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### **Boomless Ground Applications**

- Applicators are required to use a medium or coarser droplet size (ASABE S572/3) for all applications.
- Do not apply when wind speeds exceed 10 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.

### **BOOM HEIGHT – Ground Boom**

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

## **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 application 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 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 increased 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.

#### **Boomless Ground Applications**

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

#### **Handheld Technology Applications**

- Take precautions to minimize spray drift.

### **Application with Dry Bulk Fertilizer (Soil Application Only)**

Dry bulk fertilizer may be impregnated or coated with Strongarm. Soil applications of dry bulk fertilizer impregnated with Strongarm provides weed control equal to the same rates of Strongarm applied in liquid carriers. Follow label directions for Strongarm regarding rates per acre, special instructions, precautions and limitations for soil application.

Most absorbent dry fertilizers can be used for impregnation with Strongarm. Pure ammonium nitrate and/or limestone will not absorb the herbicide and are not suitable for impregnation with Strongarm. Absorbent fertilizer blends containing a mixture of ammonium nitrate and/or limestone as part of the fertilizer mixture may be impregnated.

Apply 300 to 700 lb of fertilizer/herbicide mixture per acre. Apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential for satisfactory weed control and to prevent possible crop injury. Non-uniform application may result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow soil incorporation of the mixture may improve weed control.

Compliance with all federal and state regulations relating to blending pesticide mixtures with dry bulk fertilizer, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

#### **Impregnation**

Strongarm must be pre-mixed with water to form a slurry prior to impregnation of dry bulk fertilizer. For best results, use a minimum of 6 fl oz of water for each individual 0.45 oz water soluble packet of product. Pre-mixing can be accomplished by shaking the water soluble packets and water together in a closed container. A small amount of a silicon-based defoaming agent may also be needed. Make sure Strongarm is completely and uniformly dispersed in water and the water soluble packet has completely dissolved. Add sufficient water to adjust the total volume of the mixture to deliver a spray volume of 0.5 to 1 gallon of fertilizer per ton. Nozzles used to spray Strongarm onto the fertilizer should be placed to provide uniform spray coverage. Use constant agitation to keep the spray mixture suspended.

#### **Herbicide Combinations with Strongarm on Dry Bulk Fertilizer**

To prepare concentrated tank mixtures of Strongarm with emulsifiable concentrate formulations, the Strongarm/water pre-mix should be added to the liquid mixing tank first. If additional water is required, this should be added next, followed by the emulsifiable concentrate. Care should be taken to avoid over-saturating the dry fertilizer with liquid. For this reason the volume of water in the mixing tank should be roughly equivalent to the volume of emulsifiable concentrate added to the mixing tank. Depending upon the specific dry fertilizer blend and the emulsifiable concentrate application rates, it may be necessary to increase the fertilizer application rates to avoid over-saturating the dry fertilizer. Over-saturation can

result in a mixture with poor flow properties and increase residues of Strongarm left in the blending equipment.

Spray nozzle selection and placement are critical for uniform spray coverage. The spray time is no less than 3 to 5 minutes per batch. Nozzle placement should minimize spray overlap in the blender and also avoid spraying the mixer walls. For best results, use a suitable in-line (no finer than 100 mesh) screen to avoid spray blockages. Any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender may be used.

Calculate amounts of Strongarm with the following formula:

$$\frac{2000}{\text{lb of fertilizer per acre}} \times \text{oz/acre of Strongarm} = \text{oz of product per ton of fertilizer}$$

**Example:**

$$\frac{2000}{300 \text{ lb of fertilizer per acre}} \times 0.45 \text{ oz/acre of Strongarm} = 3 \text{ oz of product (Strongarm) per ton of fertilizer}$$

**Note:** Thoroughly clean dry fertilizer blending and application equipment prior to use with other herbicides. It is important to thoroughly clean the blender, herbicide spray tank, and spraying apparatus. Rinse the sides of the blender and the herbicide tank with water. Clean spraying apparatus prior to preparing fertilizer/herbicide mixtures for crops other than peanuts or soybeans (see Spray Equipment Clean Out Procedures). If the following crop is peanuts or soybeans, flushing may be accomplished by running one to two loads of dry fertilizer, which must be used only in peanuts or soybeans. Inspect the equipment carefully for any spray build-up or deposits from earlier batches and wash or remove as appropriate.

