



Group

14

Herbicide

# Flumioxazin 51% WDG

## Herbicide for control and suppression of weeds in:

Alfalfa, Asparagus, Bushberries, Celery, Chickpea, Cotton, Dry Beans, Field Corn, Field Pea, Flax, Garlic, Grape, Hops, Lentils, Mint, Nut Trees (including pistachio), Onion (Dry bulb), Olive, Peanut, Pome Fruit, Pomegranate, Potato, Soybean, Stone Fruit, Strawberry, Sugarcane, Sunflower, Safflower, Sweet Potato, Wheat, Transplanted Melons, Pepper and Tomato Beds, Non-Bearing Fruit Trees, Fallow Land, Bare Ground on Non-Crop Areas of Farms, Orchards, and Vineyards

Active Ingredient:	By Wt.
Flumioxazin*.....	51%
Other Ingredients:.....	49%
Total:.....	100%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

### KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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

#### FIRST AID

<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal) call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: **1-800-424-9300**.

Manufactured For: RedEagle International LLC  
5143 S. Lakeland Dr., Suite 4 Lakeland, FL 33813

EPA Reg. No. 85678-34

# PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

## CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust and spray mist. Avoid contact with skin, eyes, or clothing.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some of the materials that are chemical-resistant to this product are listed below.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Shoes and socks

#### For aerial application to Sugarcane, mixer/loaders must also wear:

- Coveralls
- Chemical-resistant apron
- Chemical-resistant boots

#### For aerial application to Field Peas, Flax, Lentils, Sunflower, Safflower and Wheat, mixer/loaders must also wear:

- Filtering face piece respirator (N95, R95, or P95)

#### For ground boom application to Olive and Pomegranate, mixer/loaders must also wear:

- Filtering face piece respirator (N95, R95, or P95)

Follow manufacturer's instructions for cleaning/maintaining PPE. If there are 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/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### **ENVIRONMENTAL HAZARDS**

This product is toxic to non-target plants and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to plants and must be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run-off to surface water or adjacent land.

Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use vegetation filter strips along rivers, creeks, streams, wetlands, or on the downhill side of fields, where run-off could occur to minimize water run-off.

### **DIRECTIONS FOR USE**

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

### **READ ENTIRE LABEL USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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.

The following PPE is required for early entry into 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:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries, or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift. Do not enter or allow others to enter treated areas until sprays have dried.

### **RESISTANCE MANAGEMENT**

Flumioxazin 51% WDG is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to Flumioxazin 51% WDG and other Group 14 herbicides. Weed species with acquired resistance to Group 14 herbicides may eventually dominate the weed population if Group 14 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Flumioxazin 51% WDG or other Group 14 herbicides.

#### **To delay herbicide resistance:**

- Avoid using Flumioxazin 51% WDG or other target site of action Group 14 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Base use on a comprehensive Integrated Pest Management (IPM) program.
- Monitor treated weed populations for loss of field efficacy.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management measures for specific crops and resistant weed biotypes.

### **TANK MIXES NOTICE**

Tank mixing and/or use of this product with another product that is not specifically and expressly authorized by the label shall be at the exclusive risk of user, applicator, and/or application advisor to the extent allowed by applicable law.

Read and follow the entire label of each product to be used in the tank mix with this product.

## PRODUCT USE INFORMATION

### Flumioxazin 51% WDG:

- Provides residual control of susceptible weeds in alfalfa, asparagus, bushberries, celery, cotton, dry bean, field corn, garlic, grape, hops, mint, nut trees (including pistachio), onion (dry bulb), non-bearing fruit trees, peanut, pome fruit, potato, soybean, stone fruit, strawberry, sugarcane, and sweet potato.
- Provides additional burndown activity when used as part of a burndown program in alfalfa, asparagus, celery, cotton, dry bean, field corn, grape, hops, nut trees (including pistachio), non-bearing fruit trees, peanut, soybean, and sugarcane.
- Can be applied as part of a fall burndown program to control susceptible winter annuals.
- Can be applied with a hooded or shielded sprayer, as well as part of a layby application, in cotton and sugarcane for post-emergence weed control as well as residual control of susceptible weeds.
- Can be used on farms, orchards and vineyards for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed free.
- **Read tank mix product label for rates and weeds controlled. Read and follow all label directions for all tank mix products before using. Follow the most restrictive labeling of any tank mix product. Flumioxazin 51% WDG will control the weeds claimed in crop specific use directions when applied according to label use directions. This label makes no claims concerning control of other weed species.**

### AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions. Where states have more stringent regulations, they must be observed.

### RESTRICTIONS AND LIMITATIONS

- Do not apply this product when weather conditions favor spray drift from treated areas.
- Do not apply during low-level inversion conditions, including fog.
- When applying by air, observe drift management restrictions and precautions listed under “**AERIAL APPLICATION**”.
- Do not apply to frozen or snow covered soil.
- Mechanical incorporation into the soil will reduce residual weed control.
- Only apply post-directed and layby applications of Flumioxazin 51% WDG to healthy growing crops.
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply within 300 yards of non-dormant pears.
- Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **Do not apply other materials with spray equipment used to apply Flumioxazin 51% WDG to any crop foliage unless the proper cleanout procedures are followed. See “SPRAYER CLEANUP” for more information.**

## **ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE**

### **Pre-Emergence Application (Conventional Tillage)**

Important: Crop injury can occur if application is made to poorly drained soils and/or applied under cool, wet conditions. Minimize risk of crop injury by using on well drained soils, planting at least 1.5 inches deep, using high quality seed, and completely covering seeds with soil prior to pre-emergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

Adequate moisture is required to activate Flumioxazin 51% WDG in soil for residual weed control. Dry weather following applications of Flumioxazin 51% WDG can reduce effectiveness. However, when adequate moisture is received after dry conditions, Flumioxazin 51% WDG will control susceptible germinating weeds. Flumioxazin 51% WDG may not control weeds that germinate after application but before an activating rainfall/irrigation or weeds that germinate through cracks resulting from dry soil.

If adequate moisture is not received after Flumioxazin 51% WDG application, weed control can be improved by irrigation with at least 1/4 inch of water. If emerged weeds are controlled by cultivation, residual weed control will be reduced.

### **Burndown Application**

Apply Flumioxazin 51% WDG as part of a burndown program to actively growing weeds. Applications in conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply Flumioxazin 51% WDG when weeds are stressed due to drought, excessive water, extremes in temperature, disease, or low humidity. Stressed weeds are less susceptible to herbicidal action. Flumioxazin 51% WDG is most effective when applied under warm sunny conditions.

Reduced residual weed control can occur if burndown applications are made to fields where heavy crop and/or weed residue exist.

### **Post-Emergence Application**

Apply Flumioxazin 51% WDG to healthy crops labeled for post-emergence use. Do not apply Flumioxazin 51% WDG to crops that are weakened by disease, drought, flooding, excessive fertilization, soil salts, previously applied pesticides, nematodes, insects, or winter injury.

### **Rainfastness**

Flumioxazin 51% WDG is rainfast one hour after application. Applications made when rain is expected within one hour of application will reduce post-emergence efficacy.

## **Soil Characteristics**

Application of Flumioxazin 51% WDG to soils with high organic matter and/or high clay content require higher dosages than soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

## **HERBICIDE RATE**

### **Residual Weed Control (Including Pre-Emergence Applications or Applications as Part of a Fall or Spring Burndown and Fallow Seedbed Program)**

Based upon soil characteristics (organic matter content and texture), the most difficult to control weed species being targeted, and the crop being grown, select the proper dosage from the rate range tables contained in this label.

**CARRIER VOLUME AND SPRAY PRESSURE** (Ground Equipment only. See Information for Aerial Equipment under "AERIAL APPLICATION".)

### **Pre-Emergence Application (Conventional Tillage)**

To ensure uniform coverage, use 10 - 30 gals. of spray solution per acre for conventional tillage applications. Nozzle selection must meet manufacturer's gallonage and pressure specifications for pre-emergence herbicide application.

### **Burndown Application (Prior to Crop Emergence)**

To ensure thorough coverage in burndown applications, use 15 - 60 gals. spray solution per acre. Use 20 - 60 gals. per acre if dense vegetation or heavy crop residue is present. Nozzle selection must meet manufacturer's gallonage and pressure specifications for post-emergence herbicide application. Do not use flood jet nozzles.

### **Post-Emergence Application (Emerged Crop)**

Check use directions for specific crops in which Flumioxazin 51% WDG can be applied post-emergence. To ensure thorough coverage in burndown applications, use a minimum of 15 gals. spray solution per acre. Use a minimum of 20 gals. per acre if dense vegetation or heavy crop residue is present. Nozzle selection must meet manufacturer's gallonage and pressure specifications for post-emergence herbicide application.

## **ADDITIVES**

### **Burndown Application (Prior to Crop Emergence)**

Post-emergence control of weeds from Flumioxazin 51% WDG tank mixes requires the addition of an agronomically approved adjuvant to the spray mixture. When an adjuvant is to be used, RedEagle International LLC suggests the use of a Chemical Producers and Distributors Association certified adjuvant. Either a crop oil concentrate or methylated seed oil which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant at 0.25% v/v, may be used when applying Flumioxazin 51% WDG as part of a burndown program. Some tank mix partners, such as Roundup Power Max®, are formulated with sufficient adjuvants and do not require the addition of a crop oil concentrate, methylated seed oil, or non-ionic surfactant when tank mixed with Flumioxazin 51% WDG. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds such as cutleaf evening primrose and Carolina geranium. Verify mixing compatibility qualities with a jar test.

Add a spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) to the spray mixture along with either a crop oil concentrate, methylated seed oil or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for a crop oil concentrate, a methylated seed oil or a non-ionic surfactant.

#### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND FLUMIOXAZIN 51% WDG**

When using Flumioxazin 51% WDG and an adjuvant, such as in stale seed bed, layby, hooded/shielded, or reduced tillage situations, perform a jar test before mixing commercial quantities of, when using Flumioxazin 51% WDG for the first time, when using new adjuvants or when a new water source is being used.

1. Add 1 pt. of the water to a quart jar. Use water from the same source and temperature that will be used in the spray tank mixing operation.
2. Add 1g of Flumioxazin 51% WDG to the quart jar for every 3 oz. of Flumioxazin 51% WDG per acre being applied (4g if 12 oz./A is the desired Flumioxazin 51% WDG rate), gently mix until product goes into suspension.
3. Add 60 mL (4 Tbsps. or 2 fl. oz.) of the crop oil or methylated seed oil to the quart jar or 1 mL of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 mL (1 Tbsp. or 0.5 oz.) of the 28% to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19g AMS to the quart jar in place of the 28% to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. The appearance of any of the following conditions are unacceptable and the choice of adjuvant must be modified:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.

#### **SPRAYER PREPARATION**

Before applying Flumioxazin 51% WDG, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonyleurea and phenoxy herbicides, (i.e., Classic®, and 2,4-D respectively) are active at very small amounts and can cause crop injury when applied to susceptible crops. Clean spray equipment according to the manufacturer's directions for the last product used before the equipment is used to apply Flumioxazin 51% WDG. If two or more products were tank mixed prior to Flumioxazin 51% WDG application, follow the most restrictive cleanup procedure.



## MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 - 2/3 of desired level with clean water.
2. If a drift retardant is to be used, add 10 lbs. of spray grade ammonium sulfate per 100 gals. of spray solution.
3. To ensure a uniform spray mixture, pre-slurry the required amount of Flumioxazin 51% WDG with water prior to addition to the spray tank. Use a minimum of 1 gal. of water per 10 oz. of Flumioxazin 51% WDG.
4. While agitating, slowly add the pre-slurried Flumioxazin 51% WDG to the spray tank. Adequate agitation will create a rippling or rolling action on the water surface.
5. If tank mixing Flumioxazin 51% WDG with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
6. Add any required adjuvants.
7. Fill spray tank to desired level with water. **Continue agitation until all spray solution has been applied.**
8. Mix only the amount of spray solution that can be applied the day of mixing. Apply Flumioxazin 51% WDG within 6 hours of mixing.

## SPRAYER CLEANUP

Clean spray equipment, including mixing vessels and nurse tanks, each day following Flumioxazin 51% WDG application. After Flumioxazin 51% WDG is applied, use the following steps to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens, and nozzles.
3. Top off tank, add 1 gal. of 3% household ammonia (or equivalent) for every 100 gals. of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of Flumioxazin 51% WDG from the spray system, add a tank cleaner such as "Valent Tank Cleaner" from Valent U.S.A. Corporation, in place of ammonia and allow the cleaning solution to remain in the pressurized spray system (spray tank, hoses, and boom) overnight before flushing the system for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens, and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Thoroughly clean spray equipment, including all tanks, hoses, booms, screens, and nozzles before it is used to apply post-emergence pesticides. Equipment with Flumioxazin 51% WDG residue remaining in the system may result in crop injury to the subsequently treated crop.

## APPLICATION EQUIPMENT

Application equipment must be clean and in good repair. Nozzles must be uniformly spaced on boom and frequently checked for accuracy.

## BROADCAST APPLICATION

Apply Flumioxazin 51% WDG, and Flumioxazin 51% WDG tank mixes, with ground equipment using standard commercial sprayers equipped with flat fan or flood nozzles (pre-emergence applications only) designed to deliver the desired spray pressure and spray volume.

## BAND APPLICATION

When banding, use proportionately less water and Flumioxazin 51% WDG per acre. The rate of Flumioxazin 51% WDG required per acre, when applied as a banded application, can be calculated with the following formula:

Amount Needed per Acre for Banded Application	=	Band Width in Inches	x	Rate per Broadcast Acre
		Row Width in Inches		

## AERIAL APPLICATION

Spray drift away from the site of application may cause damage to non-target vegetation. To minimize drift, apply the largest droplet size consistent with uniform coverage and satisfactory weed control.

To obtain satisfactory application and avoid drift:

- Do not apply during low-level inversion conditions (including fog), when winds are gusty, or under other conditions that favor drift.
- Do not spray when wind velocity is less than 2 mph or more than 10 mph.
- Do not apply this product by air within 40 ft. of non-target plants including non-target crops.
- Do not apply this product by air within 100 ft. of emerged cotton crops.
- Do not apply this product by air within 40 ft. of streams, wetlands, marshes, ponds, lakes, and reservoirs.

**Carrier Volume and Spray Pressure:** When used as part of a burndown weed control program, apply Flumioxazin 51% WDG in 7 - 10 gals. of water per acre. Application at less than 7 gals. per acre may provide inadequate control. When used for pre-emergence weed control, apply Flumioxazin 51% WDG in 5 - 10 gals. of water per acre. The higher gallonage applications generally afford more consistent weed control. Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Nozzle Selection and Orientation:** Formation of very small drops may be minimized by appropriate nozzle selection, and orienting nozzles away from the air stream as much as possible and by avoiding excessive spray pressure. Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, such as diaphragm type nozzles, to avoid unwanted discharge of spray solution. The nozzles must be directed toward the rear of the aircraft, at an angle between 0° and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

**Adjuvants and Drift Control Additives:** Refer to tank mix partner's label for adjuvant use directions. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

### **CHEMIGATION**

Follow all label directions for crops regarding rates, timing of application, special instructions and precautions.

Apply this product only through center pivot systems. End guns must be turned off due to uneven application.

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

Crop injury, lack of efficacy, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

The system must be properly calibrated (with water only) to ensure that the amount of Flumioxazin 51% WDG applied corresponds to the listed rate.

Apply Flumioxazin 51% WDG in 1/2 - 3/4 inches of water during the first sprinkler set. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period. Once chemigation has begun, the run must be completed to ensure no product is left in the system.

If you have any questions about calibration, you should contact your State Extension Service Specialist, equipment manufacturers or other experts.

