



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

279-3642

Date of Issuance:

5/14/21

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

F4412-1

Name and Address of Registrant (include ZIP Code):

Paula Bodey  
FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Cynthia Giles-Parker, Chief  
Fungicide, Registration Division (7505P)

Date:

5/14/21

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 279-3642.”
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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

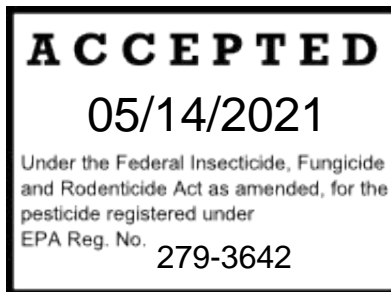
If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 08/30/2018
- Alternate CSF 1 dated 08/30/2018

If you have any questions, please contact Marcel Howard by phone at (703-305-6784), or via email at [howard.marcel@epa.gov](mailto:howard.marcel@epa.gov)

Enclosure stamped “accepted” label

F 4412-1  
EPA Reg. No. 279-  
Lcode 4118



[Optional text appears in brackets]

AZOXYSTROBIN	Group	11	Fungicide
FLUINDAPYR	Group	7	Fungicide
FLUTRIAFOL	Group	3	Fungicide

## F4412-1

{Alternate Brand Name: }

{When an alternate brand name is used, it will also be used in the body of the label.}

For use on corn (field corn, field corn grown for seed, popcorn and sweet corn), grain sorghum, wheat, triticale, and barley.

### ACTIVE INGREDIENTS:

Azoxystrobin: methyl (E)-2-[2-[6-(2-cyanophenoxy) pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate*	15.7%
Fluindapyr	10.5%
Flutriafol	15.7%
OTHER INGREDIENTS:	58.1%
TOTAL:	100.0%

Contains 1 pounds per gallon of the active ingredient fluindapyr, 1.5 pounds per gallon of the active ingredient flutriafol, and 1.5 pounds per gallon of the active ingredient azoxystrobin.

Suspension Concentrate.

Keep Out of Reach of Children  
**CAUTION / PRECAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-800- 331-3148
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– OR –

For MEDICAL EMERGENCY 1-866-331-3148	For SPILLS CHEMTREC 1-800-424-9300
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Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

**Note to PM**, the following bracketed statements are individually optional depending on the packaging configuration and whether a booklet label design is used:

- a.[See First Aid statement on back [label] [panel] [of booklet]].
- b.[See additional precautionary statements and Directions for Use in booklet.]
- c.[Read the entire label before using this product.]
- d.[See First Aid, Precautionary Statements, and Directions for Use on individual packages.]

EPA Reg. No. 279-

EPA Est. No. \_\_\_\_\_

Net Contents: \_\_\_\_\_

Sold by:  
FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104

[ *placeholder* is a registered trademark of FMC]

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Caution.** Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### FIRST AID

**If swallowed:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**If on skin:**

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

**If in eyes:**

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

#### Hotline Number

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

**Note to Physician:** No specific antidote. Treat symptomatically.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and all other handlers must wear:** long-sleeved shirt and long pants, chemical-resistant gloves of one of the following types; Barrier Laminate, Butyl Rubber  $\geq$  14 mils, Nitrite Rubber  $\geq$  14 mils, Neoprene Rubber  $\geq$  14 mils, Polyvinyl Chloride (PVC)  $\geq$  14 mils, and Viton  $\geq$  14 mils., and shoes plus socks.

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

### ENGINEERING CONTROLS STATEMENT

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

### **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. Remove PPE immediately after handling this product.

Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **ENVIRONMENTAL HAZARDS**

This formulated product is toxic to fish, mammals, and aquatic invertebrates.

Azoxystrobin and flutriafol can be persistent for several months or longer. For terrestrial uses; Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and run off may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This product is not acutely toxic to pollinators; however, chronic exposure to the product through pollen and nectar may cause risk to pollinators. Protect pollinators by following label directions intended to limit exposure.

