

Sample Knowledge Test

- 1. Should a pilot in command (PIC) of an agricultural aircraft assist in mixing and loading the aircraft when dispensing a highly toxic chemical?
- 2. When dispensing a highly toxic chemical, what instruction would you give your flagger, if one is being used?
- 3. What are some of the symptoms of chronic toxic effect, which is the cumulative buildup of chemical in the body?
- 4. How would you dispose of containers that held a toxic poison?
- 5. Where is the nearest poison control center?
- 6. If you have mild symptoms of organophosphate poisoning, can you administer the recommended antidote yourself and continue work until an appointment with a doctor can be arranged?
- 7. What emergency action would you take if a known contamination exists?
- 8. Indicate your swath runs and procedure turns over the following field, when dispensing an herbicide that could damage plants in the congested area.

{Insert aviation safety inspector (ASI)-developed field sketch here.}

- 9. Would you apply a chemical such as a highly toxic insecticide to this field? If so, how and when?
- 10. What wind direction would be required for applying an herbicide on the crop in the following field sketch?

{Insert ASI-developed field sketch here.}

- 11. How long should records required by Title 14 of the Code of Federal Regulations (14 CFR) part 137, § 137.71 be kept?
 - a. 6 months
 - b. 12 months
 - c. Until the end of the season
 - d. Indefinitely
- 12. While airborne, before starting your first swath run, what steps would you take?
- 13. In applying insecticides for insect control adjacent to a lake, stream, or fish-stocked earth tank, what precautions must be taken?
- 14. Does your Agricultural Aircraft Operator Certificate allow you to fly under 500 feet over the top or closer than 500 feet horizontal to a farm while going to or from your base of operation and the field you are to treat?
- 15. What are the steps to be taken before you can dispense chemicals over a city, town, settlement, or other congested area?
- 16. Does your aircraft have to be inspected before you can engage in applying insecticide for insect control over a congested area?
- 17. In your procedure left turn, you misjudge your turn and roll out 300 feet to the right side of your intended course. How would you correct this error?

- 18. Your agricultural aircraft is required by part 137 to be equipped with a (circle one):
 - a. Quantity tank gauge
 - b. Shoulder harness
 - c. Stall warning horn
 - d. Boom pressure gauge
- 19. In order to dispense chemicals over a congested area, you are required by part 137 to have your aircraft equipped with which of the following:
 - a. Stall warning horn
 - b. Tank quantity gauge
 - c. Emergency dump valve or chemical jettison device
 - d. Boom pressure gauge
- 20. {Insert question about the performance characteristics of the aircraft to be flown—such as Weight and Balance (W&B)}.
- 21. What certificate or certificates have to be carried on the aircraft engaged in agricultural aircraft operations?
 - a. Registration
 - b. Facsimile of the Agricultural Aircraft Operator Certificate
 - c. Both of the above
- 22. You are flying a restricted category agricultural aircraft with a belly unit and two seats. Can you use this aircraft for other purposes than agricultural operations?
- 23. Are you required to wear a crash helmet during operations?
- 24. Describe, in detail, the dangers involved with a hot, heavy, downwind turn.
- 25. As your bank increases, what happens to your stall speed?
- 26. Have the applicant work a W&B problem for aircraft flown.
- 27. Have the applicant work at least one performance problem involving Density Altitude (DA) for aircraft flown.
- * The following are sample questions to be added to the above when dealing with Unmanned Aircraft System (UAS) operations:
- 1. Describe the performance of the aircraft within the proposed flight envelope.
- 2. How does the system respond, and what safeguards are in place to mitigate the risk of engine power loss?
- 3. Explain what happens when a failed signal input from the control station takes place.
- 4. Describe the payload equipment that will fly on board the aircraft. Describe all payload configurations that significantly change W&B, electrical loads, or flight dynamics.
- 5. Describe/explain aircraft lost link and emergency recovery procedures.
- 6. Is there a radio signal strength and/or health indicator or similar display to the pilot? How is the signal strength and health value determined, and what are the threshold values that represent a critically degraded signal?
- 7. Describe the procedure that will be used to communicate between the PIC and the visual observer (VO) when operating.

