Willowood
CLORAN DF

Herbicide

CLORANSULAM-METHYL	GROUP 2	HERBICIDE

For broadleaf weed control in soybeans

ACTIVE INGREDIENT:
Cloransulam-methyl: N-(2-carbomethoxy-6-chlorophenyl)-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

Net Weight: 10 Ounces

Manufactured For:
Willowood, LLC
1887 Whitney Mesa Drive #9740
Henderson, NV 89014-2069

EPA Reg. No.: 87290-87

See inside label booklet for Precautionary Statements and Directions For Use.

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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. • 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.

HOTLINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at **1-800-858-7378** Mon.-Fri., 8:00 a.m. to 12:00 p.m. Pacific Time. For medical emergencies, call your poison control center at **1-800-222-1222**.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or polyethylene, or polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils, or butyl rubber ≥14 mils, or natural rubber ≥14 mils, or neoprene rubber ≥14 mils or nitrile rubber ≥14 mils
- 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 CONTROL STATEMENTS

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

- Aerial applicators must be in enclosed cockpits

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

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

Groundwater Advisory: Cloransulam-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in area where soils are permeable, particularly where the water table is shallow.

This chemical can contaminate surface water through spray drift.

Surface Water Advisory: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching aquatic sediment via runoff for several weeks 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 Cloransulam-methyl from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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 area. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

DIRECTIONS FOR USE

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 (WPS), 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 exemptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval (REI). 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
- Chemical-resistant gloves such as barrier laminate, or polyethylene, or polyvinyl chloride (PVC) ≥14 mils, or viton ≥14 mils, or butyl rubber ≥14 mils, or natural rubber ≥14 mils, or neoprene rubber ≥14 mils or nitrile rubber ≥14 mils
- Socks and shoes

PRODUCT INFORMATION

Willowood Cloran DF controls many economically important broadleaf weeds in soybeans. Willowood Cloran DF may be applied pre-plant incorporated, pre-plant surface, pre-emergence or post-emergence.

Use Precautions

- Read and carefully follow all applicable directions, precautions, and restrictions on labeling for other products used in combination with Willowood Cloran DF.
- Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage. To minimize spray drift, apply Willowood Cloran DF in a spray volume of 3 or more gallons per acre. Increase spray volume to 5 or more gallons per acre when there is heavy weed pressure or dense crop foliage.

Iron Chlorosis: There are isolated geographic areas where soil-induced iron chlorosis routinely occurs. In these areas, the severity of iron chlorosis symptoms or other nutrient-induced crop injury may increase when Willowood Cloran DF is applied.

Crop Rotation Intervals

When tank mixing with other herbicides, follow crop rotation guidelines on the label of each product used. The following rotational crops may be planted at the indicated interval following application of Willowood Cloran DF. Unusual climatic or environmental conditions that may increase the likelihood of rotational crop sensitivity (i.e., corn, sugar beets, sunflowers) include lower than normal rainfall and/or soil temperatures in the fall and spring; and/or soil pH extremes.

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

Crop	Rotation Interval (1) (Months)
Soybeans	0
Wheat	4
Alfalfa, Field Corn, Popcorn, Seed Corn (2), Cotton, Peanuts, Rice, Sorghum, Dry Beans, Lima Beans, Oats, Peas, Snap Beans	9
Barley	12
Potatoes, Sweet Corn	18
Tobacco (3) and Other Crops Not Listed	18 (3)
Sugar Beets, Sunflowers (4)	30 (4)

(continued)

Specific Crop Rotation Information:

1. Minimum number of months that must pass before planting other crops after application of Willowood Cloran DF at up to 0.75 oz. (0.039 lb. a.i.) per acre soil applied and/or 0.3 oz. (0.015 lb. a.i.) per acre post-emergence.
2. **Hybrid seed production:** Corn inbred lines grown for hybrid seed production may be injured the growing season following an application of Willowood Cloran DF. Inbred lines should be thoroughly tested for crop tolerance before rotating to large acreage. While growers are not prohibited from rotating to seed corn in the growing season following an application of Willowood Cloran DF, Willowood, LLC will not accept responsibility for any crop injury on field corn grown for seed following an application of Willowood Cloran DF.
3. Transplanted tobacco may be planted 10 months after application of 0.3 oz. (0.015 lb. a.i.) per acre of Willowood Cloran DF.
4. Rotation to sugar beets and sunflowers require a 30-month rotation interval and a successful field bioassay.