Ground Water Advisory: Azoxystrobin, a degradate of azoxystrobin, and flutriafol are known to leach through soil to groundwater under certain conditions as a result of label use. These chemicals may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

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

Notify State and/or Federal authorities and FMC immediately if you observe any adverse environmental effects due to use of this product.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONARY STATEMENTS ON THIS LABEL MAY RESULT IN POOR DISEASE CONTROL, CROP INJURY AND/OR ILLEGAL RESIDUES.

[Note to Reviewer: Below is optional state specific language.]

[Optional language for CA: In California, this product may only be applied to fields that are not irrigated, or are irrigated using pressurized irrigation methods such as macro-sprinkler, micro-sprinkler, or drip systems.]

[Optional language for NY: Not for sale, distribution, or use in Nassau or Suffolk Counties of New York State.]

[Optional language for PA: Use of this product through airblast application equipment is prohibited in the following townships and boroughs of Erie County, Pennsylvania: North East, Harborcreek, Lawrence Park, Erie, Presque Isle, MillCreek, Fairview, Girard and Springfield. his prohibition is intended to help eliminate phytotoxicity problems with apples observed in this geographic location.]

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers 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). The REI for each crop is located in the use directions for each crop.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is: coveralls, chemical resistant gloves, and shoes plus socks.

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store unused product in original container in a cool, dry, secure area.

**Pesticide Disposal:** Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

### Container Handling:

**Nonrefillable container.** [equal to or less than 5 gallons]

Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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  $\frac{1}{4}$  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 2 more times.

**Nonrefillable container.** [greater than 5 gallons] [and less than 260 gallons]

Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse or pressure rinse as follows:

Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank and store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

*{Note to PM, IBC's may be nonrefillable or refillable, the container handling section will state either Nonrefillable or Refillable.}*

**Nonrefillable container.** {or}

**Refillable container.**



**Bottom discharge IBC.**

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

## PRODUCT DIRECTIONS

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

### **Product Restrictions:**

Greenhouses: Not for use in greenhouses.

### **Chemigation:**

#### **Application through Irrigation Systems (Chemigation):**

Apply 4412-1 through irrigation to crops at rates and timings specified in this label. Chemical tank and injector system must be thoroughly cleaned before and after use. Flush system with clean water.

**Sprinkler Irrigation:** Apply this product through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler or hand move irrigation systems. Do not apply this product through any other type of irrigation system except as specified on this label.

With Center Pivot irrigation equipment, use 4412-1 only with equipment with drive systems that provide uniform water distribution. Do not use end guns for chemigation due to the non-uniform application pattern.

Add 4412-1 to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. Maintain agitation during the entire application period.

For continuous-move irrigation systems, apply the labeled rate for that crop in ½ acre-inch or less per acre. For stationary or non-continuous moving systems, inject F4412-1 spray mixture during the last 20-30 minutes of the set.

Do not apply when winds are greater than 10-15 mph to avoid drift or wind skips. Do not apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Thorough coverage of foliage is required for good control.

If you have questions about calibration you should contact a State Extension Service specialist, equipment manufacturer or other expert.

#### **Operating Requirements for Application through Irrigation Systems:**

1. Do not use chemigation when conditions are favorable for drift to non-target areas.
2. To prevent water-source contamination from backflow, a functional check valve, vacuum relief valve, and low-pressure drain should be located on the irrigation pipeline.

3. To prevent backflow back toward the injection pump, the pesticide injection pipeline must be equipped with a functional, automatic, quick-closing check valve.
4. To prevent fluid from being withdrawn from the supply tank when the irrigation system is shut down, the pesticide injection pipeline should also be equipped with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock.
5. The system must also contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops and a functional pressure switch to stop the pump motor when water pressure decreases to a point at which pesticide distribution is adversely affected.
6. A metering pump, constructed of materials compatible with pesticides and capable of being fitted with a system interlock, such as a positive displacement injection pump (e.g., a diaphragm pump), must be included in the system.
7. A knowledgeable person responsible for the chemigation system should shut the system down and turn the irrigation water off, ensuring enough time for the pesticide to be flushed through all lines and nozzles.
8. No irrigation system, including those in greenhouses, used to distribute pesticides can be connected to a public water source unless safety measures and devices prescribed in the pesticide label for such connection are in place.