### **Special Instructions for Chemigation**

1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
2. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person must be present to shut the system down and make necessary adjustments.
3. The system must be free of leaks and clogged nozzles.
4. The pesticide must be supplied continuously for the duration of the aqueous application. An uneven application may cause injury to the crop or poor weed control.
5. Agitation must be maintained in the nurse tank.
6. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
7. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in the case where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with the pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **Chemigation Systems Connected to Public Water Systems**

1. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to the public water system must contain a functional, reduced pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to the public water system must also follow restrictions listed in the preceding section titled “**Special Instructions for Chemigation**”.

#### **APPLICATION WITH DRY BULK FERTILIZERS**

Dry bulk fertilizer can be impregnated or coated with Flumioxazin 51% WDG. Application of dry bulk fertilizer with Flumioxazin 51% WDG provides weed control equal to, or slightly below, the same rate of Flumioxazin 51% WDG applied in liquid carriers, due to better coverage with application via spray equipment. Follow label directions for Flumioxazin 51% WDG regarding rates, special instructions, cautions and special precautions. Apply 400-700 lbs. of the fertilizer/herbicide mixture per acre to obtain adequate soil coverage. Apply the mixture to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury and to obtain uniform weed control.

Do not use ammonium nitrate and/or limestone as the sole source of fertilizer, as Flumioxazin 51% WDG may not adhere to these materials.

Compliance with all Federal and State regulations relating to blending pesticide mixtures with dry bulk fertilizer, registrations, labeling, and application are the responsibility of the individual and/or company offering the fertilizer and Flumioxazin 51% WDG mixture for sale.

Premix Flumioxazin 51% WDG with water to form a slurry prior to impregnation on dry bulk fertilizer. Use a minimum of 1 pt. of water for each 2 oz. of Flumioxazin 51% WDG, and use a minimum of 6 pts. of Flumioxazin 51% WDG slurry to impregnate 2,000 lbs. of the fertilizer for uniform coverage of the fertilizer. Closed drum, belt, ribbon, or other commonly used dry bulk blenders may be used.

The amount of Flumioxazin 51% WDG required can be calculated with the following formula:

Ounces of Flumioxazin 51% WDG per Ton of Fertilizer	=	Ounces of Flumioxazin 51% WDG per Acre	x	2,000	÷	Pounds of Fertilizer per Acre
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Thoroughly clean dry fertilizer blending equipment after placing Flumioxazin 51% WDG in the system to avoid injury to sensitive crops that may be treated with fertilizers blended after the equipment has been used for Flumioxazin 51% WDG. Rinse the sides of the blender and the herbicide tank with water. Then impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gal. of rinsate per ton of fertilizer. Follow with 1 - 2 loads of unimpregnated fertilizer in the blender before switching herbicides.

#### ROTATIONAL RESTRICTIONS

The following rotational crops can be planted after applying Flumioxazin 51% WDG at the specified rate. Planting earlier than the specified rotational interval may result in crop injury. **Do not plant any crop, except corn (field), cotton, peanut, soybean, sugarcane, and sweet potato earlier than 30 days after applying Flumioxazin 51% WDG.**

RATE FLUMIOXAZIN 51% WDG OZ./A	CROPS	ROTATIONAL INTERVALS
1	Cotton (no-till or strip-till only)	14 days <sup>1</sup>
1.5 - 2	Cotton (no-till or strip-till only)	21 days <sup>1</sup>
2	Peanut, Soybean, Sugarcane, and Sweet Potato	Immediately
	Field Corn (minimum and no-till)	7 days
	Cotton and Field Corn (conventional tillage), Rice, Sorghum, Sunflower, Tobacco, and Wheat	30 days <sup>1</sup>
	Barley, Dry and Snap Beans, Flax, Peas, Rye, Safflower, and Sweet Corn	3 months
	Alfalfa, Canola, Clover, Oats, Potato, Sugar Beet, and all other crops not listed <sup>2</sup>	4 months if soil tilled prior to planting; 8 months if not tilled
	Lentil	6 months

Up to 3	Peanut, Soybean, Sugarcane, and Sweet Potato	Immediately
	Field Corn (minimum and no-till)	14 days
	Field Corn (conventional tillage) and Sorghum	30 days <sup>1</sup>
	Cotton, Rice, Sunflower, Tobacco, and Wheat	2 months <sup>1</sup>
	Barley, Dry and Snap Beans, Flax, Pea, Rye, Safflower, and Sweet Corn	4 months
	Alfalfa, Clover, Oats, Potato, and Sugar Beet	5 months if soil tilled prior to planting; 10 months if not tilled
	Canola and all other crops not listed <sup>2</sup>	6 months if soil tilled prior to planting; 12 months if not tilled
	Lentil	7 months
Up to 4	Sugarcane	Immediately
	Alfalfa, Canola, Potato, Sugar Beet, and all other crops not listed <sup>2</sup>	6 months if soil tilled prior to planting; 12 months if not tilled
	Cotton, Field Corn, Peanut, Rice, Sorghum, Soybean, Sunflower, Tobacco, and Wheat	4 months
	Transplanted on raised beds only: Melon, Pepper, and Tomato <sup>4</sup>	2 months (if the top 4 inches of the beds have been removed)
6 - 12	Cotton, Field Corn, Peanut, Rice, Sorghum, Soybean, Sunflower, Tobacco, and Wheat	9 months
	Alfalfa, Canola, Sugar Beet, and all other crops not listed <sup>2</sup>  Trees can be transplanted 2 months after an application of Flumioxazin 51% WDG <sup>3</sup> .	12 months if soil tilled prior to planting; 18 months if not tilled

<sup>1</sup>At least one inch of rainfall/irrigation must occur between application and planting or crop injury may occur.

<sup>2</sup>Successful soil bioassay must be performed prior to planting these crops.

<sup>3</sup>Transplanted apple, apricot, avocado, bushberries (including blueberry), cherry, fig, grape, grapefruit, lemon, nectarine, nut trees (including pistachio), olive, orange, peach, pear, plum (including dried plum), and tangerine can be planted 2 months after a Flumioxazin 51% WDG application of 2 - 12 oz./A.

<sup>4</sup>**Arizona and California only:** For fallow bed application on transplanted melon, pepper, and tomato beds, follow directions for use in this label.

**Table 1. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
SECTION A				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Carpetweed	<i>Mollugo verticillata</i>	Up to 5%	All Soil Types	2 oz./A
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Evening primrose, Cutleaf	<i>Oenothera laciniata</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Florida Pusley	<i>Richardia scabra</i>			
Henbit	<i>Lamium amplexicaule</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
Marestai/Horseweed				
Mayweed/False Chamomile	<i>Matricaria maritime</i>			
Nightshades	<i>Matricaria maritime</i>			
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce	<i>Lactuca serriola</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane, Common	<i>Portulaca oleracea</i>			
Radish, Wild	<i>Raphanus raphanistrum</i>			
Redmaids	<i>Calandrinia ciliata var menziesii</i>			
Shepherd's Purse	<i>Capsella bursa-pastoris</i>			
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>			
Sowthistle, Prickly	<i>Sonchus asper</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Venice Mallow	<i>Hibiscus trionum</i>			

(continued)

**Table 1. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

BROAEI LEAF WEED SPECIES				
SECTION B				
All weeds listed in Section A plus:				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG2 RATE
Coffee Senna	<i>Cassia occidentalis</i>	Up to 3%	All Soil Types	Cotton and Dry Bean 2 oz./A Field Corn and Soybean 2.5 oz./A Peanut and all other labeled crops 3 oz./A
Common Ragweed <sup>1</sup>	<i>Ambrosia artemisiifolia</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Golden Crownbearda	<i>Verbesina encelioides</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>	3 - 5%	Coarse and Medium Soils: sandy loam, loamy sand, loamy silt loam, silt, sandy clay, sandy clay loam	Cotton and Dry Bean 2 oz./A Field Corn and Soybean 2.5 oz./A Peanut and all other labeled crops 3 oz./A
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
London Rocket	<i>Sisymbrium irio</i>			
Morningglories <sup>3</sup>				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Tall	<i>Ipomoea purpurea</i>			
Mustard, Wild	<i>Brassica kaber</i>			
Palmer Amaranth	<i>Amaranthus palmeri</i>	3 - 5%	Fine Soils: silty clay, silty clay loam, clay, clay loam	Cotton and Dry Bean 2 oz./A Field Corn, Peanut, Soybean, and all other labeled crops 3 oz./A
Spurred Anoda	<i>Anoda cristata</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Waterhemp <sup>1</sup>				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			
Yellow Rocket	<i>Barbarea vulgaris</i>			

<sup>1</sup>A post-emergence herbicide, such as COBRA®, PHOENIX™, or glyphosate (ROUNDUP READY® soybeans only) may be needed following a pre-emergence application of Flumioxazin 51% WDG to adequately control common ragweed or waterhemp in soybean fields with heavy pressure.

<sup>2</sup>Due to differences in crop canopy timing between peanuts and soybeans, apply 3 oz./A of Flumioxazin 51% WDG in peanuts, regardless of soil type and organic matter content, except in the states of North Carolina, Oklahoma, and Virginia where a maximum of 2 oz./A can be applied in peanuts. Flumioxazin 51% WDG will provide residual control of these weeds at 2 oz./A when applied under a cotton canopy.

<sup>3</sup>Morningglory species are not adequately controlled on fine soils or soils with greater than 3% organic matter.



**Table 2. Weeds Suppressed by Residual Activity of Flumioxazin 51% WDG**

<b>BROADLEAF WEED SPECIES</b>					
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>OUNCES PER ACRE</b>		
Bristly Starbur	<i>Acanthospermum hispidum</i>	Up to 5%	2 - 3		
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>				
Ragweed, Giant	<i>Ambrosia trifida</i>				
Russian Thistle	<i>Salsola iberica</i>				
Smartweeds					
Ladysthumb	<i>Polygonum persicaria</i>				
Pennsylvania	<i>Polygonum pennsylvanicum</i>				
Smellmelon	<i>Cucumis melo</i>				
Velvetleaf	<i>Abutilon theophrasti</i>				
Wild Buckwheat	<i>Polygonum convolvulus</i>				
Wormwood, Biennial	<i>Artemisia biennis</i>				
<b>GRASS WEED SPECIES</b>				Up to 5%	1.5 - 3
Barnyardgrass	<i>Echinochloa crus-galli</i>				
Bluegrass, Annual	<i>Poa annua</i>				
Crabgrass, Large	<i>Digitaria sanguinalis</i>				
Foxtail, Giant	<i>Setaria faberi</i>				
Goosegrass	<i>Eleusine indica</i>				
Lovegrass, California	<i>Eragrostis diffusa</i>				
Panicums					
Fall	<i>Panicum dichotomiflorum</i>				
Texas	<i>Panicum texanum</i>				
Ryegrass, Italian	<i>Lolium multiflorum</i>				
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>				
Cheat	<i>Bromus secalinus</i>				
Downy Brome	<i>Bromus tectorum</i>				

**DIRECTIONS FOR USE IN FALL AND SPRING PRE-PLANT BURNDOWN AND FALLOW SEEDBED PROGRAMS IN FIELD CORN, PEANUT, AND SOYBEAN (Pre-Emergence to Crop)**

**RESTRICTIONS AND LIMITATIONS**

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.
- Observe all rotational intervals prior to planting as listed in the “**ROTATIONAL RESTRICTIONS**” table.

## FALL BURNDOWN AND FALLOW SEEDBED PROGRAMS

Flumioxazin 51% WDG at 2 - 3 oz./A can be used in the fall to provide residual weed control in fields that will be planted the following spring with field corn, peanut, or soybean (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). Weeds controlled by residual activity are listed in Table 1 (sections A and B), Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG; Table 3, Weeds Controlled by Fall and Spring Pre-Plant Burndown Programs; and Table 7, Weeds Controlled by Residual Activity of Flumioxazin 51% WDG. If weeds have emerged at the time of application, use Flumioxazin 51% WDG in combination with a labeled burndown herbicide. Application must be made no earlier than October 15th in Region 2 or November 15th in Region 1 or when soil temperature falls below 50°F at a 2 inch depth to maintain residual weed control into the spring (April 1st in Region 1 and May 1st in Region 2) or up until planting, whichever comes first. Flumioxazin 51% WDG can be used in a fall burndown or fallow seedbed program outside of Regions 1 and 2, however the length of residual control may be variable.

Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

Fall Application Regions:

Region 1: Alabama, Arkansas, Georgia, Kentucky, Mississippi, Oklahoma, Tennessee, and Virginia

Region 2: Delaware, Kansas, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, West Virginia, and Wisconsin

Weeds controlled by post-emergence or residual activity are listed in Table 3. Pre-plant burndown treatment tank mixes and rates are:

HERBICIDE	RATE
<b>Program 1<sup>1</sup></b>	
Flumioxazin 51% WDG <b>Plus</b>	2 - 3 oz./A
Glyphosate <b>Plus</b>	0.5 - 1.0 lb. a.i./A (equivalent to 1 - 2 pts./A of ROUNDUP Original®)
2,4-D LVE (2,4-D for use on pre-plant soybeans only) <b>Plus</b>	0.5 - 1.0 lb. a.i./A (equivalent to 1 - 2 pts./A of 2,4-D 4 LVE)
NIS + AMS	0.5% v/v + 17 lbs./100 gals. of water

Or

HERBICIDE	RATE
<b>Program 2<sup>1</sup></b>	
Flumioxazin 51% WDG <b>Plus</b>	2 - 3 oz./A
Glyphosate <b>Plus</b>	0.5 - 1.0 lb. a.i./A (equivalent to 1 - 2 pts./A of ROUNDUP Original®)
COC2 <b>Or</b> NIS + AMS	1 pt./A <b>Or</b> 0.5% v/v + 17 lbs./100 gals. of water

**Or**

HERBICIDE	RATE
<b>Program 3<sup>1</sup></b>	
Flumioxazin 51% WDG <b>Plus</b>	2 - 3 oz./A
2,4-D LVE (2,4-D for use on pre-plant soybeans only) <b>Plus</b>	0.5 - 1.0 lb. a.i./A (equivalent to 1 - 2 pts./A of 2,4-D 4 LVE)
COC	1 pt./A

<sup>1</sup>Dicamba (BANVEL®), at 0.188 lb. a.i./A (6 fl. oz./A of BANVEL 4) can be added to Programs 1, 2, & 3 to assist in the control emerged broadleaves. Refer to dicamba label for rotational restrictions.

<sup>2</sup>Crop oil concentrate has been found to increase glyphosate burndown of emerged cutleaf evening primrose and Carolina geranium.

**Table 3. Weeds Controlled by Fall and Spring Pre-Plant Burndown Programs**

WEEDS CONTROLLED <sup>1</sup>		POST-EMERGENCE			RESIDUAL
COMMON NAME	SCIENTIFIC NAME	Program 1	Program 2	Program 3	
		WEEDS 3 INCHES OR LESS			
Chamomile, False	<i>Matricaria maritima</i>	Yes	Yes	No	Yes
Cheatgrass	<i>Bromus tectorum</i>	Yes	Yes	No	Yes
Chickweed, Common	<i>Stellaria media</i>	Yes	Yes	No	Yes
Chickweed, Mouseeara	<i>Cerastium vulgatum</i>	Yes	Yes	No	Yes
Cockle, White	<i>Silene latifolia</i>	No	Yes	Yes	Yes
Dandelion	<i>Taraxacum officinale</i>	Yes	Yes	Yes <sup>2</sup>	Yes
Deadnettle, Purple	<i>Lamium purpureum</i>	Yes	Yes	Yes	Yes
Groundsel, Cressleaf	<i>Senecio glabellus</i>	Yes	Yes	---	Yes
Henbit	<i>Lamium amplexicaule</i>	Yes	Yes	Yes	Yes
Kochia	<i>Kochia scoparia</i>	Yes	Yes	Yes	Yes
Marestail/Horseweed	<i>Conyza canadensis</i>	Yes	Yes <sup>3</sup>	Yes	Yes
Mallow, Common	<i>Malva neglects</i>	Yes	Yes	No	Yes
Prickly Lettuce	<i>Lactuca serriola</i>	Yes	Yes	Yes	Yes
Wormwood, Biennial	<i>Artemisia biennis</i>	Yes	Yes	Yes	Yes
		WEEDS 12 INCHES OR LESS			
Canola, Volunteer	<i>Brassica napus</i>	Yes	Yes	Yes	Yes
Carolina Geranium	<i>Geranium carolinianum</i>	Yes	Yes	Yes	Yes
Evening Primrose, Cutleaf <sup>4</sup>	<i>Oenothera laciniata</i>	Yes	Yes	Yes	Yes
Flixweed	<i>Descurainia sophia</i>	Yes	Yes	Yes	Yes
Mustard, Tansy	<i>Descurainia pinnata</i>	Yes	Yes	Yes	Yes
Mustard, Wild	<i>Brassica kaber</i>	Yes	Yes	Yes	Yes
Shepherd's Purse	<i>Capsella bursa-pastoris</i>	Yes	Yes	Yes	Yes

<sup>1</sup>Refer to glyphosate and/or 2,4-D labels for additional weeds controlled and rotational restrictions.