Field Bioassay Instructions: Using typical tillage, seeding practices, and timings for the crop, plant several strips of the desired crop variety across the field previously treated with Willowood Cloran DF. Plant the strips perpendicular to the direction in which Willowood Cloran DF was applied. Locate the strips so that different field conditions are encountered, including difference 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. If visible injury or stand reduction occurs, do not seed the test crop and repeat the bioassay the next growing season.

Use Restrictions

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 slope 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.

- Do not make more than one soil application during a single year.
- Do not exceed 0.039 lb. active ingredient cloransulam-methyl (0.75 oz. of Willowood Cloran DF) per acre as a soil application (pre-plant or pre-emergence).
- Do not apply more than 0.03 lb. active ingredient cloransulam-methyl (0.6 oz. of Willowood Cloran DF) per acre as a post-emergence application during a single year (either as a single application or as a total of sequential post-emergence applications).
- The maximum cumulative application rate from pre-plant, pre-emergence, and/or post-emergence use of cloransulam-methyl must not exceed 0.055 lb. active ingredient (1.05 oz. of Willowood Cloran DF) per acre per year.
- **Preharvest Interval: Forage or Hay:** Do not apply within 25 days before harvest. **Soybeans:** Do not apply within 70 days before harvest.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

Aerial Application: Willowood Cloran DF may be aerially applied for pre-emergence or post-emergence control of broadleaf weeds in soybeans. **Aerial application of this product is prohibited in New York State.**

Restriction

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

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

- Aerial applicators must be in enclosed cockpits.

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 Willowood Cloran DF 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 surface soil 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 tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least ½ inch of rainfall has occurred between application and the first irrigation.

SPRAY DRIFT

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 potential by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
- Keep ground-driven spray boom as low as possible above target surface.
- Spray when conditions are calm or wind speed is low.

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.

Controlling Droplet Size – Aircraft

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

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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

WIND

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

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

WEED RESISTANCE MANAGEMENT

For resistance management, Willowood Cloran DF is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Willowood Cloran DF 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 Willowood Cloran DF 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 from a different group if such use is permitted; where information on resistance in target weeds species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- 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.
- Suspected herbicide-resistant weeds may be identified by these indicators:
    - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
    - A spreading patch of non-controlled plants of a particular weed species; and
    - Surviving plants mixed with controlled individuals of the same species
- 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 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.

Report any incidence of non-performance of this product against a particular weed species to your Willowood, LLC representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

MIXING DIRECTIONS

Mixing Willowood Cloran DF Alone:

1. Fill the tank with ½ of the total amount of water or liquid fertilizer required for the load.
2. Start agitation.
3. Add the required amount of Willowood Cloran DF for the acreage being treated by opening the bottle(s), measuring the required amount, and pouring the measured amount directly into the spray tank while agitating the mixture and allowing time for the herbicide to disperse.
4. Continue agitation while filling the spray tank to the required volume.
5. 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. Apply within 24 hours of mixing. Weed control with Willowood Cloran DF, which has been mixed and allowed to stand for more than 24 hours, may be reduced.