**Specific Instructions for Public Water Systems:**

1. Public water system means a system that provides piped water for human consumption if the 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. All measures and devices listed in the above section, "Operating Requirements for Application through Irrigation Systems", must be operational for connection to a public water system.
3. Additionally, chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) 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 must be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

**Crop Rotation:** Fields treated with F4412-1 may be planted to the following crops and plant back intervals:

Crop	Plant back Interval
Barley; field corn; field corn grown for seed; sweet corn; popcorn; grain sorghum; tree nuts; triticale; or wheat	Immediately
Alfalfa; cotton; cucurbits; fruiting vegetables; grapes; hops; Brassica leafy vegetables crop group 5; leafy vegetables, except Brassica, crop group 4; peanut; pome fruit; rice; soybean; stone fruit; strawberry; sugar beet; tomato	12 months
All other crops	Prohibited

**Compatibility Jar Test:** F4412-1 is compatible with most products, however not all combinations have been tested. Use the following compatibility jar test to ensure physical compatibility.

Using a quart jar, add the proportionate amounts of the products to approximately one quart of water with agitation. Add wettable powders and water dispersible granular products first, next liquid flowables, then emulsifiable concentrates, and last liquid soluble products. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding products to the spray tank. Use tank mix combinations on a small number of plants before treating larger areas. When tank mixing, follow more restrictive labeling of any tank mix partner. Do not tank mix with any product that contains a prohibition on tank mixing.

**Use of Adjuvants:** An adjuvant may be used with F4412-1 unless otherwise specified in the crop use directions. F4412-1 is compatible with most products, however not all have been tested. Use the compatibility jar test to ensure physical compatibility.

**Tank Mixing:** F4412-1 may be tank mixed with other fungicides, herbicides, insecticides, and/or other additives unless prohibited on the label of the tank mix partner. Although F4412-1 is compatible with most products, not all combinations have been tested. Use the compatibility jar test to ensure physical compatibility. Before applying any tank mixture not specifically recommended on this label, the crop safety of the target crop should be confirmed by applying the mixture to a small area of the target crop in accordance to the label instructions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Spray Equipment/Volume:** F4412-1 should be applied in sufficient water volume to ensure thorough coverage as a broadcast foliar application for good disease control.

For ground application, apply a minimum of 10 gallons of spray solution per acre. Commonly used ground and aerial agricultural sprayers may be used to achieve thorough coverage, unless prohibited in crop directions for use. For aerial application, apply a minimum of 2 gallons of spray solution per acre for all crops.

**Resistance Management:** F4412-1 is a mixture of three different modes of action for optimal management of isolates which may have reduced sensitivity to any individual mode of action. Fluindapyr is a member of FRAC group 7 which inhibits succinate dehydrogenase (SDHI). Flutriafol, a member of FRAC group 3, is a demethylation inhibitor (DMI) and azoxystrobin, a member of FRAC group 11, is a member of the strobilurin class that inhibits the Qo site (QoI).

Repeated use of fungicides in the same FRAC group for a targeted disease may lead to the selection of resistant fungal strains and result in reduced disease control. To reduce selection pressure and maintain good performance of F4412-1, do not exceed the number of applications specified in the crop use directions for each individual crop or crop group. F4412-1 should be used preventively (i.e. before disease occurs). For assistance on a particular crop and disease control situation, consult your local agricultural dealer, consultant, applicator, or state extension personnel for specific practices or recommendations in your area.