5-1735 OPERATIONAL SAFETY ISSUES WHICH MAY BE DISCUSSED WITH THE

APPLICANT. The applicant should be familiar with the following subject areas.

- **A. Contamination Protection.** The applicant should have satisfactory knowledge
- 4) The pilot must be knowledgeable about procedures to prevent contamination of the water sources if water is obtained from streams or ponds for mixing purposes. The pilot must know state and local laws concerning spillage.
- 5) The pilot should be knowledgeable about how often aircraft and spray equipment should be cleaned (e.g., daily or as often as required to remove accumulation of pesticide residue). When aircraft are cleaned, the pilot should be aware of state and local laws concerning drainage into a sewer, ditch, pond, stream, or other body of water, or the location of approved disposal sites.
- **B.** Container Disposal. The applicant should be knowledgeable about recommended methods for disposing of used pesticide containers. The pesticide label contains Environmental Protection Agency (EPA)-approved methods for disposal. State and local laws, however, may require additional precautions, and it would be useful for the inspector to be aware of them. Local extension agents or an EPA office can be of assistance in this area.
- C. Economic Poison Labeling. Economic poisons manufactured for interstate use are required by EPA regulations to be registered with that department. Those poisons must be labeled showing the brand name, active ingredients, inert ingredients, directions for use, warning, net contents, and name and address of manufacturer or registrant. The label normally contains other detailed instructions concerning the effects on plants, animals, and persons. Therefore, when required by § 137.19(e), the applicant must possess a satisfactory knowledge concerning the general effects and precautions to be observed as described on the label of the economic poisons normally used in the area where the applicant conducts operations.
- **D. Detecting Contamination.** The requirements contained in § 137.19(e)(1)(iv) should not be interpreted as FAA encouragement or endorsement of self-diagnosis. Rather, it is a requirement that the agricultural pilot possess sufficient knowledge of the primary symptoms of poisoning to motivate seeking immediate professional medical attention when an element of doubt exists concerning contamination.
- **E. Decontamination Steps.** Decontamination should be accomplished in accordance with the manufacturer's labeling and instructions.
- **F. Poison Control Centers.** Refer to the most recent issue of the Directory of Poison Control Centers, a publication from the U.S. Department of Health and Human Services (HHS), for the location of poison control centers in the United States. A local HHS office may also have a copy. In addition, several chemical hotlines are available for the use of persons handling chemicals. Inspectors may wish to provide these names and telephone numbers to agricultural operators who do not already have them.
- 1) The National Pesticide Telecommunications Network operates a toll-free hotline, 1-800-858-PEST (7378), which is staffed Monday through Friday, from 8:00 a.m. to 12:00 p.m., Pacific Time (PT). Qualified personnel are available to answer questions about pesticides. Information can be obtained about treatment by a physician after contamination or suspected contamination. The location of the nearest poison control center, cleanup of a pesticide spill, and other related information is also available on the Internet at http://npic.orst.edu/index.html