<sup>2</sup>Use 1 lb. a.i./A of 2,4-D LVE (equivalent to 2 pts./A of 2,4-D 4 LVE) for control of emerged dandelion.

<sup>3</sup>Program 2 will not control emerged glyphosate resistant marestail/horseweed.

<sup>4</sup>To control cutleaf evening primrose that are nearing 12 inches in height or are past the rosette stage, use Program 1. Use Program 2 or 3 to control cutleaf evening primrose that are 12 inches or less and in the rosette stage.

## **SPRING BURNDOWN PROGRAMS**

Flumioxazin 51% WDG can be used in combination with labeled pre-plant burndown herbicides to assist in the post-emergence burndown of emerged weeds and provide residual weed control prior to crop emergence. Weeds controlled by residual activity are listed in Table 1.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row. Apply Flumioxazin 51% WDG after planting peanuts and soybeans when these types of planters are used (within 3 days after planting soybeans, within 2 days after planting peanuts and before the crop emerges). Flumioxazin 51% WDG cannot be applied after planting field corn.

Flumioxazin 51% WDG can be used at 1 - 3 oz./A with labeled pre-plant burndown herbicides to enhance the speed of burndown and increase weed spectrum.

Flumioxazin 51% WDG can be used at 1 - 3 oz./A in field corn, peanut and soybean burndown programs. See **“DIRECTIONS FOR USE IN FIELD CORN”**, **“DIRECTIONS FOR USE IN PEANUT”**, and **“DIRECTIONS FOR USE IN SOYBEAN”** for more information.

## **DIRECTIONS FOR USE IN FALL AND SPRING BURNDOWN PROGRAMS IN COTTON AND SUGARCANE**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.
- Flumioxazin 51% WDG can be used at 1 - 2 oz./A with labeled burndown herbicides to enhance the speed of burndown and increase weed spectrum.
- A minimum of 30 days must pass, and 1 inch of rainfall/irrigation must occur, between Flumioxazin 51% WDG application and planting of conventionally tilled cotton.
- A minimum of 14 days must pass, and 1 inch of rainfall/irrigation must occur, between Flumioxazin 51% WDG application and planting of no-till or strip-till cotton when a Flumioxazin 51% WDG rate of 1 oz./A is used and 21 days when a Flumioxazin 51% WDG rate of 1.5 - 2 oz./A is used. The field must contain the stubble from the previous crop.
- Flumioxazin 51% WDG can be applied as part of a burndown application to sugarcane until cane emergence.
- Observe all rotational intervals prior to planting as listed in the **“ROTATIONAL RESTRICTIONS”** table.
- Refer to most restrictive label for minimum interval between application and planting.

### **FALL BURNDOWN PROGRAMS**

Flumioxazin 51% WDG at 2 - 4 oz./A, can be used in the fall to provide residual weed control in fields that will be planted the following spring with cotton or sugarcane (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). Weeds controlled by residual activity are listed in Table 1 and Table 7. If weeds have emerged at the time of application, use Flumioxazin 51% WDG in combination with a labeled burndown herbicide. Application must be made no earlier than October 15th in Region 2 or November 15th in Region 1 or when soil temperature falls below 50°F at a 2 inch depth to maintain residual weed control into the spring (April 1st in Region 1 and May 1st in Region 2) or up until planting, whichever comes first. Flumioxazin 51% WDG can be used in a fall burndown or fallow seedbed program outside of Regions 1 and 2.

Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

### **SPRING BURNDOWN PROGRAMS**

Flumioxazin 51% WDG at 1 - 2 oz./A, can be used in combination with labeled pre-plant burndown herbicides to assist in the post-emergence burndown of emerged weeds and provide residual weed control prior to crop emergence in fields that will be planted with cotton or sugarcane. Weeds controlled by residual activity are listed in Table 1.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row.

## **DIRECTIONS FOR USE IN FALL AND SPRING BURNDOWN PROGRAMS IN RICE, SORGHUM, SUNFLOWERS, TOBACCO, AND WHEAT (Pre-Plant to Crop)**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.
- Flumioxazin 51% WDG can be used at 1 - 2 oz./A with labeled burndown herbicides to enhance the speed of burndown and increase weed spectrum. A minimum of 30 days must pass, and 1 inch of rainfall/irrigation must occur, between Flumioxazin 51% WDG application and planting of rice, sorghum, sugarcane, sunflowers, tobacco, or wheat. Refer to most restrictive label for minimum interval between application and planting.
- Observe all rotational intervals prior to planting as listed in the “**ROTATIONAL RESTRICTIONS**” table.

### **FALL BURNDOWN PROGRAMS**

Flumioxazin 51% WDG can be used in combination with labeled burndown programs to control emerged weeds and provide residual weed control in fields that will be planted the following spring (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). Application must be made no earlier than October 15th in Region 2 or November 15th in region 1 or when soil temperature falls below 50°F at a two inch depth to maintain residual weed control into the spring.

Abnormally warm winters may reduce the length of weed control observed in the spring.

### **SPRING BURNDOWN PROGRAMS**

Flumioxazin 51% WDG can be used in combination with labeled burndown programs to control emerged weeds and provide residual weed control prior to crop emergence. Weeds controlled by residual activity are listed in Table 1 Section A. Crops that will be planted following application must be in compliance with the rotational interval listed in the “**Rotational Restriction**” table above.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row.

### **DIRECTIONS FOR USE IN FALL BURNDOWN PROGRAMS IN FIELDS TO BE PLANTED TO BARLEY, FIELD PEA, FLAX, LENTIL, SAFFLOWER, SUNFLOWER, AND SPRING WHEAT (Pre-Plant to Crop)**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.
- Flumioxazin 51% WDG can be mixed with 2,4-D and/or glyphosate formulations labeled for burndown programs (pre-plant to crop) in accordance with the most restrictive label limitations and precautions. Labeled application rates cannot be exceeded. Do not mix Flumioxazin 51% WDG with any product containing a label prohibition against such mixing.
- Observe all rotational intervals prior to planting as listed in the “**ROTATIONAL RESTRICTIONS**” table.

#### **FALL BURNDOWN PROGRAMS**

Flumioxazin 51% WDG can be used at 2 - 4 oz./A with labeled burndown herbicides to enhance the speed of burndown, increase weed spectrum and provide residual weed control of the weeds listed in Table 3 until the following spring. Rotational intervals must be followed for crop to be planted in the spring following the fall Flumioxazin 51% WDG application. Refer to most restrictive label for minimum interval between application and planting.

### **DIRECTIONS FOR USE IN FALLOW LAND**

Flumioxazin 51% WDG may be used as a pre-emergence fallow treatment. Weeds controlled by residual activity are listed in Table 1.

Flumioxazin 51% WDG at 2 - 4 oz./A, can be used in the fall to provide residual weed control in fallow fields (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). If weeds have emerged at the time of application, use Flumioxazin 51% WDG in combination with a labeled fallow herbicide. Application must be made no earlier than October 15th in Region 2 or November 15th in Region 1 or when soil temperature falls below 50°F at a 2 inch depth to maintain residual weed control into the spring (April 1st in Region 1 and May 1st in Region 2).

Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

Flumioxazin 51% WDG at 1 - 4 oz./A, can be used in spring in combination with labeled burndown herbicides to control emerged weeds and provide residual weed control.

## DIRECTIONS FOR FALLOW BED USE ON TRANSPLANTED MELON, PEPPER, AND TOMATO BEDS

### For Use in Arizona and California Only

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 4 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 4 oz. of Flumioxazin 51% WDG per acre during a single growing season.

Many weather-related factors, including high wind or heavy rains or cool conditions at or near crop transplanting, may result in crop injury in fields treated with Flumioxazin 51% WDG. On occasion this has resulted in a delay in maturity.

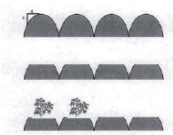
#### TIMING TO CROP

##### Flumioxazin 51% WDG Fallow bed Use Prior To Transplanting

FLUMIOXAZIN 51% WDG RATE	ADJUVANT	GPA	TRANSPLANTING INTERVAL
4 oz./A	Required by burndown tank mix partner	Ground: 20 - 40	2 Months
<b>Application Method:</b> Apply with a burndown herbicide labeled for the control of emerged weeds. Flumioxazin 51% WDG, when used alone, will not provide satisfactory control of emerged weeds.			

#### USE RESTRICTIONS FOR FLUMIOXAZIN 51% WDG FOR PRE-EMERGENCE FALLOW BED WEED CONTROL PRIOR TO TRANSPLANTING

1. Always read and follow all label directions when using any pesticide alone or in tank mix combinations.
2. The top 4 inches of the bed, from a horizontal and vertical perspective, where the crop will be transplanted, must be removed prior to transplanting.
3. Use only healthy transplants. Do not use on direct seeded crops.



Beds are formed and Flumioxazin 51% WDG is applied with a burndown herbicide.

A minimum of 2 months after Flumioxazin 51% WDG application, the tops of the beds are removed and the soil from the tops of the beds is placed in the area between the beds.

Crops are transplanted into beds.



4. On flat beds (tomato only), the soil must be incorporated to a depth of at least 4 inches, twice, prior to transplanting. Failure to incorporate may result in stand reduction and/or crop injury.
5. This use pattern makes no claim for in-season weed control after the beds have been disturbed.
6. Do not apply when weather conditions favor spray drift.

## DIRECTIONS FOR USE IN ESTABLISHED ALFALFA

### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 4 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 8 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not make a sequential Flumioxazin 51% WDG application within 60 days of the first Flumioxazin 51% WDG application.
- Do not apply to alfalfa with greater than 6 inches of growth. Application will result in burning of treated leaves and stems.
- Do not apply within 25 days of harvest or grazing.
- Do not use on alfalfa grown for seed unless approved by a State authority to support a Special Local Need (SLN) under FIFRA section 24(c).
- Only apply with an adjuvant or tank mix with products formulated as an emulsifiable concentrate (EC) when targeting control of emerged weeds.
- Crop burn and/or stunting should be expected and accepted if Flumioxazin 51% WDG is used with an adjuvant, a tank mix partner formulated as an emulsifiable concentrate (EC), or a tank mix partner formulated with an adjuvant.
- Application with paraquat can be used to burndown winter annuals prior to winter dormant period.
- Do not use on intended mixed alfalfa-grass stands.

### TIMING TO ALFALFA

Flumioxazin 51% WDG may be applied to established alfalfa with a maximum amount of growth of 6 inches or less for the pre-emergence control of the weeds listed in Table 7, Weeds Controlled by Residual Activity of Flumioxazin 51% WDG. Established alfalfa is defined as alfalfa planted in the fall or spring which has gone through a first cutting/mowing. Application to alfalfa with greater than 6 inches of growth may result in unacceptable crop injury.

**For control of winter annual weeds:** The best timing for pre-emergence control is in the fall immediately after the last cutting or sheepling off has occurred.

**For control of summer annual weeds:** The best timing for pre-emergence control is in the spring prior to alfalfa growth and before 6 inches of growth.

## **TIMING TO WEEDS**

### **Pre-Emergence - Pre-Emergence to Weeds**

Apply Flumioxazin 51% WDG before alfalfa growth exceeds 6 inches in height for the pre-emergence control of weeds listed in Table 7, Weeds Controlled by Residual Activity of Flumioxazin 51% WDG. Make applications as soon as possible after cutting and removing alfalfa to minimize injury to alfalfa growth.

### **Post-Emergence Dodder Suppression**

Apply Flumioxazin 51% WDG at 4 oz. per acre with an adjuvant for post-emergence suppression of dodder. Tank mixes with Pursuit® Herbicide or Raptor® Herbicide will increase control.

## **DIRECTIONS FOR USE IN ESTABLISHED ASPARAGUS**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Apply only to dormant asparagus no less than 14 days before spears emerge. Application to non-dormant asparagus may result in unacceptable crop injury.
- Do not work soil within 60 days prior to application in the spring. Soil can be worked after spear harvest in preparation for Flumioxazin 51% WDG application prior to fern emergence. Treated soil that is splashed onto the ferns may result in spotting.

### **TIMING TO ASPARAGUS - Dormant**

Flumioxazin 51% WDG may be applied to dormant asparagus for pre-emergence control of the weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG. Application to non-dormant asparagus will result in unacceptable crop injury. Applications must be made no less than two weeks prior to spear emergence and must be sprinkler or rainfall incorporated with 0.5 - 0.75 inches of water or some scoring may result.

### **TIMING TO ASPARAGUS - Post-Harvest**

Apply Flumioxazin 51% WDG after the final harvest of the season, but prior to fern emergence, for pre-emergence control of the weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG. Application after fern emergence will result in unacceptable crop injury. Apply no less than two weeks prior to fern emergence and must be sprinkler or rainfall incorporated with 0.5 - 0.75 inches of water. Add a burndown tank mix partner for the control of emerged weeds labeled for asparagus in accordance with the most restrictive labeled limitations and precautions.

## **TIMING TO WEEDS**

### **Burndown - Dormant Asparagus, Post-Emergence to Weeds**

Flumioxazin 51% WDG may be used for residual weed control, as well as to assist in post-emergence burndown of many annual and perennial weeds where asparagus is dormant. For control of emerged weeds, tank mix Flumioxazin 51% WDG with paraquat. Refer to paraquat label for specified rate and application parameters. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Flumioxazin 51% WDG tank mixes applied to assist in the control of emerged weeds must be applied with a non-ionic surfactant at 0.25% v/v. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to increase herbicidal activity.

### **Burndown - After Last Harvest of Season, Post-Emergence to Weeds**

Use Flumioxazin 51% WDG for residual weed control and to assist in post-emergence burndown for many annual and perennial weeds where asparagus harvest has been completed for the year. For control of emerged weeds, use a labeled tank mix partner with activity on the emerged weeds.

### **Pre-Emergence - Dormant Asparagus or After Last Harvest of Season, Pre-Emergence to Weeds**

Apply Flumioxazin 51% WDG to dormant asparagus for the pre-emergence control of weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG.

## **DIRECTIONS FOR USE IN CELERY**

### **For Use in the States of California, Michigan, and Wisconsin Only**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a pre-transplant application.
- In the state of California, use as pre-transplant application only.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a post-transplant application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not use with an adjuvant.
- Post-transplant applications must be made between 3 - 7 days following transplanting.
- Do not apply as part of a tank mix.

#### **TIMING TO CELERY**

Apply Flumioxazin 51% WDG at 3 oz./A prior to transplanting, or between 3 - 7 days following transplanting, for pre-emergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG.

## **TIMING TO WEEDS**

Use Flumioxazin 51% WDG prior to weed emergence for residual control.

**Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. The most restrictive labeling of any tank mix product must be followed. Flumioxazin 51% WDG, when applied according to label use directions, will control the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG. This label makes no claims concerning control of other weed species.**

## **DIRECTIONS FOR USE ON CHICKPEA (GARBANZO BEAN)**

**For Use Only in Arizona, California, Idaho, Oregon, and Washington**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2.0 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 2.0 oz. of Flumioxazin 51% WDG per acre during a single growing season.