**If the following crop is not peanuts or soybeans,** at a minimum, two dry flush batches are required. Both flushes should fill at least 50% of the blender's capacity. A third flush may be necessary if the blender batch of Strongarm was "wet" due to over-saturating the fertilizer, or if the subsequent application is for a crop known to be highly sensitive to Strongarm.

Alternately, an effective cleaning procedure is rinsing the blenders with a bleach or ammonia solution. The resulting rinsate can be mixed with the fertilizer used for flushing, but at no more than 1 gallon of rinsate per ton of fertilizer.

## **Peanuts**

**(All States Except New Mexico, Oklahoma and Texas)**

Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform spray coverage. For best results, use a spray volume of 10 gallons or more per acre for soil applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. It is not recommended to use screens in spray lines and nozzles finer than 50 mesh (100 mesh is finer than 50 mesh).

## **Application Rates and Broadleaf Weeds Controlled by Soil Applications**

Strongarm will not control known ALS resistant biotypes of weeds listed below. **Note:** Numbers in parentheses (-) refer to footnotes following table.

Weeds Controlled		Strongarm (oz/acre)
bristly starbur	Pennsylvania smartweed	0.45 (0.024 lb ai/acre)
common cocklebur	prickly sida	
common lambsquarters	redroot pigweed	
common ragweed	smooth pigweed	
common sunflower	spurge species	
eclipta	spurred anoda	
devil's-claw	shining tickweed	
Florida beggarweed	tropic croton	
giant ragweed	velvetleaf	
morningglory species	Virginia copperleaf	
nutsedge species <sup>1, 2</sup>	wild poinsettia	
palmer amaranth		

<sup>1</sup>Heavy infestations may require postemergence application of complimentary herbicides following a soil application of Strongarm for season-long control.

<sup>2</sup>The level of nutsedge control provided by Strongarm can vary depending upon weed density and soil or environmental conditions (especially soil moisture).

### Application Methods for Soil Applications

Strongarm may be used in various tillage programs including strip till, no till and conventional tillage operations. Application of Strongarm on soils with greater than 5% organic matter may result in reduced weed control and require subsequent postemergence applications of other herbicides appropriate for specific weeds. Do not use on peat or muck soils. Season-long control of severe weed infestations may require a postemergence application of complimentary herbicides following application of Strongarm.

For best results, fields should be clean-tilled and weed-free. Apply Strongarm as close as possible to planting. If irrigation is available, immediately apply 0.25 to 0.5 inches of water (apply a minimum of 0.5 inches of water if soil conditions are dry). Cultivation, a tank mixture, or applications of postemergence herbicides may also be needed to achieve the desired level of control. If cultivation is required, it should be shallow to avoid excessive movement of treated soil and to avoid exposing weed seed buried deep within the soil.

**Note:** Environmental and soil factors can influence the performance and selectivity of any herbicide treatment. Rainfall of 0.5 inches or greater is required for optimum weed control by most soil herbicides, including Strongarm. When incorporated, Strongarm and other herbicides will perform most optimally when evenly distributed in the surface soil. When emergence of the planted crop is delayed due to unusually cool and/or wet conditions, factors such as pH, disease, and nutrient deficiencies can contribute to reduced crop tolerance to a soil-applied herbicide.