Willowood Cloran DF Applied Alone with Liquid Fertilizer: In order to add Willowood Cloran DF to a liquid fertilizer carrier, Willowood Cloran DF must be premixed in a slurry of product and clean water. Use a minimum of one gallon of water for each container of Willowood Cloran DF. Stir until completely dissolved. With agitator operating, add slurry to the spray tank through a 20 to 35 mesh screen. Rinse container used for premixing and add rinsate to the spray tank. Complete the filling of the spray tank with fertilizer. Maintain agitation during filling, mixing and application. Use the spray mixture of Willowood Cloran DF immediately after mixing. Do not store mixture.

Pre-Mixing (Other Products): If pre-mixing is required for other dry or flowable products applied in tank mix combination with Willowood Cloran DF, follow directions for pre-mixing of such products provided in their respective product labels.

Willowood Cloran DF - Tank Mix

If a broader spectrum of weed control is needed, Willowood Cloran DF 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. 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.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- 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 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: Perform a jar test prior to tank mixing to ensure compatibility of Willowood Cloran DF 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 ½ hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not a compatible tank mix combination.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe 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.

Mixing Order for Tank Mixes:

1. Fill the spray tank to ¼ to ⅓ of the total spray volume required with water or liquid fertilizer.
2. Start agitation.
3. Add the required amount of Willowood Cloran DF for the acreage being treated directly to the spray tank while agitating and allow time to disperse. If liquid fertilizer is being used as the spray carrier rather than water, pre-mix Willowood Cloran DF as described above before adding to the spray tank.
4. After adding Willowood Cloran DF, add different formulation types in the following order: (1) other formulation(s) packaged in water soluble packets; (2) any compatibility agent, if required; (3) dry flowables; (4) wettable powders; (5) aqueous suspension, flowable and liquids. Maintain agitation and fill spray tank to ¾ of total spray volume and add: (6) emulsifiable concentrates; (7) solutions; (8) adjuvants. Allow time for complete mixing and dispersion after each addition.
5. Finish filling the spray tank. Maintain continuous agitation during mixing and throughout application.

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

Clean-Out Procedure for Spray Equipment

1. Drain any remaining spray mixture from the application equipment.
2. Hose down the interior surfaces of the tank while filling the tank ½ full of 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 Willowood Cloran DF, repeat steps 1 through 3. Thoroughly clean exterior surfaces of spray equipment.

Note: Rinsate must be disposed of on-site according to label use directions or at an approved waste disposal facility.

Application in Liquid Fertilizer for Tank Mixes

Always pre-mix or slurry Willowood Cloran DF with water prior to adding to liquid fertilizer in spray tanks. To slurry or pre-mix Willowood Cloran DF, use a minimum of one gallon of water for each container of Willowood Cloran DF. Stir until completely dissolved. Make sure Willowood Cloran DF is completely and uniformly dispersed in water and then add to the spray tank or induction system through a 20 to 35 mesh screen. Add any rinsate to the spray mixture.

When necessary, use a compatibility agent to ensure that Willowood Cloran DF mixes properly. The use of an appropriate compatibility agent is especially important when tank mixing Willowood Cloran DF and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizer. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are difficult to disperse. A jar test, utilizing relative proportions of the tank mix ingredients, must be administered or performed prior to mixing with a large quantity of liquid fertilizer.

Note: Refer to Clean-Out Procedures for Spray Equipment for directions of cleaning equipment prior to use in crops other than soybeans.

Application with Dry Bulk Fertilizer

Dry bulk fertilizer may be impregnated or coated with Willowood Cloran DF. Application of dry bulk fertilizer impregnated with Willowood Cloran DF provides weed control equal to the same rates of Willowood Cloran DF applied in liquid carriers. Follow label directions for Willowood Cloran DF regarding rates per acre, crops, special instructions, cautions and special precautions. Apply 200 to 700 lbs. of the 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 is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control.

Most dry fertilizers can be used for impregnation with Willowood Cloran DF. When coated ammonium nitrate and/or limestone are used alone, do not impregnate with Willowood Cloran DF. These materials will not absorb the herbicide. Blends containing a mixture of ammonium nitrate and/or limestone as part of the fertilizer mixture can be impregnated.