**Many weather-related factors, including high wind, splashing or heavy rains or cool conditions at or near crop emergence, may result in garbanzo bean injury in fields treated with Flumioxazin 51% WDG. On occasion this has resulted in a delay in maturity.**

### **TIMING TO CHICKPEA (GARBANZO BEAN)**

Flumioxazin 51% WDG may be applied to garbanzo beans within 2 days after planting for the pre-emergence suppression of the weeds listed in Table A, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG. Tank mix Flumioxazin 51% WDG with other labeled herbicides for broad spectrum weed control.

## **TIMING TO WEEDS**

Flumioxazin 51% WDG may be applied to garbanzo beans prior to planting or pre-emergence (after planting). Pre-emergence application of Flumioxazin 51% WDG must be made within 2 days after planting and prior to garbanzo bean emergence. Application after the garbanzo beans have begun to crack, or are emerged, will result in severe crop injury. Application must not be made when garbanzo beans have begun to crack.

Pre-plant incorporation (PPI) applications may result in reduced weed control.

### **ADDITIONAL RESIDUAL GRASS CONTROL**

Flumioxazin 51% WDG can be tank mixed with pendimethalin for additional grass control.

**Table A. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
SECTION A				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Carpetweed	<i>Mollugo verticillata</i>	Up to 5%	All Soil Types	2 oz./A
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Evening primrose, Cutleaf	<i>Oenothera laciniata</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Florida Pusley	<i>Richardia scabra</i>			
Henbit	<i>Lamium amplexicaule</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			
Mayweed/False Chamomile	<i>Matricaria maritima</i>			
Nightshades				
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce	<i>Lactuca serriola</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			

(continued)

**Table A. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

BROADLEAF WEED SPECIES				
SECTION A				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Purslane, Common	<i>Portulaca oleracea</i>	Up to 5%	All Soil Types	2 oz./A
Radish, Wild	<i>Raphanus raphanistrum</i>			
Redmaids	<i>Calandrinia ciliata var. menziesii</i>			
Shepherd's Purse	<i>Capsella bursa-pastoris</i>			
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>			
Sowthistle, Prickly	<i>Sonchus asper</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Venice Mallow	<i>Hibiscus trionum</i>			
SECTION B				
All weeds listed in Section A plus:				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Coffee Senna	<i>Cassia occidentalis</i>	Up to 3%	All Soil Types	2 oz./A
Common Ragweed	<i>Ambrosia artemisiifolia</i>			
False Chamomile	<i>Tripleurospermum</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>	3 - 5%	Coarse and Medium Soils: (sandy loam, loamy sand, loamy, silt loam, silt, sandy clay, sandy clay loam)	2 oz./A
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
London Rocket	<i>Sisymbrium irio</i>			
Morningglories				
Entireleaf	<i>Ipomoea hederacea var. integruscula</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Tall	<i>Ipomoea purpurea</i>			

(continued)

Mustard, Wild	<i>Brassica kaber</i>	3 - 5%	Fine Soils: (silty clay, silty clay loam, clay, clay loam)	2 oz./A
Palmer Amaranth	<i>Amaranthus palmeri</i>			
Spurred Anoda	<i>Anoda cristata</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Waterhemp				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			
Yellow Rocket	<i>Barbarea vulgaris</i>			

#### DIRECTIONS FOR USE IN COTTON

##### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 4 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not make a sequential Flumioxazin 51% WDG application within 30 days of the first Flumioxazin 51% WDG application.
- Do not apply within 60 days of harvest.

##### ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

###### Hooded, Shielded, and Layby Application

For best results, apply Flumioxazin 51% WDG to actively growing weeds within the growth stages indicated in this label. Applying Flumioxazin 51% WDG under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply Flumioxazin 51% WDG when the crop or weeds are under stress due to drought, excessive water, extremes in temperature, disease or low humidity. Weeds under stress tend to become less susceptible to herbicidal action. Flumioxazin 51% WDG is most effective when applied under sunny conditions at temperatures above 65°F.

Flumioxazin 51% WDG is rainfast one hour after application. Do not apply if rain is expected within one hour of application or post-emergence efficacy may be reduced. Rainfall within one hour of application will not adversely affect residual activity.

##### HERBICIDE RATE

###### Hooded, Shielded, and Layby Application

For post-emergence weed control, apply Flumioxazin 51% WDG through a hooded or shielded sprayer or at layby, at 2 oz./A, in combinations with MSMA or at 1 - 2 oz./A in combination with glyphosate, to assist in the control of weeds listed in Table 4. Residual weed control can also be obtained through hooded, shielded, and layby application of Flumioxazin 51% WDG. Weeds that are controlled through residual activity of Flumioxazin 51% WDG are listed in Table 1. Weeds that are suppressed by residual activity of Flumioxazin 51% WDG are listed in Table 2.

**Table 4. Emerged Broadleaf Weeds Controlled by Hooded, Shielded, and Layby Application of Flumioxazin 51% WDG Tank Mixes With Glyphosate or MSMA in Cotton**

BROADLEAF WEED SPECIES		WEED HEIGHT (INCHES) 2 OZ./A
COMMON NAME	SCIENTIFIC NAME	
Bindweed, Field1	<i>Convolvulus arvensis</i>	4
Carpetweed	<i>Mollugo verticillata</i>	4
Chickweed, Common	<i>Stellaria media</i>	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6
Jimsonweed	<i>Datura stramonium</i>	4
Lambsquarters, Common	<i>Chenopodium album</i>	4
Morningglories		
Entireleaf	<i>Ipomoea hederacea var. integruscula</i>	4
Ivyleaf	<i>Ipomoea hederacea</i>	4
Pitted	<i>Ipomoea lacunose</i>	4
Red	<i>Ipomoea coccinea</i>	4
Tall	<i>Ipomoea purpurea</i>	2
Mustard, Wild	<i>Brassica kaber</i>	6
Nightshades		
Black	<i>Solanum nigrum</i>	4
Eastern Black	<i>Solanum ptycanthum</i>	4
Hairy	<i>Solanum sarrachoides</i>	4
Pigweeds		
Palmer Amaranth	<i>Amaranthus palmeri</i>	4
Redroot	<i>Amaranthus retroflexus</i>	4
Smooth	<i>Amaranthus hybridus</i>	4
Plantain, Broadleaf	<i>Plantago major</i>	6

(continued)



**Table 4. Emerged Broadleaf Weeds Controlled by Hooded, Shielded, and Layby Application of Flumioxazin 51% WDG Tank Mixes With Glyphosate or MSMA in Cotton (continued)**

BROADLEAF WEED SPECIES		WEED HEIGHT (INCHES) 2 OZ./A
COMMON NAME	SCIENTIFIC NAME	
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	4
Purslane, Common	<i>Portulaca oleracea</i>	2
Ragweeds		
Common	<i>Ambrosia artemisifolia</i>	2
Giant	<i>Ambrosia trifida</i>	4
Rice Flatsedge	<i>Cyperus iria</i>	2
Sicklepod	<i>Senna obtusifolia</i>	4
Smartweeds		
Ladysthumb	<i>Polygonum persicaria</i>	4
Pale	<i>Polygonum lapathifolium</i>	4
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4
Spotted Spurge	<i>Euphorbia maculata</i>	4
Velvetleaf	<i>Abutilon theophrasti</i>	4
Venice Mallow	<i>Hibiscus trionum</i>	2
Waterhemp		
Common	<i>Amaranthus rudis</i>	2
Tall	<i>Amaranthus tuberculatus</i>	2

<sup>1</sup>Flumioxazin 51% WDG tank mixes will control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

#### **CARRIER VOLUME AND SPRAY PRESSURE Hooded, Shielded, and Layby Application**

To ensure thorough coverage in hooded, shielded, and layby applications, use 15 - 30 gals. spray solution per treated acre. Use 20 - 30 gals. per treated acre under heavy weed pressure. Nozzle selection must meet manufacturer's gallonage and pressure specifications for application method being used. Do not use "Flood Jet" nozzles, as they tend to increase the chance of crop injury.

## **ADDITIVES**

### **Hooded, Shielded, and Layby Application**

Weed control from hooded, shielded or layby application of Flumioxazin 51% WDG in cotton requires the addition of an agronomically approved non-ionic surfactant to the spray mixture. Non-ionic surfactant must contain at least 80% active ingredient. Verify mixing compatibility qualities by a jar test. **The use of crop oil concentrates, methylated seed oils, organo-silicant surfactants or products containing these ingredients, may result in severe crop injury and must not be used.**

## **APPLICATION EQUIPMENT**

Apply Flumioxazin 51% WDG tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Ensure that application equipment is clean and in good repair. Nozzles must meet manufacturer's specifications for spray pattern and placement on spray boom and must be checked frequently for accuracy.

## **TIMING TO COTTON**

### **Hooded and Shielded Application**

Flumioxazin 51% WDG tank mixes may be applied with a hooded or shielded sprayer after cotton has reached a minimum of 6 inches in height. All nozzles must be under the hood or behind the shield to ensure no spray solution comes in contact with the cotton. **Care must be taken to ensure the spray solution or drift does not come in contact with the cotton or severe crop injury can occur.**

### **Layby Application**

Layby application of Flumioxazin 51% WDG tank mixes may be made once cotton has reached a minimum of 16 inches in height. Cotton that is smaller than 16 inches in height may be injured by Flumioxazin 51% WDG applications. Flumioxazin 51% WDG application must be directed to the lower 2 inches of the cotton stem to avoid crop injury.

## **TIMING TO WEEDS**

Flumioxazin 51% WDG tank mix applications must be made to weeds within the height range given in Table 4.

## **TANK MIXES**

Flumioxazin 51% WDG must be tank mixed with one of the herbicides listed in Table 5 for post-emergence control of the weeds listed in Table 4.

**Table 5. Tank Mixes with Flumioxazin 51% WDG for Hooded, Shielded, and/or Layby Use in Cotton**

TANK MIX PARTNER	TARGET WEEDS	HOODED AND SHIELDED	LAYBY
Glyphosate	Perennial Grasses and Broadleaves	X	X <sup>1</sup>
MSMA	Annual Grasses Yellow Nutsedge	X	X

<sup>1</sup>For use only in cotton with the ROUNDUP READY gene.

### DIRECTIONS FOR USE IN DRY BEANS

Dried cultivars of bean (*Lupinus*); bean (*Phaseolus*)(includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (*Vigna*)(includes adzuki bean, black-eyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean; and lentil

### HARVEST AID

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from Flumioxazin 51% WDG requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 2% v/v. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with either a crop oil concentrate or methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for a crop oil concentrate or a methylated seed oil. Tank mixing Flumioxazin 51% WDG with glyphosate or paraquat will increase control of emerged weeds and aid in harvest. Add a burndown tank mix partner for the control of emerged weeds labeled for dry bean in accordance with the most restrictive labeled limitations and precautions.

### TIMING TO DRY BEANS

Apply when crop is mature and at least 80% of the pods are yellowing and mostly ripe with no more than 40% (bush type beans) or 30% (vine type beans) of the leaves still green in color. Dry beans can be harvested 5 days after application. To ensure thorough coverage, use 15 - 30 gals. spray solution per acre. Nozzle selection must meet manufacturer's gallonage and pressure specifications for post-emergence application.

## DIRECTIONS FOR USE IN FIELD CORN

### RESTRICTIONS AND LIMITATIONS

- Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.
- Corn must be planted between 14 - 30 days after application unless the application is made as part of a Fall burndown program.
- Corn can be planted 7 days after an application of 2 oz./A if a minimum of 25% of the soil surface is covered with the residue of the preceding crop and a minimum of 1/4 inch of rainfall has occurred between application and planting.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not irrigate between emergence and 2-leaf corn.
- Do not use on popcorn, sweet corn, or corn grown for seed.

### TIMING TO FIELD CORN

- Apply Flumioxazin 51% WDG, at 2 - 3 oz./A, between 7 - 30 days prior to planting field corn, for the pre-emergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG.
- Apply Flumioxazin 51% WDG, at 2 oz./A, between 7 - 30 days prior to planting field corn if a minimum of 25% of the soil surface is covered with the residue of the preceding crop and a minimum of 1/4 inch of rainfall has occurred between application and planting.
- Apply Flumioxazin 51% WDG, at 3 oz./A, between 14 - 30 days prior to planting field corn.

### Burndown Use Directions - For Pre-Plant Applications in Field Corn

Flumioxazin 51% WDG, applied as part of a burndown program, may be used for residual weed control, as well as to assist in post-emergence burndown of many weeds where field corn will be planted directly into the residue of the previous year. See Directions for Use in Fall and Spring Pre-Plant Burndown and Fallow Seedbed Programs in Field Corn, Peanut, and Soybean for rates and timing of applications. For control of emerged weeds, Flumioxazin 51% WDG must be applied with an appropriate burndown tank mix partner listed in Table 6. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Refer to tank mix partner's label for specified application pressure and adjuvant systems.

### INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY

Flumioxazin 51% WDG, at 1 oz./A, may be tank mixed with glyphosate (Roundup®) to increase the speed of burndown activity compared to glyphosate applied alone. Residual weed control will not be provided at rates lower than 2 oz./A; however, suppression of the weeds in Table 2 may occur at Flumioxazin 51% WDG rates as low as 1 oz./A. Applications of Flumioxazin 51% WDG at 1 oz./A must be made a minimum of 14 days prior to planting field corn.

## TANK MIXES

Flumioxazin 51% WDG may be tank mixed with the herbicides listed in Table 6 for pre-plant burndown applications. Refer to tank mix partner's label for adjuvant specifications.

**Table 6. Tank Mix Partners for Burndown and/or Residual Control of Weeds in Field Corn**

TANK MIX PARTNERS <sup>1</sup>	
2,4-D LVE atrazine Basis® dicamba Express® glyphosate Hornet®	metribuzin paraquat Python® Resolve® simazine Weedmaster®

<sup>1</sup>Refer to tank mix product labels for tank mix specifications.

## TANK MIX RESTRICTIONS

Tank mixes with flufenacet (Axiom or Domain), metolachlor or s-metolachlor (Dual Magnum or Dual II Magnum), dimethenamid or dimethenamid-p (Frontier or Outlook), alachlor (Lasso), or acetochlor (Surpass or Harness) may result in injury to field corn when application is followed by prolonged periods of cool wet weather and must not be used with Flumioxazin 51% WDG, unless supplemental labeling, provided by RedEagle International LLC, is followed.

## DIRECTIONS FOR USE IN FIELD PEAS

### WEED CONTROL

### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single growing season.

**Many weather-related factors including high wind splashing or heavy rains or cool conditions at or near crop emergence may result in pea injury in fields treated with Flumioxazin 51% WDG. On occasion this has resulted in a delay in maturity.**

### TIMING TO FIELD PEAS

Flumioxazin 51% WDG may be applied to field peas within 2 days after planting for the pre-emergence control of the weeds listed in Table 1 Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG or Table 8 Weeds Suppressed by Residual Activity of Flumioxazin 51% WDG. Tank mix Flumioxazin 51% WDG with other labeled herbicides for broad spectrum weed control.

### **TIMING TO WEEDS**

Flumioxazin 51% WDG may be applied to field peas prior to planting or pre-emergence (after planting). Pre-emergence application of Flumioxazin 51% WDG must be made within 2 days after planting and prior to field pea emergence. To avoid severe crop injury, do not apply to field peas after peas begin to crack or have emerged. Pre-plant incorporation (PPI) applications may result in reduced weed control.

### **ADDITIONAL RESIDUAL GRASS CONTROL**

Flumioxazin 51% WDG can be tank mixed with pendimethalin for additional grass control.

### **HARVEST AID**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from Flumioxazin 51% WDG requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt./A. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing Valor Herbicide with glyphosate will increase control of emerged weeds and aid in harvest.