**Preplant Incorporated Application:** Apply Strongarm alone or in tank mix combination with other herbicides registered for preplant incorporated application to peanuts. Apply to a seedbed that is relatively free of clods. Incorporate the herbicide(s) into the top 1 to 3 inches of the final seedbed using equipment that provides thorough soil mixing. For best results, do not use a stalk chopper as an incorporation implement because poor weed control and/or crop injury can result. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Proper moisture is needed to activate Strongarm and maintain weed control. When Strongarm is applied in tank mix combination with other herbicide(s), follow the incorporation directions for the tank mix partner(s). Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

**Preplant Surface Application:** Apply Strongarm alone or in tank mix combination with other herbicide(s) registered for preplant soil surface application to peanuts. Apply to a seedbed that is relatively free of clods. Do not apply Strongarm more than four weeks before planting. For optimum results, apply



Strongarm at or just prior to planting. Soil surface applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into soil where weed germination occurs. Under dry soil conditions, a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. If rainfall is not anticipated, shallow incorporation (i.e., 2 inches deep) prior to planting should be done to place Strongarm in contact with germinating weeds. Even with incorporation, water is still needed for activation of Strongarm. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. For minimum-tillage, no tillage, or reduced tillage systems when weeds are present at the time of application, apply in a tank mix combination with a contact herbicide such as Gramoxone Max, Roundup WeatherMAX, Glyphomax® XRT herbicide, or Durango® herbicide. **Note:** Reduced weed control in the planted row may occur if untreated soil is exposed during the planting operation if surface applications are not incorporated prior to planting.

**Preemergence Application:** Apply after planting through cracking. For optimum results, Strongarm should be applied at or near planting, prior to germination of weeds. Preemergence applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into the soil where weed germination occurs. Under dry soil conditions a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. Strongarm may be applied alone or in tank mix combination with other herbicide(s) registered for preemergence application to peanuts. When applied in tank mix combination, follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Do not rely on Strongarm for postemergence control of emerged weeds.

**Burndown Application:** When used as a no-till burndown application, Strongarm provides foliar control of specific broadleaf weeds (bristly starbur, common cocklebur, common and giant ragweed, common sunflower, Florida beggarweed, morningglory species, tropic croton, and velvetleaf) and residual control of broadleaf weeds listed above for soil applied applications. For optimum results, apply Strongarm within two weeks of planting. If applied as a burndown application in tank mix combination with another herbicide(s), use only adjuvants that are recommended for the tank mix partner(s). When tank mixing with other herbicide(s), a jar test for compatibility is always recommended (see Compatibility Testing in the Mixing section). When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

**Postemergence Application:** Apply Strongarm as a broadcast spray when weeds are in the 1 to 4 leaf stage and actively growing. Applications made to larger weeds or to weeds under stress may result in unsatisfactory control. Optimum weed control is obtained by applying Strongarm under favorable growing conditions (i.e., adequate soil moisture and temperature). Applications may occur from peanut cracking through pegging.

Strongarm may be applied alone or in tank mix combination with other postemergence herbicide(s) registered for use in peanuts. Applications of Strongarm must include either a crop oil concentrate or a nonionic surfactant.

**Application Rates and Broadleaf Weeds Controlled by Postemergence Applications:** Strongarm will not control known ALS resistant biotypes of weeds listed below.

Weeds Controlled	Strongarm (oz/acre)
common cocklebur common ragweed Florida beggarweed hemp sesbania morningglory species nutsedge species prickly sida smartweed spurge species spurred anoda velvetleaf	0.15 - 0.45 (0.008 – 0.024 lb ai/acre)

**Adjuvant Systems for Postemergence Application:** Use in combination with one of the following adjuvant systems approved for application to growing crops:

- Nonionic surfactant (0.125 to 0.25% v/v)
- Nonionic surfactant (0.125 to 0.25% v/v) plus urea ammonium nitrate solution (2.5% v/v); dry ammonium sulfate may be used at a rate of 2 lb per acre as a substitute for urea ammonium nitrate.
- Crop oil concentrate or methylated seed oil (1.2% v/v)
- Crop oil concentrate or methylated seed oil (1.2% v/v) plus urea ammonium nitrate solution (2.5% v/v)

**Note:** Use of crop oil concentrate or methylated seed oil plus urea ammonium nitrate is preferred when weeds are under drought stress, but may increase crop injury.

**Tank Mix Applications:** When applied in tank mix combination with other herbicide(s), follow applicable use instructions, including application rates, precautions and restrictions for each product used in the tank mixture, including use of adjuvants.