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: Willowood Cloran DF must be pre-mixed with water to form a slurry prior to impregnation of dry bulk fertilizer. For best results, use a minimum of one gallon of water for each container of Willowood Cloran DF. Make sure Willowood Cloran DF is completely and uniformly dispersed in water. Then add sufficient water to adjust the total volume of the mixture to deliver a spray volume of at least 6 pints per ton of fertilizer. Place nozzles used to spray Willowood Cloran DF onto the fertilizer to provide uniform spray coverage. Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender.

Calculate amounts of Willowood Cloran DF by the following formula:

$$\frac{2000}{\text{Lb./Acre of fertilizer}} \times \text{Lb./Acre of Willowood Cloran DF} = \text{Pounds of product per ton of fertilizer}$$

Note: Thoroughly clean dry fertilizer blending and application equipment prior to use with other herbicides. It is important to clean the blender, herbicide spray tank, and spraying apparatus thoroughly. 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 soybeans (see Clean-Out Procedures for Spray Equipment). Then, impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gallon of rinsate per ton of fertilizer. Follow with one to two loads of unimpregnated fertilizer in the blender before switching herbicides. The fertilizer application equipment must be empty, clean, and dry before applying any material to crops other than soybeans.

Soybeans

Apply with ground equipment using a standard low pressure (20 to 40 psi) herbicide sprayer equipped with nozzles that provide uniform coverage. For best results, apply in a spray volume of 10 gallons or more per acre for either soil or post-emergence applications. Use sufficient spray volume to provide uniform coverage. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. Screens in spray lines and nozzles should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

Broadleaf Weeds Controlled by Soil Applications

The following weeds are controlled by Willowood Cloran DF when applied to the soil surface at specified rates either as a pre-plant incorporated, pre-plant surface, or pre-emergence application (Willowood Cloran DF does not control known ALS resistant biotypes of these weeds):

Cocklebur, Common	Ragweed, Common
Horseweed, (Marestail)	Ragweed, Giant
Jimsonweed	Smartweed, Pennsylvania
Lambsquarters, Common	Sunflower, Common
Mallow, Venice	Velvetleaf
Morningglory (Annual Species)	Waterhemp Species[1]
Palmer Amaranth[1]	
Pigweed (Annual Species)	

[1] Willowood Cloran DF provides partial control of Palmer amaranth and waterhemp. To improve control of these weeds, apply Willowood Cloran DF in tank mix combination with the appropriate labeled rate of a soil applied Group 15 herbicide such as Dual II Magnum®, Warrant®, or Zidua® or Group 15 herbicide product such as Treflan® or Prowl H20®.

Application Rates and Methods for Soil Applications (Pre-plant Incorporated, Pre-plant Surface Applied, Burndown and Pre-emergence)

Note: Numbers in parentheses (-) refer to footnotes following table. See instructions for Special Situations below.

Area of Use	Soil Organic Matter	Willowood Cloran DF (Oz./Acre)
DE, CT, IA, KS, MD, ME, MI, MN, MO (excluding the bootheel), ND, NE, NH, OH, OK, SD, VT, WI, PA, NY, and areas north of Interstate 64 in the states of IL, IN, KY, WV, VA.	3% or less	0.6 (0.03 lb. a.i.)
	greater than 3% (1)	0.75 (0.039 lb. a.i.)
all areas to the south of the above mentioned geographic area.	all organic matter levels	0.75 (0.039 lb. a.i.)

1. Soil applications of Willowood Cloran DF at 0.75 oz. (0.039 lb. a.i.) per acre on soils with greater than 5% organic matter may result in reduced weed control. Under these conditions, post-emergence applications of Willowood Cloran DF or other herbicides may be required to control specific weeds.

Special Situations:

Note: Numbers in parentheses (-) refer to footnotes following table.