**Resistance Management Advisory:** In addition to the above requirements for the use of F4412-1, additional resistance management techniques are recommended to maintain the longevity of F4412-1 and other fungicides in FRAC groups 3, 7, and 11.

1. Use integrated pest management techniques to reduce overall disease pressure.
2. If tank mixed with a partner from a different FRAC group, use each partner at a rate that gives effective disease control when used individually. Rotate to products that have alternate modes of action (i.e. are **not** included in FRAC groups 3, 7, or 11).

**High Disease Pressure:** Where a range is given, use the higher rate of F4412-1 and/or reduced spray interval when disease pressure is high and/or conditions are favorable for disease development.

**Phytotoxicity to Apples:** Any product containing azoxystrobin (including F4412-1) is extremely phytotoxic to certain apple and crabapple varieties. Extreme caution must be used to prevent injury to apple trees (and apple fruit) from spray drift. AVOID SPRAY DRIFT that may reach apple trees. See Spray Drift Management section in this label for ways to reduce spray drift or contact your State extension agent for spray drift prevention guidelines in your area.

Even trace amounts of azoxystrobin may cause phytotoxicity to certain apple and crabapple varieties. DO NOT use spray equipment which has been previously used to apply azoxystrobin to spray apple trees.

THE APPLICATOR AND GROWER ARE RESPONSIBLE FOR SPRAY DRIFT MANAGEMENT.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Airblast Applications:**

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

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

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy and have minimal bounce.
- Applicators are required to use a Medium to Coarse droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators are required to use a Medium to Coarse droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.
- Do not apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- Volume - Increasing the spray volume so that larger droplets are produced will

reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **BOOM HEIGHT – Ground Boom**

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

### **SHIELDED SPRAYERS**

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

### **TEMPERATURE AND HUMIDITY**

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

### **TEMPERATURE INVERSIONS**

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

### **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **BOOMLESS GROUND APPLICATIONS**

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

### **HANDHELD TECHNOLOGY APPLICATIONS:**

- Take precautions to minimize spray drift.

### RATE EQUIVALENCY TABLE

Product rate fl oz/A 4 lb/gal	Total Active Ingredient Rate (lb ai/A)	Equivalent fluindapyr Active Ingredient Rate (lb ai/A)	Equivalent flutriafol Active Ingredient Rate (lb ai/A)	Equivalent azoxystrobin Active Ingredient Rate (lb ai/A)
5.0	0.156	0.039	0.059	0.059
6.0	0.188	0.047	0.07	0.07
7.0	0.219	0.055	0.082	0.082
8.0	0.250	0.063	0.094	0.094
9.0	0.281	0.07	0.105	0.105



## CROP USE DIRECTIONS

### Use Directions for Corn (Field Corn, Field Corn Grown for Seed, Sweet Corn, and Popcorn)

Diseases	Product Rate (floz/A)	Application Directions	Application Interval (Days)
Diplodia ear rot and stalk rot ( <i>Stenocarpella macrospora</i> , <i>Stenocarpella maydis</i> )  Eyespot ( <i>Kabatiella zeae</i> )  Anthracnose leaf blight ( <i>Colletotrichum graminicola</i> )  Gray leaf spot ( <i>Cercospora zeae-maydis</i> )  Southern rust ( <i>Puccinia polysora</i> )  Common rust ( <i>Puccinia sorghi</i> )  Northern corn leaf blight ( <i>Exserohilum turcicum</i> )  Southern corn leaf blight ( <i>Bipolaris maydis</i> )  Northern corn leaf spot ( <i>Bipolaris zeicola</i> )  Physoderma brown spot ( <i>Physoderma maydis</i> )	7 to 9	Apply by aerial or ground application or chemigation in a protective spray schedule or when weather conditions are favorable for disease development. Apply from onset of disease up through R4 growth stage on corn. A repeat application may be made 10-14 days later. When disease pressure is high, use the higher rate and shorter interval.  For management of fungal pathogen resistance development, do not make more than 2 sequential applications per year before alternating to another fungicide from a FRAC group different from groups 3, 7, and 11.	10 to 14