#### **Minimum Tillage, No Tillage, Strip Tillage, or Other Reduced Tillage Systems**

In these tillage systems where peanuts are planted directly into a cover crop, stale seedbed, or previous crop residues, a burndown herbicide such as Gramoxone Max, Roundup WeatherMAX, Glyphomax XRT, or Durango may be tank mixed with Strongarm to control existing weeds. Do not rely on Strongarm for postemergence control of emerged weeds. Apply before, during (behind the planter), or after planting through cracking. If applying at cracking, insure that any tank mix partner being used is labeled for this application. When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

#### **Strongarm Followed by Postemergence Application**

Weeds and grasses not controlled by Strongarm may be controlled with postemergence herbicide products. Follow the postemergence manufacturer's label for application rates, weeds controlled, applicable use directions, precautions and limitations before use.

### **Soybeans**

Strongarm is a soil-applied product for control of broadleaf weeds in soybeans. A single preplant incorporated, preplant surface, or preemergence application may be made.

Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform spray coverage. For best results use a spray volume of 10 gallons or more per acre for soil applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. It is not recommended to use screens in spray lines and nozzles finer than 50 mesh (100 mesh is finer than 50 mesh).



### Application Rates and Broadleaf Weeds Controlled by Soil Applications

Strongarm will not control known ALS resistant biotypes of weeds listed below. **Note:** Numbers in parentheses (-) refer to footnotes following table.

Weeds Controlled		Strongarm (oz/acre)
bristly starbur	Pennsylvania smartweed	0.45 – 0.6 (0.024 – 0.032 lb ai/acre)
common cocklebur	prickly sida	
common lambsquarters	redroot pigweed	
common ragweed	smooth pigweed	
common sunflower	spurge species	
eclipta	spurred anoda	
devil's-claw	shining tickweed	
Florida beggarweed	tropic croton	
giant ragweed	velvetleaf	
morningglory species	Virginia copperleaf	
nutsedge species <sup>1,2</sup>	wild poinsetta	
palmer amaranth		

<sup>1</sup>Heavy infestations may require postemergence application of complimentary herbicides following a soil application of Strongarm for season-long control.

<sup>2</sup>The level of nutsedge control provided by Strongarm can vary depending upon weed density and soil or environmental conditions (especially soil moisture).

### Application Methods for Soil Applications

Strongarm may be used in various tillage programs including strip till, no till and conventional tillage operations. Application of Strongarm on soils with greater than 5% organic matter may result in reduced weed control and require subsequent postemergence applications of other herbicides appropriate for specific weeds. Do not use on peat or muck soils. Season-long control of severe weed infestations may require a postemergence application of complimentary herbicides following application of Strongarm.

For best results, fields should be clean-tilled and weed-free. Apply Strongarm as close as possible to planting. If irrigation is available, immediately apply 0.25 to 0.5 inches of water (apply a minimum of 0.5 inches of water if soil conditions are dry). Cultivation, a tank mixture, or applications of postemergence herbicides may also be needed to achieve the desired level of control. If cultivation is required, it should be shallow to avoid excessive movement of treated soil and to avoid exposing weed seed buried deep within the soil.

**Note:** Environmental and soil factors can influence the performance and selectivity of any herbicide treatment. Rainfall of 0.5 inches or greater is required for optimum weed control by most soil herbicides, including Strongarm. When incorporated, Strongarm and other herbicides will perform most optimally when evenly distributed in the surface soil. When emergence of the planted crop is delayed due to unusually cool and/or wet conditions, factors such as pH, disease, and nutrient deficiencies can contribute to reduced crop tolerance to a soil-applied herbicide.

**Area of Use:** Use of Strongarm in soybeans is limited to the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri (bootheel only), New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. Do not apply Strongarm in soybeans in other geographic areas.

**Preplant Incorporated Application:** Apply Strongarm alone or in tank mix combination with other herbicides registered for preplant incorporated application to soybeans. Apply to a seedbed that is relatively free of clods. Incorporate the herbicide(s) into the top 1 to 3 inches of the final seedbed using equipment that provides thorough soil mixing. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Proper moisture is needed to activate Strongarm and maintain weed control. When Strongarm is applied in tank mix combination with

other herbicide(s), follow the incorporation directions for the tank mix partner(s). Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture.