- 2) Chemical Transportation Emergency Center (CHEMTREC) offers emergency phones service 24 hours a day, 7 days a week. In the event of an incident or accident involving pesticides, CHEMTREC is able to provide emergency response information pertaining to chemical spills. In emergency situations, call 1-800-424-9300. For non-emergency, general information or referrals, call 1-800-262-8200. Nonemergency telephones are staffed Monday through Friday from 9:00 a.m. to 5:30 p.m. Eastern Time (ET). They also maintain a website at http://www.chemtrec.com.
- **G.** Preflight. In addition to the preflight action required by 14 CFR part 91, § 91.103, the following steps should be taken before starting agricultural aircraft operations:regarding the methods used to safeguard the pilot against contamination and the safe handling of economic poisons that the pilot dispenses. (An explanation of the relative toxicity of economic poisons' lethal doses for 50 percent of test subjects (LD₅₀) is included in Volume 3, Chapter 52, Section 1.)
- 1) An aerial applicator pilot who is engaged in the actual application of economic poisons should be knowledgeable of the hazards of the pilot's mixing or loading highly toxic poisons. Special emphasis should be placed on this job function when the economic poison is being used in an undiluted form.
- 2) The pilot should be able to conduct a ground crew briefing concerning economic poisons and the need to wear protective clothing. such as rubber gloves, apron, boots, and a respirator, when handling materials that require them. (If a respirator is required, it should be the type which protects the wearer against the particular pesticide being handled.) The pilot should also be able to brief flaggers, when used, concerning the potential hazard of the pesticide being dispensed, and should indicate that they be equipped with appropriate protective equipment.
- 3) Pilots should also be aware that persons working closely with or handling pesticides should change clothes and bathe at the end of the operation or immediately if pesticide gets on their skin. Clean work clothes should be worn daily.
- **H.** Aerial Survey of the Area to Be Treated. When the pilot reaches the vicinity of the target area, he or she should carefully inspect the area from the air. A UAS operator should carefully inspect the area from the ground prior to aerial application.
- 1) The area immediately surrounding the working area should be surveyed to determine that the material dispensed will not cause damage to persons or property on the surface. The engine and propeller noise emitted as the pilot executes a pullup and turnaround over these areas may result in damage to some enterprises. The adjacent area should also be investigated for fish ponds, lakes, and streams, because certain economic poisons may have a lethal effect upon fish and wildlife.

- 2) The pilot should make a determination if the area to be treated could be considered to be a congested area. He or she should be familiar with the provisions of § 137.51 for operating over a congested area.
- I. Aircraft Operating Limitations. The pilot must have adequate knowledge of operating limitations for the aircraft to be used in accordance with the applicable requirements contained in § 91.9, and for UAS operations, any applicable regulations in part 107 and/or the operator's exemption, waiver, or CoA. Special emphasis should be placed on W&B information. If the applicant conducts operations using helicopters, the applicant should understand that the height/velocity diagrams do not provide information for weights above the maximum certificated gross weight. The applicant must also be familiar with aircraft performance capability, provided performance data have been established for the aircraft to be used. Knowledge about performance shall include such items as:
- **J.** Safe Application Procedures. The applicant should be knowledgeable about safe flight and safe application procedures during agricultural operations.
- 1) The pilot should be familiar with the hazards associated with dispensing materials that may be flammable.
- 2) When conducting operations over sloping terrain, caution should be exercised relative to the direction of swath runs. Flying up the slope may result in stalling the aircraft before reaching the end of the swath run, or contribute to an inadvertent stall during the pullup or turnaround.
- 3) Pullups and turnarounds are normally made on the downwind side of the centerline of the swath run. However, unfavorable terrain, wires, guy wires, poles, trees, or other obstructions may require pullups and turnarounds to be made on the upwind side. If a no-wind condition exists, it is usually the best procedure to make the turn into an open area (if available) in the event of power loss or engine failure.
- **4)** The aerial applicator pilot should avoid diversion of attention during a swath run. Not doing so may result in allowing the aircraft to fly into the ground or other obstruction.
- 5) The aerial applicator pilot may have a tendency to apply forward pressure on the elevator control or cyclic control (on a helicopter) when flying under wires. He or she should avoid such a tendency because once any part of the structure of the aircraft (wheels, skids) becomes entangled in crop foliage, it may be difficult, if not impossible, to prevent the aircraft from being pulled to the ground. The vertical fin may also contact the wires as the aircraft passes underneath them. Pilots of airplanes, and especially helicopter pilots, may choose not to fly under wires and dress-up the field parallel to the wires.