### **TIMING TO FIELD PEAS**

Apply Flumioxazin 51% WDG at 1.5 - 2 oz./A when crop is physiologically mature and a minimum of 80% of the pods are yellow to tan in color and 20% are yellow in color. If field peas are treated too early a reduction in seed quality may occur. Do not spray Flumioxazin 51% WDG on any area of the field with a significant amount of plants with green color. Peas can be harvested 5 days after application.

To ensure thorough coverage, use 15 - 30 gals. of spray solution per acre. Select nozzle type using manufacturer's gallonage and pressure specifications for post-emergence application.

## **DIRECTIONS FOR USE IN FLAX**

### **HARVEST AID**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from Flumioxazin 51% WDG requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt./A should be used. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil.

#### **TIMING TO FLAX**

Apply Flumioxazin 51% WDG at 1.5 - 2 oz./A when crop is physiologically mature and at least 75% of the bolls are brown in color. Flax can be harvested 5 days after application.

To ensure thorough coverage, use 15 - 30 gals. of spray solution per acre. Select nozzle type using manufacturer's gallonage and pressure specifications for post-emergence application.

### **DIRECTIONS FOR USE IN GARLIC**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single growing season.

#### **TIMING TO GARLIC**

Flumioxazin 51% WDG may be applied, at 6 oz./A, to garlic prior to garlic emergence. Application must be made within 3 days after planting garlic.

#### **TIMING TO WEEDS**

Pre-Emergence - Pre-Emergence to Weeds

Apply Flumioxazin 51% WDG to weed free garlic for pre-emergence control of the weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG.

### **DIRECTIONS FOR USE IN HOPS** **Not For Use in California or New York**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 6 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not allow spray to contact green stem (Unless used for sucker control), foliage, flowers, or cones or unacceptable injury may occur.
- Do not apply within 30 days of harvest.
- Do not use with an adjuvant.

Flumioxazin 51% WDG can be used in hops for pre-emergence weed control as well as sucker control.

#### **TIMING TO HOPS FOR SUCKER CONTROL**

Apply Flumioxazin 51% WDG at 6 oz./A as a directed application after hops have reached a minimum of 6 feet in height for sucker control. Direct application to the lower 2 feet of the hops.

#### **TIMING TO HOPS FOR PRE-EMERGENCE WEED CONTROL**

Apply Flumioxazin 51% WDG at 6 oz./A as a 1 - 1.5 ft. band to each side of the hop row, to dormant hops January thru March to ensure time for rain incorporation and activation. If weeds are emerged at the time of application, tank mix Flumioxazin 51% WDG with a labeled burndown herbicide such as paraquat or glyphosate to assist with control of emerged weeds. Do not mow or rake over treated areas, as dust created by mowing may drift onto sensitive crops or vegetation resulting in injury.

#### **TIMING TO WEEDS**

Flumioxazin 51% WDG applications must be made prior to weed emergence for control of weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG.

**Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. The most restrictive labeling of any tank mix product must be followed. Flumioxazin 51% WDG, when applied according to label use directions, will control the weeds listed in Table 10, Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG. This label makes no claims concerning control of other weed species.**

### **DIRECTIONS FOR USE IN LENTILS**

#### **HARVEST AID**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from Flumioxazin 51% WDG requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt./A. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing Flumioxazin 51% WDG with glyphosate or paraquat will increase control of emerged weeds and aid in harvest.



## **TIMING TO LENTILS**

Apply Flumioxazin 51% WDG at 1.5 - 2 oz./A when crop is physiologically mature and a minimum of 80% of the pods are yellow to tan in color and 20% are yellow in color. If lentils are treated too early a reduction in seed quality may occur. Do not spray Flumioxazin 51% WDG on any area of the field with a significant amount of plants with green color. Lentils can be harvested 5 days after application.

To ensure thorough coverage, use 15 - 30 gals. of spray solution per acre and select nozzle type using manufacturer's gallonage and pressure specifications for post-emergence application.

## **DIRECTIONS FOR USE IN MINT (Peppermint and Spearmint)**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 4 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 8 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not make a sequential Flumioxazin 51% WDG application within 60 days of the first Flumioxazin 51% WDG application.
- Apply only to dormant mint. Application to non-dormant mint may result in unacceptable crop injury.
- Do not apply within 80 days of harvest.
- Do not apply to row or baby mint, use only on established meadow mint.
- Do not apply to mint that has been weakened by diseases, insects (example mint root borer), nematodes, drought, soil salts, high soil pH, previous pesticides, winter injury or double cutting, as severe injury may occur. Apply only to healthy vigorous mint with undamaged rhizomes.
- Do not apply before November 25th or after March 1st.
- Do not apply a Fall application if roots and rhizomes are weak, thin or damaged.
- Do not apply to stands established longer than 3 years.
- Do not apply Flumioxazin 51% WDG on mint in Southern Union County (south of Ladd Canyon) or Baker County in Oregon.

**Many weather-related factors, including high wind, splashing or heavy rains or cool conditions at or near mint emergence, may result in mint injury in fields treated with Flumioxazin 51% WDG.**

Tank mix with labeled rates of paraquat specified to control emerged weeds and increase crop safety.

## TIMING TO MINT

As a spray, Flumioxazin 51% WDG may be applied only to established, dormant mint for pre-emergence control of the weeds listed in Table 7 as well as to assist in the post-emergence control of emerged weeds. Application to non-dormant mint or to baby (row) mint (time from planting of mint roots through the first cutting), may result in unacceptable crop injury. As a bulk fertilizer application, Flumioxazin 51% WDG may be applied at least 80 days prior to harvest. Leaves must be dry at the time of applications or severe injury may occur.

## TIMING TO WEEDS

### Burndown - Dormant Mint, Post-Emergence to Weeds

Flumioxazin 51% WDG may be used for residual weed control, as well as to assist in post-emergence burndown of many annual and perennial weeds where established mint is dormant. For control of emerged weeds, tank mix Flumioxazin 51% WDG with paraquat. Refer to paraquat label for specified rate and application parameters. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Flumioxazin 51% WDG tank mixes applied to assist in the control of emerged weeds must be applied with a non-ionic surfactant at 0.25% v/v. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to increase herbicidal activity.

### Pre-Emergence - Dormant Mint, Pre-Emergence to Weeds

Apply Flumioxazin 51% WDG to dormant mint for the pre-emergence control of weeds listed in Table 7. Fall applications of Flumioxazin 51% WDG, followed by a sequential application in the Spring, have resulted in better Summer annual weed control than a single Fall or single Spring application.

Fall application is most effective for Fall germinating weeds such as groundsel. Fields plowed or harrowed after a Flumioxazin 51% WDG application will result in less effective pre-emergence activity. In furrow irrigated fields, corrugating that is done after a Flumioxazin 51% WDG application will expose untreated soil and break the herbicide barrier resulting in poor weed control.

**Table 7. Weeds Controlled by Residual Activity of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Bristly Starbur	<i>Acanthospermum hispidum</i>			
Carpetweed	<i>Mollugo verticillata</i>			
Chickweeds				
Common	<i>Stellaria media</i>			

(continued)

**Table 7. Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Mouseear	<i>Cerastium vulgatum</i>	Up to 5%	All Soil Types	4 oz./A
Coffee Senna	<i>Cassia occidentalis</i>			
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>			
Dandelion	<i>Taraxacum officinale</i>			
Dodder (suppression only) <sup>1</sup>	<i>Cuscuta spp.</i>			
Eclipta	<i>Eclipta prostrate</i>			
Evening Primrose, Cutleaf	<i>Oenothera lacinata</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			
Fiddleneck, Coast	<i>Amsinckia menziesii</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Fleabane, Hairy	<i>Conyza bonariensis</i>			
Flixweed	<i>Descurainia sophia</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Florida Pusley	<i>Richardia scabra</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Groundsel, Common	<i>Senecio vulgaris</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>			
Henbit	<i>Lamium amplexicaule</i>			
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
London Rocket	<i>Sisymbrium irio</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			

(continued)

**Table 7. Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Mayweed/False Chamomile	<i>Matricaria maritima</i>	Up to 5%	All Soil Types	4 oz./A
Morningglories				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriscula</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Smallflower	<i>Jacquemontia tamnifolia</i>			
Tall	<i>Ipomoea purpurea</i>			
Mustard				
Tansy	<i>Descurainia pinnata</i>			
Tumble	<i>Sisymbrium altissimum</i>			
Wild	<i>Brassica kaber</i>			
Nettle, Burning	<i>Urtica urens</i>			
Nightshades				
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Palmer Amaranth	<i>Amaranthus palmeri</i>			
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce (China Lettuce)	<i>Lactuca serriola</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Sowthistle, Prickly	<i>Sonchus asper</i>			

(continued)

**Table 7. Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Puncturevine	<i>Tribulus terrestris</i>			
Purslane				
Common	<i>Portulaca oleracea</i>			
Horse	<i>Trianthema portulacastrum</i>			
Radish, Wild	<i>Raphanus raphanistrum</i>			
Ragweed, Common	<i>Ambrosia artemisiifolia</i>			
Redmaids	<i>Calandrinia ciliata var. menziesii</i>			
Russian Thistle	<i>Salsola iberica</i>			
Shepherd's Purse	<i>Capsella bursa-pastoris</i>			
Smartweeds				
Ladysthumb	<i>Polygonum persicaria</i>			
Pennsylvania	<i>Polygonum pennsylvanicum</i>			
Smellmelon	<i>Cucumis melo</i>	Up to 5%	All Soil Types	4 oz./A
Spotted Spurge	<i>Euphorbia maculata</i>			
Spurred Anoda	<i>Anoda cristata</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Velvetleaf	<i>Abutilon theophrasti</i>			
Venice Mallow	<i>Hibiscus trionum</i>			
Waterhemp				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
White Cockle	<i>Silene latifolia</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			
Wormwood, Biennial	<i>Artemisia biennis</i>			
Yellow Rocket	<i>Barbarea vulgaris</i>			

(continued)

**Table 7. Weeds Controlled by Residual Activity of Flumioxazin 51% WDG (continued)**

GRASS WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Barnyardgrass	<i>Echinochloa crus-galli</i>	Up to 5%	All Soil Types	4 oz./A
Bluegrass, Annual	<i>Poa annua</i>			
Crabgrass, Large	<i>Digitaria sanguinalis</i>			
Foxtail, Giant	<i>Setaria faberi</i>			
Goosegrass	<i>Eleusine indica</i>			
Lovegrass, California	<i>Eragrostis diffusa</i>			
Panicums				
Fall	<i>Panicum dichotomiflorum</i>			
Texas	<i>Panicum texanum</i>			
Ryegrass, Italian	<i>Lolium multiflorum</i>			
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>			

<sup>1</sup>Flumioxazin 51% WDG at 4 oz./A will provide post-emergence dodder suppression when applied in combination with Pursuit Herbicide or Raptor Herbicide at labeled rates. The use of Pursuit Herbicide and Raptor Herbicide require the use of a NIS, which will result in burn and stunting of alfalfa. Growers should expect and accept this prior to using this tank mix.

### DIRECTIONS FOR USE IN ONION (DRY BULB)

#### For Use in the States of Michigan, New York, and North Dakota Only

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not make sequential application within 14 days of the first application.
- Do not apply more than 1 oz. of Flumioxazin 51% WDG per season on soils that contain greater than 90% sand plus gravel.
- Do not apply as part of a tank mix, other than with Prowl® H2O, or unacceptable injury may result. Other formulations of pendimethalin must not be tank mixed with Flumioxazin 51% WDG for use in onions.
- Do not apply with any type of adjuvant.
- Do not apply within 45 days of harvest.

**Use of Flumioxazin 51% WDG may result in necrotic spotting of onion leaves that come in contact with the spray.**

### Micro-Rate Application

Sequential applications of Flumioxazin 51% WDG may be applied to onions (dry bulb), between the 2-leaf and 6-leaf stage, at rates of 0.5 - 1 oz./A, on a 7 day interval.

### TIMING TO ONIONS (dry bulb)

Apply Flumioxazin 51% WDG to transplanted onions (dry bulb) between the 2-leaf and 6-leaf stage and on direct seed onions (dry bulb) between the 3-leaf and 6-leaf stage.

### TIMING TO WEEDS

#### Pre-Emergence - Emerged Onions (dry bulb), Pre-Emergence to Weeds

Apply Flumioxazin 51% WDG to weed free onions (dry bulb) for pre-emergence control of the weeds listed in Table 1, Section A.

### CHEMIGATION

Flumioxazin 51% WDG may be applied through sprinkler irrigation systems in onions (dry bulb).

**Table A. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Carpetweed	<i>Mollugo verticillata</i>			
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Evening primrose, Cutleaf	<i>Oenothera laciniata</i>			
Florida Pusley	<i>Richardia scabra</i>			
Henbit	<i>Lamium amplexicaule</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			

(continued)

**Table A. Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Marestail/Horseweed	<i>Conyza canadensis</i>	Up to 5%	All Soil Types	4 oz./A
Nightshades				
Black	<i>Solarium nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solarium sarrachoides</i>			
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane, Common	<i>Portulaca oleracea</i>			
Radish, Wild	<i>Raphanus raphanistrum</i>			
Redmaids	<i>Calandrinia ciliata var. menziesii</i>			
Shepherd's Purse	<i>Capsella bursa-pastoris</i>			
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Venice Mallow	<i>Hibiscus trionum</i>			

**DIRECTIONS FOR USE IN PEANUT****RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not apply more than 2 oz./A in the states of North Carolina, Oklahoma, or Virginia where climatic conditions may result in unacceptable injury to peanuts unless supplemental labeling provided by RedEagle International LLC is followed.
- Do not irrigate when peanuts are cracking.
- Do not graze treated fields or feed treated hay to livestock.



Many weather-related factors, including high wind, splashing or heavy rains or cool conditions at or near peanut emergence, may result in peanut injury in fields treated with Flumioxazin 51% WDG. On occasion this has resulted in a delay in maturity or even a slight decrease in yield.

#### **WIND MANAGEMENT**

In areas where shallow cultivation is used between rows to reduce wind-borne sand damage to peanuts, weed control from Flumioxazin 51% WDG may be reduced.

#### **TIMING TO PEANUTS**

Flumioxazin 51% WDG may be applied to peanuts prior to planting or pre-emergence (after planting). Pre-emergence applications of Flumioxazin 51% WDG must be made within 2 days after planting and prior to peanut emergence. Application after the peanuts have begun to crack, or are emerged, will result in severe crop injury. Application must not be made when peanuts have begun to crack. Select Flumioxazin 51% WDG rate from Table 1 according to anticipated weed spectrum.

#### **TIMING TO WEEDS**

##### **Burndown - Pre-Emergence to Peanuts, Post-Emergence to Weeds**

Flumioxazin 51% WDG, applied as part of a burndown program, may be used for residual weed control, as well as to assist in post-emergence burndown of many annual and perennial weeds where peanuts will be planted directly into a stale seedbed, cover crop or in previous crop residues. Apply Flumioxazin 51% WDG before planting, during planting or after planting, but before the crop emerges. For control of emerged weeds, tank mix Flumioxazin 51% WDG with glyphosate. Refer to glyphosate label for specified rate and application pressure. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Flumioxazin 51% WDG tank mixes applied to assist in the control of emerged weeds must be applied with an adjuvant, such as a non-ionic surfactant at 0.25% v/v or a crop oil concentrate or a methylated seed oil at 1 - 2 pts./A. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to increase herbicidal activity. Pre-emergence (conventional tillage) applications of Flumioxazin 51% WDG must be applied prior to weed emergence.

##### **ADDITIONAL RESIDUAL GRASS CONTROL: SEQUENTIAL**

Flumioxazin 51% WDG may be applied sequentially following a pre-plant incorporated application of trifluralin (states of New Mexico, Oklahoma, and Texas only), SONALAN®, DUAL® (metolachlor), pendimethalin, or FRONTIER®.