**Preplant Surface Application:** Apply Strongarm alone or in tank mix combination with other herbicide(s) registered for preplant soil surface application to soybeans. Apply to a seedbed that is relatively free of clods. Do not apply Strongarm more than four weeks before planting. For optimum results, apply Strongarm at or just prior to planting. Soil surface applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into soil where weed germination occurs. Under dry soil conditions, a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. If rainfall is not anticipated, shallow incorporation (i.e., 2 inches deep) prior to planting should be done to place Strongarm in contact with germinating weeds. Even with incorporation, water is still needed for activation of Strongarm. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. For minimum-tillage, no tillage or reduced tillage systems when weeds are present at the time of application, apply in a tank mix combination with a contact herbicide such as glyphosate (Glyphomax XRT, Durango or Roundup WeatherMAX). **Note:** Reduced weed control in the planted row may occur if untreated soil is exposed during the planting operation if surface applications are not incorporated prior to planting.

**Preemergence Application:** Apply after planting but prior to crop or weed emergence. For optimum results, Strongarm should be applied at or near planting, prior to germination of weeds and emergence of the crop. Preemergence applications are not effective until rainfall or irrigation of at least 0.25 to 0.5 inches has moved Strongarm into the soil where weed germination occurs. Under dry soil conditions a minimum of 0.5 inches of water is necessary for initial activation of Strongarm. Strongarm may be applied alone or in tank mix combination with other herbicide(s) registered for preemergence application to soybeans. When applied in tank mix combination, follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Do not rely on Strongarm for postemergence control of emerged weeds.

**Burndown Application:** When used as a no-till burndown application, Strongarm provides foliar control of specific broadleaf weeds (bristly starbur, common cocklebur, common and giant ragweed, common sunflower, Florida beggarweed, morningglory species, tropic croton, and velvetleaf) and residual control of broadleaf weeds listed above for soil applied applications. For optimum results, apply Strongarm within two weeks of planting. If applied as a burndown application in tank mix combination with another herbicide(s), use only adjuvants that are recommended for the tank mix partner(s). When tank mixing with other herbicide(s), a jar test for compatibility is always recommended (see Compatibility Testing in the Mixing section). When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

#### **Minimum Tillage, No Tillage, Strip Tillage, or Other Reduced Tillage Systems**

In these tillage systems where soybeans are planted directly into a cover crop, stale seedbed, or previous crop residues, a contact herbicide such as Starfire or Roundup may be tank mixed with Strongarm to control existing weeds. Apply before, during (behind the planter), or after planting, but before the crop emerges. When tank mixing with glyphosate and ammonium sulfate, add ammonium sulfate to the tank mixture before adding glyphosate.

#### **Strongarm Followed by Postemergence Application**

Weeds and grasses not controlled by Strongarm may be controlled with postemergence herbicide products. Follow the postemergence manufacturer's labels for application rates, weeds controlled, applicable use directions, precautions and limitations before use.

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**Terms and Conditions of Use**

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If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

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**Warranty Disclaimer**

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Corteva Agriscience warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions for use, subject to the inherent risks set forth below. To the extent consistent with applicable law, Corteva Agriscience MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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**Inherent Risks of Use**

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It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application or other factors, all of which are beyond the control of Corteva Agriscience or the seller. Corteva Agriscience will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by Corteva Agriscience. To the extent consistent with applicable law, all such risks associated with non-directed use shall be assumed by buyer and/or user.

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**Limitation of Remedies**

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To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, tort, strict liability, or other legal theories), shall be limited to, at Corteva Agriscience's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of product used.

To the extent consistent with applicable law, Corteva Agriscience shall not be liable for losses or damages resulting from handling or use of this product unless Corteva Agriscience is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, in no case shall Corteva Agriscience be liable for consequential, incidental or special damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Corteva Agriscience or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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