Situations	Soil Organic Matter	Willowood Cloran DF (Oz./Acre)
moderate to heavy giant ragweed or morningglory infestations	3% or less	0.6 - 0.75 (0.03 lb. a.i. - 0.039 lb. a.i.)
applications made 15 to 30 days prior to planting	greater than 3% (1)	0.75 (0.039 lb. a.i.)

1. Soil applications of Willowood Cloran DF at 0.75 oz. (0.039 lb. a.i.) per acre on soils with greater than 5% organic matter may result in reduced weed control. Under these conditions, post-emergence applications of Willowood Cloran DF or other herbicides may be required to control specific weeds.

Pre-plant Incorporated Application

Apply Willowood Cloran DF alone or in tank mix combination with other herbicides registered for pre-plant incorporated application to soybeans. For best results, the seedbed should be 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 Willowood Cloran DF earlier than 4 weeks before planting. For best results, apply Willowood Cloran DF within 2 weeks of planting. When Willowood Cloran DF 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.

Pre-plant Surface Application

Apply Willowood Cloran DF alone or in tank mix combination with other herbicides registered for pre-plant soil surface application to soybeans. For best results, the seedbed should be relatively free of clods. For best results, apply Willowood Cloran DF within 2 weeks of planting. Soil surface applications are not effective until rainfall of at least 0.5 inch has moved Willowood Cloran DF into surface soil where weed germination occurs. If rainfall is not anticipated, for best results, shallow incorporate (i.e., 2 inches deep) prior to planting to place Willowood Cloran DF in contact with germinating weeds. Willowood Cloran DF may provide suppression of annual grasses at rates greater than 0.3 oz. (0.015 lb. a.i.) per acre if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Timely subsequent rainfall is required for optimal herbicidal activity. If applied in tank mix combination, follow use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. **Note:** Reduced weed control in the planted row may occur if untreated soil is exposed during planting operations.

Burndown Application

When used as a burndown treatment, Willowood Cloran DF alone will provide foliar activity on those broadleaf weeds listed in the Post-emergence Application section of this label. In addition, Willowood Cloran DF will provide residual control of broadleaf weeds listed under the Application Rates and Methods for Soil Applications section. Willowood Cloran DF may provide suppression of annual grasses at rates greater than 0.3 oz. (0.015 lb. a.i.) per acre if there is sufficient rainfall to move the herbicide into the soil prior to weed germination. Timely subsequent rainfall is required for optimal herbicidal activity. **Willowood Cloran DF does not control or suppress emerged annual grasses.** Include adjuvants for foliar burndown applications plus a liquid nitrogen fertilizer (see Adjuvant Systems for Post-emergence Application section). To broaden the spectrum of weeds controlled, Willowood Cloran DF may be tank mixed with other herbicides such as glyphosate, glufosinate, paraquat, 2,4-D, etc. If tank mixing, a jar test for compatibility is always required.

Ohio Only: For additional post-emergence control of Canada thistle, clover, curly dock, dandelion, horsenettle, marestail (horseweed), morning glory (annual), prickly lettuce, smartweed (annual), and wild carrot in soybean burndown applications and glyphosate tolerant soybeans, apply 0.3 oz. (0.015 lb. a.i.) per acre of this product plus ¾ lb. acid equivalent of glyphosate. Glyphosate containing product(s) must be labeled for use on glyphosate tolerant soybeans.

Foundation Soil Herbicide in Glyphosate-Tolerant Soybeans: Willowood Cloran DF can be used as a foundation soil herbicide in a planned sequential program with a glyphosate product labeled for use in glyphosate-tolerant soybeans. Used as a foundation soil herbicide, Willowood Cloran DF will control or suppress key broadleaf weeds listed in the soil applied section of this label, allowing for optimal timing of a glyphosate in-crop treatment.