- 6) When two or more aircraft (manned aircraft or UA) are used in applying chemicals to a field, the pilots conducting the operations should be encouraged to make arrangements between themselves concerning who performs the cleanup swaths or trim passes, when applicable. Mid-air collisions have occurred between aircraft conducting team operations when such coordination has not been accomplished.
- 7) When using Global Positioning System (GPS) swath marking equipment, extreme caution should be used to prevent diverting attention away from the task of flying the airplane safely. The pilot should make it a practice not to make adjustments to the computer while in the swath run. The pilot should plan the turn using only reference to the light bar instead of fixating on it.
- **K. Night Operations.** If the operator conducts night operations, the pilot should have knowledge of night operations. See Volume 6, Chapter 6, Section 1 for test areas. For UAS that weigh 55 pounds or more, refer to the C&L section of the exemption. For UAS that weigh less than 55 pounds, refer to the applicable sections of part 107 and any associated waiver.
- 55 pounds or more, check the C&L of the operator's exemption. If the aircraft is a UA that weighs less than 55 pounds, check the applicable sections of part 107.
- 1) N-number matches that on the registration certificate, or for noncertificated UAS, have the operator provide the registration number (FA number) and serial number;
- 2) Data plate information, serial number, airworthiness certificate, and registration certificate match each other and aircraft registry records; and
- 3) Agricultural Aircraft Operator Certificate facsimile is on board, if knowledge and skill test is not conducted as part of initial operator certification, unless otherwise exempted.
- **G**. Aircraft Conformity. Inspect aircraft for compliance with §§ 137.19(d), 137.31(b), and 137.33(a) and (b) (Airworthiness), unless otherwise exempted or allowed under part 107.
- 1) Aircraft maintenance documents reflect that all required inspections have been accomplished, and
 - 2) Airworthiness Directives (AD) are complied with.
- H. Skill Test. Conduct the skill portion of the test (§ 137.19(e)(2)). The applicant is to be briefed and evaluated on piloting skill and operational judgment in the following, unless otherwise exempted, as not all required skills are applicable to UAS. If the test is to be conducted using fixed-wing aircraft, § 137.19(e)(2)(i)–(v) must be covered. If the test is to be conducted using a rotorcraft, § 137.19(e)(2)(ii)–(vi) must be covered. If the pilot will be operating both fixed-wing and rotorcraft, all of § 137.19(e)(2) must be covered.

- 1) Ground crew coordination and loading procedures.
- 2) Engine start, warm-up, and taxi procedures.
- 3) Short field and soft field takeoffs (airplanes and gyroplanes only), directional control, lift-off, and climb:
 - One soft field takeoff and climb; and
 - One short field takeoff and maximum performance climb.
- 4) Approaches to the working area:
 - Satisfactory aerial (or ground UAS) survey of area for obstructions; and
 - Proper method of beginning operations; normally, starting operation crosswind on downwind side of field.



Mefentrifluconazole	Group	3	Fungicide
Pyraclostrobin	Group	11	Fungicide

SPECIMEN

Veltyma

Fungicide

[†] For disease control and plant health in beans and peas, citrus, corn, fruiting vegetables, grasses, grass grown for seed, non-grass forages, oilseeds, peanut, rapeseed (canola), sorghum, soybean, sugar beet, sugarcane, and tuberous and corm vegetables (including potato)

Active Ingredients*:

metentrifluconazole: 2-[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]-1-	
(1H-1,2,4-triazole-1-yl)propan-2-ol	17.56%
pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-	
yl]oxy]methyl]phenyl]methoxy-, methyl ester)	17.56%
Other Ingredients:	64.88%
Total:	00.00%

^{*} Veltyma™ fungicide contains 1.67 lbs mefentrifluconazole and 1.67 lbs pyraclostrobin per gallon.

EPA Reg. No. 7969-409

EPA Est. No.

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.)