**Restrictions:**

- Do not apply to sweet corn by mechanically pressurized handgun
- No single application may exceed 9 fl oz of product/A.
- Do not apply more than 2 applications per year.
- Do not apply more than 18 fl oz of product/A per year.
- Do not apply more than 0.228 lb ai of flutriafol/A per year.
- Do not apply more than 0.27 lb ai of fluindapyr/A per year.
- Do not apply more than 2.0 lb ai of azoxystrobin/A per year
- Do not use an adjuvant after the V8 stage and prior to the VT stage of corn. An adjuvant may be used at any other growth stage.
- Restricted Entry Interval (REI): The REI for detasselling field corn and popcorn grown for seed and for hand harvesting and detasselling sweet corn is 14 days. The REI for all other activities is 12 hours.
- Preharvest Interval: The PHI is 7 days of harvest for forage, and 30 days for stover and grain of field corn and popcorn, and 14 days for sweet corn.

**Use Directions for Wheat (Spring and Winter), Triticale, and Barley**

Diseases	Product Rate (floz/A)	Application Directions	Application Interval (Days)
Leaf rust ( <i>Puccinia triticina</i> , <i>P. hordei</i> )  Stripe rust ( <i>Puccinia striiformis</i> )  Stagonospora leaf / glume blotch ( <i>Parastagonospora nodorum</i> )  Tan spot ( <i>Pyrenophora tritici-repentis</i> )  Septoria leaf blotch ( <i>Zymoseptoria tritici</i> )  Stem rust ( <i>Puccinia graminis</i> )  Net blotch ( <i>Drechslera teres</i> )  Powdery mildew ( <i>Blumeria graminis</i> )	5 to 9	Apply F4412-1(Ground, Aerial, or Chemigation) in a protective spray schedule or when weather conditions are favorable for disease development.  Apply lower rates early season.  Application of high rate at flag leaf ligule emergence protects the upper foliage during critical grain fill period.	10

**Restrictions:**

- No single application may exceed 9 fl oz of product/A.
- Do not apply more than 2 applications per year.
- Do not apply more than 18 fl oz of product/A per year.
- Do not apply more than 0.228 lb ai of flutriafol/A per year.
- Do not apply more than 0.27 lb ai of fluindapyr/A per year.
- Do not apply more than 0.40 lb ai of azoxystrobin/A per year.
- Restricted Entry Interval (REI) is 12 hours.
- Preharvest Interval: PHI is 7 days prior to harvest of forage, 15 days prior to harvest of hay, and 30 days prior to harvest of grain/straw

## Use Directions for Grain Sorghum

Diseases	Product Rate (floz/A)	Application Directions	Application Interval (Days)
Anthracnose Leaf Blight <i>(Colletotrichum graminicola)</i> Ergot <i>(Claviceps africana)</i> Gray Leaf Spot <i>(Cercospora sorghi)</i> Rust, Common <i>(Puccinia purpurea)</i>	7 to 9	Apply by ground or aerial application or by chemigation.  For Ergot make first application at, or just prior to, flowering.  For all other diseases apply preventatively or when conditions are favorable for disease development. Repeat as necessary if conditions are favorable for disease development.	10
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• No single application may exceed 9 fl oz of product/A.</li> <li>• Do not apply more than 2 applications per year.</li> <li>• Do not apply more than 18 fl oz of product/A per year.</li> <li>• Do not apply more than 0.228 lb ai of flutriafol/A per year.</li> <li>• Do not apply more than 0.27 lb ai of fluindapyr/A per year</li> <li>• Do not apply more than 0.40 lb ai of azoxystrobin/A per year.</li> <li>• Restricted Entry Interval (REI) is 12 hours.</li> <li>• Preharvest Interval: Do not apply within 30 days of harvest for stover, forage or grain.</li> </ul>			

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