Michigan Only: This product can be applied as a burndown or pre-emergence soil application at a reduced rate to provide foundation broadleaf weed control when followed by a post-emergence application of Roundup ULTRA in glyphosate-tolerant soybeans.

Broadcast application rates:

Product	Timing	Application Rate
Willowood Cloran DF + 2,4-D* + Crop Oil Concentrate (COC)*	Burndown or Pre-emergence	0.3 oz./acre (0.015 lb. a.i./acre) + Refer to 2,4-D label + 1 gal./100 gals.
Roundup Ultra	Post	Refer to Roundup ULTRA label

*If no broadleaf weeds are present at burndown, 2,4-D and COC are not needed. If grasses are present at burndown application, a post graminicide should be added to the tank mix.

Pre-emergence Application

Apply after planting but prior to crop or weed emergence. For optimum results, apply Willowood Cloran DF within two days after planting. Willowood Cloran DF may be applied alone or in tank mix combination with other herbicides registered for pre-emergence 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.

Post-emergence Application

Willowood Cloran DF may be applied any time prior to the R2 (full flower) growth stage of soybeans. Application prior to full emergence of the first soybean trifoliate leaf may cause temporary yellowing or chlorosis of soybeans. Tank mix partners may cause other effects regardless of the application timing. Follow application timing restrictions of tank mix partners. For Willowood Cloran DF, optimum application timing for control of labeled weeds is provided in the table below.

Post-emergence applications of Willowood Cloran DF may provide residual soil activity on broadleaf weeds, excluding sicklepod (see soil and post-emergence weed lists). Length and effectiveness of residual activity from post-emergence applications will vary and is dependent upon weed species, application rate, rainfall following application (minimum of 0.5 inches of rainfall within a week of application), density of the weed and crop canopy at application, and length of subsequent weed germination events.

Environmental Conditions and Herbicidal Activity of Willowood Cloran DF: Factors in effective weed control with Willowood Cloran DF include application rate, weed size, temperature, and soil moisture prior to and following application, and use of adjuvants. Best weed control results are obtained when Willowood Cloran DF is applied to small, actively growing weeds, when daytime temperatures are warm (70°F or more), and optimal soil moisture to support active weed growth prior to and following application. If weeds are under drought stress, consider delaying application until more favorable conditions resume. Application when weeds are under temperature or moisture stress, or larger than the specified size, may result in reduced control.

- Willowood Cloran DF is rainfast in 2 hours.
- Applications made immediately prior to, during, or immediately following periods of heat and/or drought stress, large day/night temperature fluctuations or where daytime temperatures do not exceed 60°F may decrease weed control.
- Poor weed control may result from applications made to plants under stress from: abnormally hot or cold weather; environmental conditions such as drought, water-saturated soils, hail damage, or frost; or prior to herbicide applications.

Application Rate for Post-emergence Applications: Apply as a broadcast spray at a rate of 0.3 oz. (0.015 lb. a.i.) per acre prior to the maximum leaf stage and weed height for listed weeds using one of the specified adjuvant systems. A second application of up to 0.3 oz. (0.015 lb. a.i.) of Willowood Cloran DF per acre may be applied to later germinating weeds. For especially heavy weed infestations or added residual control, Willowood Cloran DF may be used as a single application at a rate of up to 0.6 oz. (0.03 lb. a.i.) per acre. Do not apply more than a total of 0.6 oz. (0.03 lb. a.i.) per acre per year as a post-emergence application. Willowood Cloran DF may be applied alone or in tank mix combination with other labeled herbicides registered for post-emergence application to soybeans. Refer to labels for additional instructions and specifications pertaining to tank mixes.

Willowood Cloran DF (Oz./Acre)
0.3 (0.015 lb. a.i.)
0.6 (0.03 lb. a.i.)