#### **ADDITIONAL RESIDUAL GRASS CONTROL: TANK MIXED**

Flumioxazin 51% WDG can be tank mixed with alachlor, metolachlor or FRONTIER for additional grass and broadleaf weed control. Flumioxazin 51% WDG can also be tank mixed with pendimethalin or SONALAN in states where they are labeled, provided overhead irrigation guidelines on the pendimethalin and/or SONALAN labels are followed.

#### **PRE-EMERGENCE APPLICATION IN PEANUTS IN THE STATES OF NORTH CAROLINA, OKLAHOMA, AND VIRGINIA ONLY**

Flumioxazin 51% WDG, at 2 oz. per acre, can be applied within 2 days of planting to control common ragweed, tropic croton and entireleaf, ivyleaf and tall/scarlet morningglories.

Cool temperatures near emergence, 2 consecutive nighttime lows in the 50's F, in combination with heavy rainfall may result in severe crop injury. Flumioxazin 51% WDG, at 3 oz./A, must only be used in these states when other alternatives are not available for adequate control of the weeds listed above and the user acknowledges the risks associated with this use rate under the adverse environmental conditions listed above.

#### **DIRECTIONS FOR USE IN POTATO**

**Arizona, California, Colorado, Delaware, Florida, Hawaii, Idaho, Maryland, Minnesota, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Oregon, South Dakota, Texas, Utah, Virginia, Washington, Washington DC, and Wyoming only**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 1.5 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 1.5 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not apply to Rill (Furrow) irrigated potatoes.

**Many weather-related factors, including high wind, splashing or heavy rains or cool conditions at or near potato emergence, may result in potato injury in fields treated with Flumioxazin 51% WDG. On occasion this has resulted in a delay in maturity.**

#### **TIMING TO POTATOES**

Flumioxazin 51% WDG may be applied to potatoes after hilling for the pre-emergence suppression of the weeds listed in Table 8. Apply Flumioxazin 51% WDG with other labeled herbicides for broad spectrum weed control. A minimum of 2 inches of settled soil must cover the vegetative portion of the potato plant at the time of Flumioxazin 51% WDG application. Application to potatoes with less than 2 inches of soil covering the vegetative portion of the potato may result in crop injury. In areas with historically higher amounts of rainfall during the time of pre-emergence herbicide applications,

such as the Red River Valley, Minnesota, and North Dakota, the requirement for 2 inches of settled soil is critical to avoid crop injury. Mechanical incorporation of Flumioxazin 51% WDG will result in decreased weed control and must be avoided. In areas with sprinkler irrigation, incorporate Flumioxazin 51% WDG with 0.5 - 0.75 inches of irrigation, after application and before any sprouts are within 2 inches of the settled soil surface if a rainfall event has not yet occurred.

#### **TIMING TO WEEDS**

##### **Pre-Emergence - Soil Covered Potatoes, Pre-Emergence to Weeds**

Apply Flumioxazin 51% WDG to soil covered potatoes for the pre-emergence suppression of the weeds listed in Table 8. Harrowing, cultivation or corrugating after Flumioxazin 51% WDG application will reduce weed control.

**Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. The most restrictive labeling of any tank mix product must be followed.**

#### **CHEMIGATION**

Flumioxazin 51% WDG may be applied through sprinkler irrigation systems in potatoes.

**Table 8. Weeds Suppressed by Residual Activity of Flumioxazin 51% WDG at 1.5 oz./A**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>FLUMIOXAZIN 51% WDG RATE</b>
Lambsquarters, Common	Chenopodium album	Up to 5%	1.5 oz./A
Mustard, Wild	Brassica kaber		
Nightshades			
Black	Solarium nigrum		
Eastern Black	Solanum ptycanthum		
Hairy	Solanum sarrachoides		
Pigweeds			
Palmer Amaranth	Amaranthus palmeri		
Redroot	Amaranthus retroflexus		
Smooth	Amaranthus hybridus		
Spiny Amaranth	Amaranthus spinosus		
Tumble	Amaranthus albus		
Prickly Lettuce (China Lettuce)	Lactuca serriola		
Radish, Wild	Raphanus raphanistrum		

## DIRECTIONS FOR USE IN SOYBEAN

### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not tank mix Flumioxazin 51% WDG with acetochlor (Warrant®), alachlor (Micro-Tech®), flufenacet (Axiom®, Domain®), metolachlor (Dual® Magnum, Dual II Magnum®, Boundary®), or dimethenamid (Frontier® or Outlook®) within 14 days of planting soybeans, unless soybeans are planted under no-till or minimum tillage conditions on wheat stubble or no-till field corn stubble.
- Do not irrigate when soybeans are cracking.
- Do not graze treated fields or feed treated hay to livestock.

### TIMING TO SOYBEANS

Flumioxazin 51% WDG may be applied to soybeans prior to planting or pre-emergence (after planting). Pre-emergence application of Flumioxazin 51% WDG must be made within 3 days after planting and prior to soybean emergence. Application after the soybeans have begun to crack, or are emerged, will result in severe crop injury. Do not apply when soybeans have begun to crack. Select Flumioxazin 51% WDG rate from Table 1 according to anticipated weed spectrum.

### TIMING TO WEEDS

#### Burndown - Pre-Emergence to Soybeans, Post-Emergence to Weeds

Flumioxazin 51% WDG, applied as part of a burndown program, may be used for residual weed control, as well as to assist in post-emergence burndown of many annual and perennial weeds where soybeans will be planted directly into a stale seedbed, cover crop or in previous crop residues. For control of emerged weeds, choose the most appropriate tank mix partner from Table 9. Apply Flumioxazin 51% WDG with ground equipment before planting, during planting or within 3 days after planting, **but before the crop emerges**. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Refer to tank mix partner's label for specified application pressure. All Flumioxazin 51% WDG tank mixes applied to assist in the control of emerged weeds must be applied with crop oil concentrate or methylated seed oil at 1 - 2 pts./A or a non-ionic surfactant at 0.25% v/v.

#### INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY

Flumioxazin 51% WDG, at rates as low as 1 oz./A, may be tank mixed with glyphosate (ROUNDUP®) to increase the speed of burndown activity compared to glyphosate applied alone. Residual weed control will not be provided at rates lower than 2 oz./A; however, suppression of the weeds in Table 2, may occur at Flumioxazin 51% WDG rates as low as 1 oz./A.

### TANK MIXES

Flumioxazin 51% WDG may be tank mixed with the herbicides listed in Table 9 for increased burndown activity, additional residual broadleaf and/or additional grass control. Refer to tank mix partner's label for adjuvant specifications.

**Table 9. Tank Mix Partners for Control of Emerged Weeds in Reduced Tillage Soybeans**

<b>TANK MIX PARTNER</b>	<b>TARGET WEEDS<sup>1</sup></b>
2,4-D LVE	Marestail Giant Ragweed Dandelion
paraquat	Annual Grasses Henbit
glyphosate	General Burndown
Select Max <sup>®</sup>	Annual Grasses
SCEPTER <sup>®</sup> 70 DG	Cocklebur Common Sunflower
Weedmaster <sup>®</sup>	Marestail Giant Ragweed Dandelion

<sup>1</sup>Refer to tank mix product labels for directions for control of emerged weeds present.

#### **ADDITIONAL RESIDUAL BROADLEAF CONTROL**

Flumioxazin 51% WDG can be tank mixed with metribuzin, FIRSTRATE<sup>®</sup>, LOROX<sup>®</sup>, PURSUIT PLUS<sup>®</sup>, PYTHON<sup>®</sup>, SQUADRON<sup>®</sup>, SCEPTER, or STEEL<sup>®</sup> for additional broadleaf control.

#### **ADDITIONAL RESIDUAL GRASS CONTROL**

Flumioxazin 51% WDG can be tank mixed with pendimethalin or COMMAND<sup>®</sup> for additional grass control. Tank mixes with flufenacet (AXIOM or DOMAIN), metolachlor (DUAL products or BOUNDARY), dimethenamid (FRONTIER or OUTLOOK) or alachlor (MICRO-TECH or IntRRo<sup>®</sup>), may result in severe injury to soybeans when application is followed by prolonged periods of cool wet weather and must not be used with Flumioxazin 51% WDG, unless supplemental labeling, provided by RedEagle International LLC, is followed.

#### **ROUNDUP READY PROGRAM**

Flumioxazin 51% WDG may be applied as part of a burndown program or pre-emergence in conventional tillage programs, at 2 - 3 oz./A to reduce early season weed competition from waterhemp, velvetleaf, nightshade and morningglories as well as other weeds listed in Tables 2 and 3 in ROUNDUP READY programs. A sequential post-emergence application of glyphosate will be required to control weeds not controlled by Flumioxazin 51% WDG.

#### **DIRECTIONS FOR USE IN STRAWBERRY**

##### **RESTRICTIONS AND LIMITATIONS:**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre per application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.

- Flumioxazin 51% WDG, at 3 oz. per acre, can be applied to the soil a minimum of 30 days prior to transplanting strawberries provided the strawberries will be transplanted through a plastic mulch.
- Flumioxazin 51% WDG at 3 oz. per acre can be applied to dormant (established or newly planted) strawberries for the pre-emergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG.
- Flumioxazin 51% WDG, at 3 oz. per acre, can be applied in strawberry row middles with a shielded or hooded sprayer for the pre-emergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of Flumioxazin 51% WDG.

Application Method	Minimum Time From Application To Harvest (PHI)	Use Rate Per Acre Per Application (oz.)	Use Rate Per Acre Per Year (oz.)	Special Use Instructions
Pre-transplant	Not applicable	3	3	Apply a minimum of 30 days prior to transplanting and prior to plastic mulch being laid. Apply as part of a tank mix to control emerged weeds.
Pre-emergence to dormant strawberries	Not applicable	3	3	Crop oil concentrate, at 1% v/v, or non-ionic surfactant, at 0.25% v/v, may be added to help control emerged broadleaf weeds.
Hooded or shielded Sprayer application to row middles	Do not apply after fruit set	3	3	<b>Apply only to row middles - do not apply over strawberries.</b> Apply prior to weed emergence. Crop spotting may occur if an adjuvant is added. <b>Application after fruit set may result in spotting of fruit and should be avoided.</b> Do not allow spray drift to come in contact with fruit or foliage.

**Table 10. Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Bristly Starbur	<i>Acanthospermum hispidum</i>			
Carpetweed	<i>Mollugo verticillata</i>			
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Coffee Senna	<i>Cassia occidentalis</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Evening primrose, Cutleaf	<i>Oenothera laciniata</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			
Filaree				
Redstem	<i>Erodium cicutarium</i>			
Whitestem	<i>Erodium moschatum</i>			
Fiddleneck, Coast	<i>Amsinckia menziesii</i>			
Fleabane, Hairy	<i>Conyza bonariensis</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Florida Pusley	<i>Richardia scabra</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Groundsel, Common	<i>Senecio vulgaris</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>			
Henbit	<i>Lamium amplexicaule</i>			
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Mallow				
Common (Cheeseweed)	<i>Malva neglecta</i>			

**Asparagus, Garlic, Hops**  
6 oz./A

**Sugarcane**  
6 - 8 oz./A

(Continued)

**Table 10. Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG (Continued)**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Little	<i>Malva parviflora</i>	Up to 10% <sup>1</sup>	All Soil Types <sup>2</sup>	<b>Bushberries, Grapes, Nut Trees (Including Pistachio), Olive, Pome Fruit, Pomegranate, Stone Fruit, and Non-Bearing Fruit Trees</b> 6 - 12 oz./A <sup>2</sup>  <b>To Maintain Bare Ground on Non-Crop Are of Farms, Orchards, and Vineyards</b> 6 - 12 oz./A
Horseweed/Marestail	<i>Conyza canadensis</i>			
Mayweed/False Chamomile	<i>Matricaria maritima</i>			
Morningglories				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Smallflower	<i>Jacquemontia tamnifolia</i>			
Tall	<i>Ipomoea purpurea</i>			
Mustards				
London Rocket	<i>Sisymbrium irio</i>			
Tansy	<i>Descurainia pinnata</i>			
Tumble	<i>Sisymbrium altissimum</i>			
Wild	<i>Brassica kaber</i>			
Nettle, Burning	<i>Urtica urens</i>			
Nightshades				
Black	<i>Solarium nigrum</i>			
Eastern Black	<i>Solarium ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Palmer Amaranth	<i>Amaranthus palmeri</i>			
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce (China Lettuce)	<i>Lactuca serriola</i>			

(Continued)



**Table 10. Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG (Continued)**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane				
Common	<i>Portulaca oleracea</i>			
Horse	<i>Trianthema portulacastrum</i>	Up to 10% <sup>1</sup>	All Soil Types <sup>2</sup>	<p><b>Asparagus, Garlic, Hops</b> 6 oz./A</p> <p><b>Sugarcane</b> 6 - 8 oz./A</p> <p><b>Bushberries, Grapes, Nut Trees (Including Pistachio), Olive, Pome Fruit, Pomegranate, Stone Fruit, and Non-Bearing Fruit Trees</b> 6 - 12 oz./A<sup>2</sup></p> <p><b>To Maintain Bare Ground on Non-Crop Are of Farms, Orchards, and Vineyards</b> 6 - 12 oz./A</p>
Radish, Wild	<i>Raphanus raphanistrum</i>			
Ragweed, Common	<i>Ambrosia artemisiifolia</i>			
Redmaids	<i>Calandrinia ciliata var. menziesii</i>			
Redweed	<i>Melochia corchorifolia</i>			
Shepherd's Purse	<i>Capsella bursa-pastoris</i>			
Smellmelon	<i>Cucumis melo</i>			
Sowthistle, Annual3	<i>Sonchus oleraceus</i>			
Spotted Spurge	<i>Euphorbia maculate</i>			
Spurred Anoda	<i>Anoda cristata</i>			
Thistle, Russian	<i>Salsola iberica</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Venice Mallow	<i>Hibiscus trionum</i>			
Waterhemp				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			
White Cockle	<i>Silene latifolia</i>			
Wormwood, Biennial	<i>Artemisia biennis</i>			
Yellow Rocket	<i>Barbarea vulgaris</i>			

(Continued)

**Table 10. Weeds Controlled by Pre-Emergence Application of Flumioxazin 51% WDG (Continued)**

GRASS WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	FLUMIOXAZIN 51% WDG RATE
Barnyardgrass	<i>Echinochloa crus-galli</i>	Up to 10% <sup>1</sup>	All Soil Types <sup>2</sup>	<b>Asparagus, Garlic, Hops</b> 6 oz./A  <b>Sugarcane</b> 6 - 8 oz./A  <b>Bushberries, Grapes, Nut Trees (Including Pistachio), Olive, Pome Fruit, Pomegranate, Stone Fruit, and Non-Bearing Fruit Trees</b> 6 - 12 oz./A <sup>2</sup>  <b>To Maintain Bare Ground on Non-Crop Areas of Farms, Orchards, and Vineyards</b> 6 - 12 oz./A
Bluegrass, Annual	<i>Poa annua</i>			
Crabgrass				
Large	<i>Digitaria sanguinalis</i>			
Smooth	<i>Digitaria ischaemum</i>			
Foxtails				
Bristly	<i>Setaria verticillata</i>			
Giant	<i>Setaria faberi</i>			
Green	<i>Setaria viridis</i>			
Yellow	<i>Setaria glauca</i>			
Goosegrass	<i>Eleusine indica</i>			
Guineagrass	<i>Panicum maximum</i>			
Johnsongrass, Seedling	<i>Sorghum halepense</i>			
Lovegrass, California	<i>Eragrostis diffusa</i>			
Panicum				
Fall	<i>Panicum dichotomiflorum</i>			
Texas	<i>Panicum texanum</i>			
Ryegrass, Italian	<i>Lolium multiflorum</i>			
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>			

1Flumioxazin 51% WDG can be used on soils with greater than 10% organic matter; however, length of residual control may be shorter than on soils with lower organic matter content.

2Use a maximum Flumioxazin 51% WDG rate of 6 oz./A per application on any soil that has a sand plus gravel content over 80% if bushes, trees or vines are under 3 years of age.