See full label for complete First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation 26 Davis Drive, Research Triangle Park, NC 27709

[†]See **Detailed Use Directions** for detailed crop listings.

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 do so by a poison control center or doctor. DO NOT give anything by mouth to an unconscious person. 				
If on skin or clothing	 Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. 				
If inhaled	 Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice. 				
If in eyes	 Hold eyes open and rinse slowly and gently with water for 15 to 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 BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long sleeved shirt, long pants, and shoes plus socks
- Waterproof or chemical-resistant gloves (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton \geq 14 mils)

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

Engineering Controls

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 thoroughly with soap and water after handling and 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 clothing/PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

This product may impact surface water quality because of runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater.

Groundwater Advisory

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

Surface Water Advisory

This product is classified as having high potential for reaching aquatic sediment via runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied

and surface water features such as ponds, streams, and springs will reduce the potential loading of this active ingredient or its degradates from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the user's possession during application. Read the entire **Directions For Use** and **Conditions of Sale and Warranty** before using this product.

Use Restrictions

- DO NOT use in greenhouse production.
- 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.
- **Veltyma**TM **fungicide** is not for sale, distribution, or use in **Nassau and Suffolk counties in New York State**.

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), restricted-entry interval, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

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

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

- Coveralls
- Chemical-resistant gloves (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils)
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed.

Pesticide Disposal

Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

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

(continued)

STORAGE AND DISPOSAL (continued)

Container Handling (continued)

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

• CHEMTREC 1-800-424-9300

• BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

VeltymaTM fungicide is a broad-spectrum fungicide containing the active ingredients mefentrifluconazole and pyraclostrobin for use in beans and peas, citrus, corn, fruiting vegetables, grasses, grass grown for seed, nongrass forages, oilseeds, peanut, rapeseed (canola), sorghum, soybean, sugar beet, sugarcane, and tuberous and corm vegetables (including potato). For optimum disease control, apply **VeltymaTM fungicide** in a regularly scheduled protective spray program and use in a rotation program with **non-Group 3** and **non-Group 11** fungicides.

Preventive applications of **VeltymaTM fungicide** optimize disease control, resulting in improved plant health. Timed applications, as specified in the **Detailed Use Directions** of this label, optimize disease control and can have positive effects on plant physiology, including improved stress tolerance and/or improved growth efficiency. This overall increased plant health may result in an improvement in crop growth, crop quality and/or crop yields. These results may vary according to factors such as the crop, crop genetics, application timing or environment.

Information regarding the contents and levels of metals in this product is available on the internet at http://www.aapfco.org/metals.htm.

Mode of Action

Mefentrifluconazole, the active ingredient in **VeltymaTM fungicide** inhibits the demethylation step of sterol biosynthesis (DMI) which disrupts cell membrane synthesis and is classified by FRAC as a **Group 3** fungicide. Pyraclostrobin belongs to the group of respiration inhibitors classified by the US EPA and Canada PMRA as Quinone Outside Inhibitors (QoI) which are classified by FRAC as **Group 11** fungicides.

Resistance Management

For resistance management, please note that **VeltymaTM fungicide** contains both a **Group 3** (mefentrifluconazole) and **Group 11** (pyraclostrobin) fungicide. Any fungal population may contain individuals naturally resistant to **VeltymaTM fungicide** and other **Group 3** or **Group 11** fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of VeltymaTM fungicide or other Group 3 or Group 11 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.

- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treatment area for lack of biological efficacy that might indicate possible resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistancemanagement and/or Integrated Pest Management (IPM) recommendations for specific crops and pathogens.
- For further information or to report suspected resistance consult your local BASF representative, extension specialist, or certified crop advisor.