Broadleaf Weeds Controlled and Optimum Stage of Growth: The following weeds are controlled by Willowood Cloran DF when applied post-emergence at the indicated weed stage of growth. Willowood Cloran DF does not control known ALS resistant biotypes of these weeds. To improve coverage and product performance in heavy weed infestations, use a minimum of 15 gallons per acre spray volume.

Note: Numbers in parentheses (-) refer to Weed-Specific Use Information following table.

Target Weeds	Leaf Number at Application (Optimum to Maximum)	Maximum Height (inches)
Controlled		
Cocklebur, Common	4 – 8	10
Dayflower, Asiatic	2 – 6	NA
Dayflower, Marsh	2 – 6	NA
Dayflower, Spreading	2 – 6	NA
Horseweed, (Marestail)	--	6
Jimsonweed	2 – 4	4
Mallow, Venice	2 – 4	<3
Marsh Elder	4 – 6	10
Morningglory (Annual Species)(1)	2 – 4	4
Mustard, Wild (2)	2 – 4	2
Ragweed, Common	4 – 6	8
Ragweed, Giant	4 – 6	10

(continued)

Broadleaf Weeds Controlled and Optimum Stage of Growth (continued)

Target Weeds	Leaf Number at Application (Optimum to Maximum)	Maximum Height (inches)
Controlled		
Sicklepod (3)	cotyledon – 1	<2
Smartweed, Pennsylvania	2 – 4	6
Sunflower, Common	4 – 8	12
Velvetleaf (4)	2 – 4	6
Suppressed		
Burcucumber	2 – 4	6
Canada Thistle	--	10
Hophornbeam Copperleaf	1 – 2	4
Nutsedge, Yellow	--	8

Weed-Specific Use Information

1. **Morningglory:** Spray before morningglory plants begin to send out runners.
2. **Wild Mustard:** For optimum control, apply before wild mustard plants exceed 4 inches in diameter.
3. **Sicklepod:** Applications made to sicklepod plants later than the 1-leaf stage of growth will likely result in reduced control. A repeat application of Willowood Cloran DF may be necessary 7 to 10 days after the first (do not apply more than a total of 0.6 oz. (0.03 lb. a.i.) per acre per year as a post-emergence application). Application of other post-emergence herbicides may be necessary to control later germinating sicklepod plants.
4. **Velvetleaf:** When velvetleaf is a primary target weed, always include urea ammonium nitrate (UAN) or ammonium sulfate (AMS) with nonionic surfactant, crop oil concentrate or methylated seed oil as the adjuvant system.

Alabama, Arkansas, Connecticut, Delaware, Georgia, Florida, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri (Bootheel), New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas and Virginia ONLY: If sicklepod is the primary target weed, apply 0.3 oz. (0.015 lb. a.i.) of this product per acre when sicklepod is in the cotyledon to 1 leaf stage. Make a second application of 0.3 oz. (0.015 lb. a.i.) of this product per acre 10 to 14 days after the first.

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

- Nonionic surfactant at 1 to 2 pints per 100 gallons of spray mixture (0.125 to 0.25% v/v) plus urea ammonium nitrate at 2.5 gallons per 100 gallons (2.5% v/v)[1]. Nonionic surfactant may be used alone at 2 pints per 100 gallons of spray mixture 0.25% v/v when required in certain tank mixes.
- Crop oil concentrate or methylated seed oil at 1.2 gallons per 100 gallons of spray mixture (1.2% v/v).
- Crop oil concentrate or methylated seed oil at 1.2 gallons per 100 gallons of spray mixture (1.2% v/v) plus urea ammonium nitrate solution at 2.5 gallons per 100 gallons (2.5% v/v).

[1]Dry ammonium sulfate may be used at a rate of 2 lbs. per acre (8.5 to 17 lbs. per 100 gallons of spray mixture) as a substitute for urea ammonium nitrate.

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.

Refer to soil and post application instructions section for mixing instructions and mixing order for tank mix products and adjuvants.