3Except CA.

### DIRECTIONS FOR USE IN SUGARCANE

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 8 oz. of Flumioxazin 51% WDG per acre per application.
- Do not make a sequential application within 14 days of the first application.
- Do not apply more than 12 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not apply within 90 days of harvest.

## **TIMING TO SUGARCANE**

Flumioxazin 51% WDG may be applied from 2 weeks prior to planting to before the sugarcane emerges, post-directed or at layby. Select the proper Flumioxazin 51% WDG rate from Table 10 according to anticipated weed spectrum and soil organic matter content for pre-emergence applications. Select Flumioxazin 51% WDG rate from Table 11 according to emerged weed spectrum and weed heights for post-directed and layby applications.

## **TIMING TO WEEDS**

### **Burndown - Pre-Emergence to Sugarcane, Post-Emergence to Weeds**

Flumioxazin 51% WDG may be used for pre-emergence control, and to assist in post-emergence burndown, of many annual broadleaf weeds in sugarcane. For control of emerged weeds, choose the most appropriate tank mix partner from Table 12. Apply Flumioxazin 51% WDG **before the crop emerges**. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. All Flumioxazin 51% WDG tank mixes applied to assist in the control of emerged weeds must be applied with crop oil concentrate or methylated seed oil at 1 qt./A or a non-ionic surfactant at 0.25% v/v. Some tank mix products, such as ROUNDUP Original Max (glyphosate), may be formulated with a suitable adjuvant and do not require additional adjuvant.

### **Pre-Emergence - Pre-Emergence to Sugarcane, Pre-Emergence to Weeds**

Flumioxazin 51% WDG may be used for pre-emergence control of many annual broadleaf and grassy weeds in sugarcane. Select rate based on anticipated weed spectrum and soil organic matter content from Table 10. Apply Flumioxazin 51% WDG **before the crop emerges**.

### **Post-Directed - Post-Emergence to Sugarcane, Post-Emergence to Weeds**

Post-directed applications must only be made to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height and has begun to joint. Do not make post-directed applications to "PINEAPPLE" varieties. Post-directed applications to "PINEAPPLE" varieties or to upright varieties that have not exceeded 24 inches in height and have not begun to joint, may result in unacceptable crop injury. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Post-directed applications of Flumioxazin 51% WDG must include a crop oil concentrate or methylated seed oil at 1 qt./A or a non-ionic surfactant at 0.25% v/v. Select the proper Flumioxazin 51% WDG rate based on weed spectrum and weed height from Table 11.

### **Layby - Post-Emergence to Sugarcane, Post-Emergence to Weeds**

Layby applications can be made to upright and "PINEAPPLE" varieties after the sugarcane has exceeded 30 inches in height and the spray solution will not contact foliage above 6 inches from the base of the sugarcane. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Layby applications of Flumioxazin 51% WDG must be applied with crop oil concentrate or methylated seed oil at 1 qt./A or a non-ionic surfactant at 0.25% v/v. Select the proper Flumioxazin 51% WDG rate based on weed spectrum and weed height from Table 11.

**Table 11. Broadleaf Weeds Controlled by Post-Directed or Layby Application of Flumioxazin 51% WDG in Sugarcane**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches)	
COMMON NAME	SCIENTIFIC NAME	3 oz./A	4 oz./A
Bindweed, Field <sup>1</sup>	<i>Convolvulus arvensis</i>	4	8
Carpetweed	<i>Mollugo verticillata</i>	4	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6	8
Jimsonweed	<i>Datura stramonium</i>	4	4
Lambsquarters, Common	<i>Chenopodium album</i>	4	4
Morningglories			
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriscula</i>	-	4
Ivyleaf	<i>Ipomoea hederacea</i>	4	4
Pitted	<i>Ipomoea lacunosa</i>	4	6
Red	<i>Ipomoea coccinea</i>	-	4
Tall	<i>Ipomoea purpurea</i>	2	4
Mustard, Wild	<i>Brassica kaber</i>	6	6
Pigweeds			
Palmer Amaranth	<i>Amaranthus palmeri</i>	4	6
Redroot	<i>Amaranthus retroflexus</i>	4	6
Smooth	<i>Amaranthus hybridus</i>	4	6
Plantain, Broadleaf	<i>Plantago major</i>	6	6
Prickly Sida	<i>Sida spinosa</i>	4	6
Purslanes			
Common	<i>Portulaca oleracea</i>	2	4
Rock	<i>Calandrinia</i> spp.	-	2
Ragweeds			
Common	<i>Ambrosia artemisiifolia</i>	2	2
Giant	<i>Ambrosia trifida</i>	4	4
Rice Flatsedge	<i>Cyperus iria</i>	2	4
Sicklepod	<i>Senna obtusifolia</i>	4	4
Smartweeds			

(Continued)

**Table 11. Broadleaf Weeds Controlled by Post-Directed or Layby Application of Flumioxazin 51% WDG in Sugarcane (Continued)**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches)	
COMMON NAME	SCIENTIFIC NAME	3 oz./A	4 oz./A
Ladysthumb	<i>Polygonum persicaria</i>	4	4
Pale	<i>Polygonum lapathifolium</i>	4	4
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4	4
Spotted Spurge	<i>Euphorbia maculata</i>	4	4
Velvetleaf	<i>Abutilon theophrasti</i>	4	6
Venice Mallow	<i>Hibiscus trionum</i>	2	2
Waterhemp			
Common	<i>Amaranthus rudis</i>	2	2
Tall	<i>Amaranthus tuberculatus</i>	2	2

<sup>1</sup>Flumioxazin 51% WDG tank, mixes will only control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

#### TANK MIXES

Flumioxazin 51% WDG may be tank mixed with the herbicides listed in Table 12 for additional weed control in burndown, pre-emergence, post-directed and layby applications. Refer to tank mix partner's label for adjuvant specifications.

**Table 12. Tank Mixes with Flumioxazin 51% WDG for Post-Directed or Layby Use in Sugarcane**

TANK MIX PARTNER <sup>1</sup>	TARGET WEEDS	BURNDOWN	POST-DIRECTED <sup>2</sup>	LAYBY
2,4-D amine	Annual and Perennial Broadleaf Weeds	X		
atrazine	Pigweeds	X	X	X
	Cocklebur			
Asulox <sup>®3</sup>	Annual Grasses		X	X
Evik <sup>®4</sup>	Annual Grasses		X	X
glyphosate <sup>5</sup>	Annual and Perennial Weeds	X		X
metribuzin <sup>6</sup>	Broadleaf Panicum		X	X
	Goosegrass			
Sempra <sup>®</sup>	Purple Nutsedge	X	X	X
	Yellow Nutsedge			
Weedmaster <sup>®</sup>	Annual and Perennial Broadleaf Weeds	X		

<sup>1</sup>Refer to tank mix product labels for directions for control of emerged weeds present not listed in Table 11.

<sup>2</sup>Post-directed applications must only be made to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height. Do not make post-directed applications to “PINEAPPLE” varieties.

Post-directed applications to “PINEAPPLE” varieties or to upright varieties that have not exceeded 24 inches in height may result in unacceptable crop injury.

<sup>3</sup>Apply to sugarcane at least 24 inches tall.

<sup>4</sup>Apply before weeds are greater than 6 inches tall.

<sup>5</sup>Glyphosate applications must be made with a hooded sprayer. Sugarcane must be at least 3 ft. tall. Contact with the sugarcane foliage by either the spray mixture or the treated weed foliage will result in sugarcane injury.

<sup>6</sup>Refer to metribuzin label for restrictions based on soil type.

#### **ADDITIONAL PRE-EMERGENCE BROADLEAF CONTROL**

Flumioxazin 51% WDG can be tank mixed with atrazine or diuron for additional pre-emergence broadleaf control.

#### **ADDITIONAL PRE-EMERGENCE GRASS CONTROL**

Flumioxazin 51% WDG can be tank mixed with PROWL (or other pendimethalin products) for additional pre-emergence grass control provided sugarcane has not emerged.

### **DIRECTIONS FOR USE IN SUNFLOWER AND SAFFLOWER**

#### **HARVEST AID**

##### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from Flumioxazin 51% WDG requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt./A. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing Flumioxazin 51% WDG with glyphosate or paraquat will increase control of emerged weeds and aid in harvest for sunflowers. Tank mixing Flumioxazin 51% WDG with glyphosate will increase control of emerged weeds and aid in harvest for safflower.

#### **TIMING TO SUNFLOWER AND SAFFLOWER**

Apply Flumioxazin 51% WDG at 1.5 - 2 oz./A when crop is mature (when seed is 35% moisture or less). For many varieties this is when the backs of the heads are turning yellow and the bracts are turning

brown Sunflower and safflower can be harvested 5 days after application.

To ensure thorough coverage, use 1.5 - 30 gals. of spray solution per acre. Select nozzle type using Manufacturer's gallonage and pressure specifications for post-emergence application.

## **DIRECTIONS FOR USE IN SWEET POTATO**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz. of Flumioxazin 51% WDG per acre during a single growing season.
- Do not apply post-emergence to sweet potatoes.
- Do not use greenhouse grown transplants.
- Do not use transplants harvested more than 2 days prior to transplanting.
- Do not use on any sweet potato variety other than "BEAUREGARD", unless user has tested Flumioxazin 51% WDG on other variety and has found crop tolerance to be acceptable.
- Do not apply as a part of any tank mix, except with labeled rates of COMMAND, if tank mix is applied prior to transplanting.

### **TIMING TO SWEET POTATOES**

Flumioxazin 51% WDG must be applied prior to transplanting sweet potatoes.

### **TIMING TO WEEDS**

#### **Pre-Emergence To Weeds**

Apply Flumioxazin 51% WDG to soil prior to transplanting sweet potato slips for the pre-emergence control of the weeds listed in Table 1.

## **DIRECTIONS FOR USE IN WHEAT**

**For use in the states of Delaware, Idaho, Kentucky, Maryland, Minnesota, Montana, North Carolina, North Dakota, New Jersey, Oregon, South Carolina, South Dakota, Tennessee, Virginia, and Washington Only**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 2 oz. of Flumioxazin 51% WDG per acre during a single growing season.

### **PRE-PLANT APPLICATIONS, PRE-EMERGENCE WEED CONTROL**

#### **RESTRICTIONS AND LIMITATIONS**

- For pre-plant weed control, use only on no till or minimum tillage fields where the previous

year's crop residue has not been incorporated into the soil.

- Plant wheat no sooner than 7 days after Flumioxazin 51% WDG application in the states of DE, KY, MD, NC, NJ, SC, TN, or VA.
- Plant wheat no sooner than 14 days after Flumioxazin 51% WDG application in the states of ID, MN, MT, ND, OR, SD, or WA.
- Do not use on Durum wheat.
- Do not irrigate between emergence and spike.
- Wheat must be planted a minimum of 1" deep.
- Do not graze until wheat has reached 5 inches in height.

### **Burndown Use Directions**

Flumioxazin 51% WDG applied as part of a burndown program at 2 oz./A may be used for residual weed control as well as to assist in post-emergence burndown of many weeds where wheat will be planted directly into the residue of the previous crop. See Directions for Use in Fall Burndown Programs in Fields to be Planted to Barley, Field Pea, Flax, Lentil, Safflower, Sunflower, and Wheat for rates and timing of applications. For control of emerged weeds, Flumioxazin 51% WDG must be applied with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Refer to tank mix partners label for specified application pressure and adjuvant systems.

### **HARVEST AID RESTRICTIONS AND LIMITATIONS**

- Do not harvest within 10 days of application.

### **Use Directions**

Flumioxazin 51% WDG applied at 2 oz./A for desiccation requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt./A. A spray grade nitrogen source (either ammonium sulfate at 2 - 2.5 lbs./A or a 28% to 32% nitrogen solution at 1 - 2 qts./A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing Flumioxazin 51% WDG with glyphosate will increase control of emerged weeds and aid in harvest.

To ensure thorough coverage, use a minimum of 10 gals. spray solution per acre by ground application and a minimum of 5 gals. per acre by aerial application. Nozzle selection must meet manufacturer's gallonage and pressure specifications for post-emergence application.

### **TIMING TO WHEAT**

Apply Flumioxazin 51% WDG at 1.5 - 2 oz./A after wheat reaches the hard dough stage and grain has no more than 30% moisture. Wheat can be harvested 10 days after application. RedEagle



International LLC recommends tank mixing with glyphosate.

**DIRECTIONS FOR USE IN BUSHBERRIES, GRAPE, NUT TREES (INCLUDING PISTACHIO), OLIVE, POME FRUIT, POMEGRANATE, STONE FRUIT, AND NON-BEARING FRUIT TREES**

**RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 12 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 24 oz. of Flumioxazin 51% WDG per acre during a 12 month period, except Bushberries; for Bushberries do not apply more than 12 oz. of Flumioxazin 51% WDG per acre during a 12 month period.
- Do not make a sequential application within 30 days of the first application, except nut trees, do not make a sequential application within 60 days of the first application.
- Use a maximum Flumioxazin 51% WDG rate of 6 oz./A per application on any soil that has a sand plus gravel content over 80% if bushes, trees or vines are less than 3 years of age. (Two applications of 6 oz./A in a 12 month period can still be made as long as there have been 60 days between applications.)
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply within 300 yards of non-dormant pears.
- Raise mower height during all mowing to reduce dust. Dust created by mowing can drift onto desirable vegetation resulting in injury.
- Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- Do not mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- Follow the most restrictive label limitations and precautions of the tank mix product(s) being used.
- Avoid direct or indirect spray contact to foliage and green bark (non-barked trunk and non-barked vines with the exception of undesirable suckers).

For bushberries, grape, nut trees (including pistachio), olive, pomegranate, and non-bearing fruit trees, Flumioxazin 51% WDG must be applied as a uniform broadcast application to the orchard or vineyard floor or as a uniform band directed at the base of the bush, trunk, or vine. For pome fruit and stone fruit, Flumioxazin 51% WDG can only be applied as a uniform band directed at the base of the trunk prior to "pink bud" in apple and "bud break" in stone fruit and pear. The preferred application timing for Flumioxazin 51% WDG is in the fall to maximize the potential for rainfall to activate and set the herbicide. Do not apply over the top of crop or allow spray to come in contact with crop as a result of application or drift.

### **Pre-Emergence Application**

Apply 6 - 12 oz. (0.188 - 0.38 lb. a.i./A) of Flumioxazin 51% WDG per broadcast acre as a pre-emergence application. Make pre-emergence (to weed emergence) applications of Flumioxazin 51% WDG to a weed-free soil surface. Pre-emergence applications of Flumioxazin 51% WDG must be completed prior to weed emergence. Moisture is necessary to activate Flumioxazin 51% WDG on soil for residual weed control. Dry weather following application of Flumioxazin 51% WDG may reduce effectiveness. However, when adequate moisture is received after dry conditions, Flumioxazin 51% WDG will control susceptible germinating weeds.

### **Post-Emergence Application**

Apply 6 - 12 oz. (0.188 to 0.38 lb. a.i./A) of Flumioxazin 51% WDG per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate). The addition of an adjuvant enhances Flumioxazin 51% WDG activity on emerged weeds. Thorough spray coverage is necessary to maximize the post-emergence activity of Flumioxazin 51% WDG.

Refer to Table 10 for weeds controlled by the residual activity of Flumioxazin 51% WDG. Tank mix Flumioxazin 51% WDG with a labeled burndown herbicide for control of the emerged weeds listed in Table 13. Refer to tank mix partner's label for additional weed species and increased weed heights claimed. Refer to tank mix partner's label for additional restrictions, including minimum carrier volume and crops in which tank mix partner may be used. Burndown tank mix partners include glyphosate, paraquat, 2,4-D and RELY®. Do not tank mix with glyphosate or 2,4-D containing products during the period after bloom through final harvest to ensure crop safety from drift.