Application Instructions

- VeltymaTM fungicide can be applied by ground or air, and through field sprinkler irrigation (chemigation) systems.
- Veltyma[™] fungicide can be applied through field sprinkler irrigation (chemigation) systems except on sugarcane.
- **DO NOT** apply this product to sugarcane through any type of irrigation system.
- Thorough and uniform coverage is required for optimum performance.
- Application equipment, including injection systems, must be cleaned thoroughly before and after applying this product, particularly if a product with the potential to injure crops was used before application of **VeltymaTM fungicide**. Flush system with clean water.

Ground Application

- Use a minimum of 10 gallons of water per acre to ensure uniform and thorough canopy penetration and coverage of foliage, bloom, and fruit.
- Complete coverage of the stem all the way down to soil level is required for suppression of soilborne diseases of the stem.

Veltyma[™] fungicide label rates specify the amount of product to apply uniformly over an acre of ground on a broadcast basis. Veltyma[™] fungicide may be banded over rows or plant beds with alleys or row middles left unsprayed. For these uses, reduce rates of Veltyma[™] fungicide in proportion to the area sprayed to avoid application at higher than labeled use rates.

Calculate the broadcast-equivalent rate for banded application:

sprayed bed width	+	row middles width	=	total row width
sprayed bed width in inches	X	broadcast rate	_	band rate
total row width in inches	^	per acre	_	per acre

EXAMPLE: Banded application to 45-inch plant beds separated by 15-inches of unsprayed row middles based on a broadcast rate of 10 ozs/A:

45 inches sprayed bed width	+	15 inches unsprayed row middles width	=	60 inches total row width
45 inches sprayed bed width	X	10 fl ozs Veltyma™	_	7.5 fl ozs Veltyma ™
60 inches total row width	^	fungicide per acre	_	fungicide per acre

Aerial Application

- For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds.
- Minimum spray volume per acre: 2 gallons of spray solution per acre, unless otherwise specified in the Detailed Use Directions section.
- DO NOT apply in spray solutions less than 50% water by volume. Reduced spray volumes used in aerial application may result in physical incompatibility, reduced disease control, or crop injury particularly when mixed with other products.

Field Sprinkler Irrigation (Chemigation) Application

- Apply this product only through field sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system.
- **DO NOT** apply this product to sugarcane through any type of irrigation system.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.
- Add Veltyma[™] fungicide to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product-water mixture continuously, applying the labeled rate per acre for that crop. DO NOT apply more than 1/2 inch (13,577 gallons) per acre. In

stationary or non-continuous moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set, allowing enough time to apply the crop-specific labeled rate per acre through the sprinkler heads. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Uniform and thorough coverage of foliage is required for control. Maintain constant agitation throughout mixing and application.

- If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts.
- The 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials compatible with pesticides and capable of being fitted with a system interlock.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.
 A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Specific Instructions for Public Water Systems

 Public water system means a system for the provision to the public of piped water for human consumption if such 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 public water systems must contain a functional, reduced-pressure zone, backflow 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 shall 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.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. 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.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. 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 pesticides and capable of being fitted with a system interlock.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment.

Spray Drift Management

DO NOT apply when conditions favor drift beyond the intended (target) application area. Drift-reduction measures include:

- DO NOT apply if wind speed is 15 mph or more. Use caution when applying if nontarget crops are downwind and wind is present. DO NOT apply if winds are gusty.
- 2. Apply only when the potential for drift to adjacent sensitive areas (e.g. bodies of water or nontarget crops) is minimal and when wind is blowing away from sensitive areas.
- 3. Use caution when conditions are favorable for drift (drought, high temperatures, low relative humidity).
- 4. **DO NOT** apply during a temperature inversion. Consult local weather services before applying if conditions are favorable for inversion.

Tank Mixing Other Products and Additives

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

restrictive directions for use and precautionary statements of each product in the tank mixture.

Veltyma[™] fungicide can be tank mixed with other fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives. Always follow the most restrictive label use directions. See the **Detailed Use Directions** section for additional crop specific information.

BASF has not tested all varieties and cultivars with all possible tank mix combinations and rates of additives or adjuvants. Local environmental conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or injury may result from mixing **VeltymaTM fungicide** with other products.