Tank Mix Options: For weeds not listed for post-emergence control with Willowood Cloran DF, the herbicides listed below may be used per label instructions. When applied in tank mix combination with other herbicides, follow all use instructions for all products, including application rates, precautions and restrictions for each product used in the tank mixture, including use of adjuvants.

Note: Numbers in parentheses (-) refer to footnotes following table.

Broadleaf Herbicides		Grass Herbicides
Basagran	Pursuit	Assure II (3)
Cadet	Python WDG	Durango DMA, glyphosate (1)
Classic	Raptor	Fusion (2)
Cobra	Reflex	Poast Plus
Durango DMA, glyphosate (1)	Resource	Roundup Original MAX (1), Roundup WeatherMAX (1)
Flexstar	Synchrony STS	Select Max (3)
Glufosinate (2)	Ultra Blazer	
Harmony GT		
Phoenix		

1. Tank mixtures of Willowood Cloran DF plus glyphosate products may only be used post-emergence in-crop over glyphosate-tolerant soybeans (refer to paragraph below for specific use instructions for tank mixing Willowood Cloran DF with these products).
2. Tank mixtures of Willowood Cloran DF plus glufosinate may only be used post-emergence in-crop over glufosinate-tolerant soybeans (refer to paragraph on tolerant soybeans for specific use instructions for tank mixing Willowood Cloran DF with these products).
3. Under certain conditions, tank mixing Willowood Cloran DF with these post-emergence grass herbicides may reduce their activity on some grass species. However, broadleaf weed control with Willowood Cloran DF will not be affected. This grass antagonism may be overcome by using full labeled rates of these grass herbicides in tank mixtures with Willowood Cloran DF. Making separate applications of Willowood Cloran DF and Assure II or Fusion is the most effective method for reducing the potential for antagonism. Do not tank mix Assure II with Willowood Cloran DF when the target weed is woolly cupgrass or fall panicum, as reduced control may occur.

Other Post-emergence Herbicide Applications: Apply other post-emergence herbicides at least 7 days before or 7 days after an application of Willowood Cloran DF.

Precautions for Post-emergence Application of Willowood Cloran DF with Foliar Insecticides: Willowood Cloran DF may be tank mixed with the foliar applied Lorsban®-4E insecticide or synthetic pyrethroid products. The addition of other herbicides with Willowood Cloran DF in combination with an insecticide may increase the risk for crop injury in the form of stunting or leaf burn.

Willowood Cloran DF + Glyphosate and Willowood Cloran DF + Glufosinate Tank Mix in Glyphosate and Glufosinate-Tolerant Soybeans: Willowood Cloran DF at 0.3 – 0.6 oz. (0.015 lb. a.i.) per acre may be tank mixed with glyphosate herbicides labeled for use in glyphosate-tolerant soybeans and glufosinate for use in glufosinate-tolerant soybeans to enhance control of key broadleaf weeds such as giant ragweed, marestail, morningglory, velvetleaf, and other listed under the Post-emergence Application section of this label. Residual control from Willowood Cloran DF may also reduce the potential need for subsequent post-emergence applications.

As a general rule, for best results, when tank mixing Willowood Cloran DF with glyphosate and glufosinate herbicides, add ammonium sulfate (AMS) at 8.5 to 17 lbs. per 100 gallons of spray mixture. The order of mixing is: (1) water; (2) Willowood Cloran DF; (3) AMS; (4) glyphosate product. **No additional** non-ionic surfactant is required when tank mixing with surfactant-loaded glyphosate herbicide.

Note: If a non-surfactant-loaded glyphosate herbicide is tank mixed with Willowood Cloran DF, a non-ionic surfactant is required. Add no less than 1 to 2 pints per 100 gallons of spray mixture (0.125 to 0.25% v/v). Add the non-ionic surfactant before completing the filling process.

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 may be disposed of on-site according to label use directions or at an approved waste disposal facility.

CONTAINER HANDLING:
Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

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