Residual weed control will be reduced if vegetation prevents the Flumioxazin 51% WDG from reaching the soil surface. If vegetation is heavy, use a burndown herbicide with Flumioxazin 51% WDG and make a sequential Flumioxazin 51% WDG application prior to the emergence of new weeds.

### **Carrier Volume and Spray Pressure**

To ensure thorough coverage in burndown applications, use a minimum of 15 gals. of spray solution per acre. Use higher gallonage if dense vegetation or heavy crop residue is present.

Nozzle selection must meet manufacturer's gallonage and pressure specifications.

### **Banded Application**

Rates listed in Table 13 refer to a broadcast application covering the entire acre. When making a banded application, the rate must be reduced according to the following formula:

$$\text{Amount Needed per Acre for Banded Application} = \frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Rate per Broadcast Acre}$$

### **USE DIRECTIONS FOR BUSHBERRIES**

Bushberries: Aronia Berry, Black Currant, Blueberry (Highbush, Rabbit-eye and Lowbush), Buffalo Currant, Chilean Guava, Cranberry (Highbush), Elderberry, European Barberry, Gooseberry, Honeysuckle (edible), Huckleberry, Jostaberry, Juneberry, Lingonberry, Native Currant, Red Currant, Salal, and Sea Buckthorn

- Do not use in the states of Idaho, Oregon or Washington except west of the Cascade Mountains in the following counties:
  - **Oregon:** Benton, Clackamas, Clatsop, Columbia, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Umatilla, Yamhill, and Washington
  - **Washington:** Benton, Clallam, Clark, Cowlitz, Franklin, Grant, Grays Harbor, King, Jefferson, Kitsap, Lewis, Pacific, Pierce, Skagit, Snohomish, Thurston, Wahkiakum, Walla Walla, and Whatcom
- Do not apply to Bushberries established less than 2 years unless they are protected from spray contact by non-porous wrap, grow tubes or waxed containers.
- Do not apply within 7 days of harvest.

### **USE DIRECTIONS FOR GRAPES**

- Do not apply within 60 days of harvest.
- Do not apply to grapes established less than 2 years unless they are trellised at least 3 ft. from the soil surface or are protected from spray contact by non-porous wrap, grow tubes or waxed containers.
- Do not apply to grapes that are not trellised or staked unless they are free standing.
- Avoid direct or indirect spray contact to foliage and green bark (non-barked vines, with the exception of undesirable suckers).
- New plantings of “own-rooted varieties”, such as Concord, must be planted so that all roots are a minimum 8 inches below the soil surface to be treated. In some situations, this may require hilling soil around newly planted vines so that the settled depth of the hill will be 4 to 5 inches above the vineyard floor.

### **Juice, Raisin, and Wine Grapes**

- Do not apply during the period after bud break through final harvest, unless using shielded application equipment and applicator can ensure spray drift will not come in contact with crop fruit or foliage. Shielded applications during this time period must not be made with glyphosate or products containing glyphosate.

### **Table Grapes**

- Flumioxazin 51% WDG may be applied during the period following final harvest up to bud break.
- Do not apply after bud break.

## USE DIRECTIONS FOR NUT TREES (INCLUDING PISTACHIO), OLIVE, POME FRUIT, POMEGRANATE, AND STONE FRUIT

**Nut Trees:** Almond, Beechnut, Betelnut, Black Walnut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, English Walnut, Filbert (Hazelnut), Ginkgo, Heartnut, Hickory Nut, Macadamia Nut, Oak, Pecan, Pili Nut, Pine Nut, Pistachio, and Tropical Almond

**Pome Fruit:** Apple, Crabapple, Loquat, Mayhaw, Pear, Pear (oriental), and Quince

**Stone Fruit:** Apricot, Cherries (Sweet and Tart), Nectarine, Peach, Plum (Chickasaw, Damson, Japanese), Plumcot, and Prune

- **California only:** For almonds and stone fruit in the counties of Merced, San Joaquin, and Stanislaus, follow Directions for use in this label.
- For pome fruit and stone fruit, Flumioxazin 51% WDG can only be applied as a uniform band directed at the base of the trunk prior to silver tip in apples and bud break in stone fruit.
- Do not apply to pears in the states of Oregon or Washington.
- For pome fruit and stone fruit, do not apply to row middles (area between berms)
- For nut trees (including Pistachio), olive, and pomegranate, apply after bud break through final harvest using shielded application equipment if the applicator can ensure the spray drift will not come into contact with non-target vegetation, crop fruit and/or foliage. Shielded application equipment is not required if the following application parameters are followed:
  - Application pressure (at boom) < 30 PSI.
  - Application speed < 5 MPH.
  - Applicator can ensure the spray drift will not come into contact with non-target vegetation, crop fruit and/or foliage.
- Do not apply within 60 days prior to harvest.
- Do not apply to trees established less than one year, unless protected from spray contact by non-porous wraps, grow tubes, paint or waxed containers.
- Do not use in the states of Oregon or Washington except in the following counties unless the additional restrictions listed below are followed:
  - **Oregon:** Benton, Clackamas, Clatsop, Columbia, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Morrow, Multnomah, Polk, Tillamook, Umatilla, Yamhill, and Washington
  - **Washington:** Clallam, Cowlitz, Grays Harbor, King, Jefferson, Kitsap, Lewis, Pacific, Pierce, Skagit, Snohomish, Thurston, Wahkiakum, and Whatcom

-For apples east of the Cascade Mountains in Washington (counties not listed above), follow the restrictions above plus:

- Apply between final harvest and January 1st.
- Apply only to apple blocks with an established (2 years or older) permanent cover crop that covers a minimum of 60% of the surface area in the block.
- Application must be incorporated with a minimum of one half inch of water within 48 hours after application.
- Do not apply to powdery soils or soils susceptible to wind displacement.
- Apply only to orchard berms.
- Do not mow the treated berm areas of the orchard.

#### USE DIRECTIONS FOR NON-BEARING FRUIT TREES

Non-Bearing Avocado, Fig, Grapefruit, Lemon, Olive, Orange, Pomegranate, and Tangerine

- Do not apply more than 12 oz. of Flumioxazin 51% WDG per acre during a single application.
- Do not apply more than 24 oz. of Flumioxazin 51% WDG per acre during a 12 month period.
- Do not harvest fruit from treated trees within one year of application.
- Do not apply to trees established less than one year, unless protected from spray contact by non-porous wraps, grow tubes or waxed containers.
- Do not apply during the period after flowering through leaf drop, unless using shielded application equipment and the applicator can ensure spray drift will not come in contact with the crop foliage.

**Table 13. Weeds Controlled by Post-Emergence Activity of Flumioxazin 51% WDG Tank Mixes**

BROADLEAF WEED SPECIES			
COMMON NAME	SCIENTIFIC NAME	WEED HEIGHT/LENGTH (inches)	FLUMIOXAZIN 51% WDG RATE
Bindweed, Field <sup>1</sup>	<i>Convolvulus arvensis</i>	8	
Carpeweed	<i>Mollugo verticillata</i>	4	
Chickweeds			
Common	<i>Stellaria media</i>	4	
Mouseear	<i>Cerastium vulgatum</i>	4	
Cocklebur, Common	<i>Xanthium strumarium</i>	4	
Evening primrose, Cutleaf <sup>2</sup>	<i>Oenothera laciniata</i>	12	
Filaree			

(Continued)

**Table 13. Weeds Controlled by Post-Emergence Activity of Flumioxazin 51% WDG Tank Mixes(Continued)**

BROADLEAF WEED SPECIES			
COMMON NAME	SCIENTIFIC NAME	WEED HEIGHT/LENGTH (inches)	FLUMIOXAZIN 51% WDG RATE
Broad leaf	<i>Erodium botrys</i>	4	6 - 12 oz./A
Redstem	<i>Erodium cicutarium</i>	4	
Florida Beggarweed	<i>Desmodium tortuosum</i>	2	
Hemp Sesbania	<i>Sesbania exaltata</i>	8	
Jimsonweed	<i>Datura stramonium</i>	4	
Lambsquarters, Common	<i>Chenopodium album</i>	4	
Morningglories			
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	4	
Ivyleaf	<i>Ipomoea hederacea</i>	4	
Pitted	<i>Ipomoea lacunosa</i>	6	
Red/Scarlet	<i>Ipomoea coccinea</i>	4	
Tall	<i>Ipomoea purpurea</i>	4	
Mustard, Wild	<i>Brassica kaber</i>	6	
Pigweeds			
Palmer Amaranth	<i>Amaranthus palmeri</i>	6	
Redroot	<i>Amaranthus retroflexus</i>	6	
Smooth	<i>Amaranthus hybridus</i>	6	
Plantain, Broadleaf	<i>Plantago major</i>	6	
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	6	
Purslanes			
Common	<i>Portulaca oleracea</i>	4	
Rock	<i>Calandrinia</i> spp.	2	
Ragweeds			
Common	<i>Ambrosia artemisiifolia</i>	2	
Giant	<i>Ambrosia trifida</i>	4	
Rice Flatsedge	<i>Cyperus iria</i>	4	
Sicklepod	<i>Senna obtusifolia</i>	4	

(Continued)

**Table 13. Weeds Controlled by Post-Emergence Activity of Flumioxazin 51% WDG Tank Mixes(Continued)**

BROADLEAF WEED SPECIES			
COMMON NAME	SCIENTIFIC NAME	WEED HEIGHT/LENGTH (inches)	FLUMIOXAZIN 51% WDG RATE
Smartweeds			
Ladysthumb	<i>Polygonum persicaria</i>	4	
Pale	<i>Polygonum lapathifolium</i>	4	
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4	
Spotted Spurge	<i>Euphorbia maculata</i>	4	
Velvetleaf	<i>Abutilon theophrasti</i>	4	
Venice Mallow	<i>Hibiscus trionum</i>	4	
Waterhemp			
Common	<i>Amaranthus rudis</i>	2	
Tall	<i>Amaranthus tuberculatus</i>	2	

<sup>1</sup>Flumioxazin 51% WDG will only provide control of the above ground portion of bindweed. Repeated applications will be needed to control regrowth.

<sup>2</sup>For acceptable control, cutleaf evening primrose must be 12 inches or less and in the rosette stage. Add crop oil concentrate, at 1 pt./A, or non-ionic surfactant at 0.25% v/v, to glyphosate tank mixes for cutleaf evening primrose control, including glyphosate formulations that contain a built-in adjuvant system.

#### **ADDITIONAL RESIDUAL WEED CONTROL**

Flumioxazin 51% WDG maybe tank mixed with oryzalin (SURFLAN®), simazine or diuron for additional residual weed control. Always read and follow label use directions for all products being used.

#### **USE DIRECTIONS ON ALMOND AND STONE FRUIT IN A DEFINED AREA OF MERCED, SAN JAQUIN, AND STANISLAUS COUNTIES OF CALIFORNIA**

The use of Flumioxazin 51% WDG in soils common in parts of Merced, San Joaquin and Stanislaus counties in California is known to have resulted in injury to almonds under drought stress conditions. These soils are characterized by having been cut or filled, high sand content, low clay content and shallow profiles. The Defined Area can be seen on the Map or by the description that follows:



- Intersection of Highway 4 and Escalon-Bellota Road at Farmington in San Joaquin County;
- Directly South on Escalon-Bellota to the Santa Fe Avenue and railroad tracks at Escalon;
- Southeast on Santa Fe Avenue down to the Merced River;
- East following the Merced River to the Merced/Mariposa County line;
- Northwest following the Merced County line through the intersection of Merced and Stanislaus County line following the Stanislaus/Tuolumne County and Calaveras County line to Highway 4;
- West on Highway 4 back to the Farmington intersection of Escalon - Bellota Road.

## **DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS, ORCHARDS, AND VINEYARDS**

### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply to ditch banks.

Flumioxazin 51% WDG, when used as directed, can be used on farms, orchards and vineyards for non-selective vegetation control to maintain bare ground on non-crop areas that must be kept weed free. Follow all applicable directions as outlined above under “USE INFORMATION”.

Flumioxazin 51% WDG offers residual and post-emergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. Flumioxazin 51% WDG can be tank mixed with the herbicides listed in Table 14 for increased residual or post-emergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. Flumioxazin 51% WDG rates of 6 - 12 oz./A are required to provide residual control of the weeds listed in Table 10.

### **Pre-Emergence Application**

Apply 6 - 12 oz. (0.188 - 0.38 lb. a.i./A) of Flumioxazin 51% WDG per broadcast acre as a pre-emergence application. Make pre-emergence (to weed emergence) applications of Flumioxazin 51% WDG to a weed-free soil surface. Pre-emergence applications of Flumioxazin 51% WDG must be completed prior to weed emergence. Moisture is necessary to activate Flumioxazin 51% WDG on soil for residual weed control. Dry weather following application of Flumioxazin 51% WDG may reduce effectiveness. However, when adequate moisture is received after dry conditions, Flumioxazin 51% WDG will control susceptible germinating weeds.



### Post-Emergence Application

Apply 6 - 12 oz. (0.188 - 0.38 lb. a.i./A) of Flumioxazin 51% WDG per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt./A crop oil concentrate). The addition of an adjuvant enhances Flumioxazin 51% WDG activity on emerged weeds. Thorough spray coverage is necessary to maximize the post-emergence activity of Flumioxazin 51% WDG. Emerged weeds are controlled post-emergence with Flumioxazin 51% WDG, however, translocation of Flumioxazin 51% WDG within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective post-emergence weed control with Flumioxazin 51% WDG occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Use a tank mix partner in combination with Flumioxazin 51% WDG for the post-emergence control of weeds larger than 2 inches. Tank mix partners are listed in Table 14.

**IMPORTANT:** Completely read and follow the label of any potential tank mix partner with Flumioxazin 51% WDG. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

**Table 14. Tank Mix Combinations to Maintain Bare Ground on Non-Crop Areas**

Glyphosate	2,4-D	Rely	paraquat
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### STORAGE AND DISPOSAL

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

#### PESTICIDE STORAGE

Keep pesticide in original container. Store in a cool, dry, secure place. Do not put formulation or dilute spray solution into food or drink containers. Do not contaminate food or foodstuffs. Do not store or transport near feed or food. Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night 1-877-250-9291.

#### PESTICIDE DISPOSAL

Wastes resulting from the use of this product may 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. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Then offer for recycling, if available or puncture and dispose of in a sanitary landfill.

## WARRANTY AND DISCLAIMER STATEMENT

**NOTICE:** Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RedEagle International LLC. To the extent allowable under State law, all such risks shall be assumed by the user or buyer.

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**LIMITATIONS OF LIABILITY:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT REDEAGLE INTERNATIONAL LLC'S ELECTION, THE REPLACEMENT OF PRODUCT.

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Surflan is a registered trademark of United Phosphorus, Inc.



# Flumioxazin 51% WDG

## Herbicide for control and suppression of weeds in:

Alfalfa, Asparagus, Bushberries, Celery, Chickpea, Cotton, Dry Beans, Field Corn, Field Pea, Flax, Garlic, Grape, Hops, Lentils, Mint, Nut Trees (including pistachio), Onion (Dry bulb), Olive, Peanut, Pome Fruit, Pomegranate, Potato, Soybean, Stone Fruit, Strawberry, Sugarcane, Sunflower, Safflower, Sweet Potato, Wheat, Transplanted Melons, Pepper and Tomato Beds, Non-Bearing Fruit Trees, Fallow Land, Bare Ground on Non-Crop Areas of Farms, Orchards, and Vineyards

Active Ingredient:	By Wt.
Flumioxazin*	51%
Other Ingredients:	49%
Total:	100%

\*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

### KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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

#### FIRST AID

IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
IF INHALED:	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
IF IN EYES:	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
IF SWALLOWED:	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal) call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: **1-800-424-9300**.

Manufactured For: edEagle International LLC  
5143 S. Lakeland Dr., Suite 4 Lakeland, FL 33813

EPA Reg. No.: 85678-34  
EPA Est. No.: 84662-CHN-001  
Net Contents: 5 pounds