To minimize the likelihood of injury, before using any tank mix previously listed, test the combination on a small portion of the crop to be treated to ensure a phytotoxic response will not occur as a result of application. However, environmental variability precludes direct and consistent projection of small area test results to future use.

When an adjuvant is used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

Consult a BASF representative or local agricultural authorities for more information on use of additives or adjuvants with this product.

Adjuvant Use Limitation on Corn

Adjuvant crop damage can occur when an adjuvant is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant is used after the V8 stage and before the VT stage, the grower and the user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proved to be safe for application from the V8 to VT corn stages. Refer to the adjuvant label for specific use directions and restrictions. Always follow the most restrictive label.

Compatibility Test

Before mixing components, always perform a compatibility iar test.

- 1. Add components in the order listed in **Mixing Order** instructions.
 - For 10 gallons per acre spray volume: Start with 1 pint (2 cups) of water from the intended source at the source temperature.
 - For other spray volumes: Adjust rates accordingly.
 - **Dry product:** Add 2 teaspoons per pound of product per acre.
 - **Liquid product:** Add 1 teaspoon per pint of product per acre.
- 2. Always cap the jar and invert 10 cycles after component additions.

- 3. When the components have all been added to the jar, let the solution stand for 15 minutes.
- 4. **Evaluate** the solution for uniformity and stability. The spray solution should not have free oil on the surface, fine particles that precipitate to the bottom, or thick (clabbered) texture. **DO NOT** use any spray solution that could clog spray nozzles.

Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Except when mixing in PVA bags, maintain constant agitation during mixing and application.

- 1. **Water** Fill a thoroughly clean sprayer tank 3/4 full of clean water and begin agitation.
- 2. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 3. Products in PVA bags Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- Water-dispersible products (such as dry flowables, wettable powders, suspension concentrates including Veltyma™ fungicide, or suspo-emulsions)
 - Containers 5 gallons or less: Shake well before adding to the tank.
 - Containers more than 5 gallons: Recirculate before adding to the tank.
 - Consult a BASF representative for additional information regarding agitation and recirculation.
- 5. Water-soluble products
- 6. **Emulsifiable concentrates** (such as oil concentrates when applicable)
- 7. **Water-soluble additives** [such as ammonium sulfate (AMS) or urea ammonium nitrate (UAN) when applicable]
- 8. Remaining quantity of water

Crop Rotation Restrictions

Rotational Crops: Please see the following table for crop rotational restrictions.

Crop or Crop Group	Rotation Interval
Brassicas including broccoli, cauliflower and head cabbages (crop group 5-16) Bulb vegetables including bulb onion, spring onion and garlic (crop group 3-07) Cereals, including wheat, oats, barley, triticale, rye, rice and corn (crop group 15 and crop group 16) Cucurbits including cucumber, squash and melons (crop group 9) Fruiting vegetables including tomato, eggplant, peppers (crop group 8-10) Fresh herbs Grass and non-grass animal feeds including alfalfa and clover (crop group 17 and crop group 18) Leafy vegetables including lettuces, spinach and leafy cabbages (crop group 4-16) Legume vegetables including soybean (crop group 6 and crop group 7) Low-growing berries including strawberries (crop group 13-07G) Oilseeds including cotton, sunflower and canola (crop group 20) Peanut Root and tuber vegetables including carrot, potato, beets and sugar beet (crop group 1 and crop group 2) Stalk, stem and leaf petiole vegetables including celery and asparagus (crop group 22) Sugarcane Any other crop labeled for direct application of a product containing mefentrifluconazole	May be planted immediately following the last application
Other food and feed crops, not listed above	May not be planted in rotation

Detailed Use Directions

Labeled Crops

Foliar

• When conditions favor disease or disease pressure is high:

- Use the shorter specified interval.
- For a rate range, use the higher specified rate.
- DO NOT make more than two (2) sequential applications of Veltyma[™] fungicide before alternating to a labeled non-Group 3 or non-Group 11 fungicide, unless otherwise specified in the following crop-specific use sections.

	Use Rate Conversion	
fl ozs product/A	Ib mefentrifluconazole/A	lb pyraclostrobin/A
5	0.07	0.07
7	0.09	0.09
8	0.10	0.10
10	0.13	0.13
13.5	0.18	0.18
20	0.26	0.26
30	0.39	0.39
40.5	0.53	0.53

State-specific Restrictions - Not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

Citrus

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
Foliar	Alternaria brown spot Alternaria citri Anthracnose Colletotrichum acutatum, C. gloeosporioides			
	Blackspot Guignardia citricarpa Greasy spot	5 to 10	30	0
	Mycosphaerella citri Melanose Diaporthe citri			
	Postbloom fruit drop Colletotrichum acutatum			
	Scab Elsinoe fawcettii			

Spray Interval

- Apply before the onset of disease and on a minimum interval of 14 days.

Use Restrictions

- DO NOT apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 10 fl ozs per acre per year.
- **DO NOT** apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- DO NOT apply more than a cumulative total of 0.88 lb ai/acre/year of pyraclostrobin-containing products.
- Aerial Application DO NOT use less than 10 gallons of spray solution per acre.

Detailed Citrus (subgroups 10-10a, 10-10b and 10-10c) Crop List - calamondin; citron; citrus hybrids; grapefruit (grapefruit, Japanese summer); kumquat; lemon; lime (lime, Australian desert, Australian finger, Australian round, Brown River finger, Mount White, New Guinea wild, Russell River, sweet, Tahiti); mandarin (Mediterranean, satsuma); orange (sour, sweet, tachibana, trifoliate); pummelo; tangelo; tangerine (mandarin); tangor; uniq fruit; cultivars, varieties, and/or hybrids of these.

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
Foliar	Anthracnose Colletotrichum graminicola Eyespot Aureobasidium zeae (formerly known as Kabatiella zeae) Gray leaf spot Cercospora zeae-maydis Northern corn leaf blight Exserohilum turcicum Northern corn leaf spot Cochliobolus carbonum Physoderma brown spot Physoderma maydis Rust, common Puccinia sorghi Rust, southern Puccinia polyspora Southern corn leaf blight Bipolaris maydis	7 to 10	20 (field corn, popcorn, silage, and seed corn) 30 (sweet corn)	21
	Tar spot Phyllachora maydis Yellow leaf blight Phyllosticta maydis			

Spray Interval

- Sweet corn: Apply at 7-day to 14-day intervals.
- Field corn, Popcorn, Silage, Seed corn: Apply at 14-day intervals.
- Adjuvant Use Limitation on Corn Adjuvant crop damage can occur when an adjuvant is used after the V8 stage and before the VT stage (the VT stage is defined as when the tassel's last branch is completely visible outside the whorl). If an adjuvant is used after the V8 stage and before the VT stage, the grower and the user are responsible for contacting the adjuvant source (adjuvant distributor, retailer, or manufacturer) for advice and confirmation that the adjuvant has been tested and proved to be safe for application from the V8 to VT corn stages. Refer to the adjuvant label for specific use directions and restrictions. Always follow the most restrictive label.

(continued)

Corn

(continued)

Use Restrictions

- DO NOT apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- DO NOT make more than 3 applications at 10 fl ozs or 4 applications at 7 fl ozs per acre per year to sweet corn.
- **DO NOT** apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) to sweet corn per acre per year.
- **DO NOT** make more than 2 applications at 10 fl ozs per acre per year to corn grown for seed, field corn, and popcorn.
- **DO NOT** apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) to field corn, popcorn, and seed corn per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products corn grown for seed, field corn, and popcorn.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products to sweet corn.
- **DO NOT** apply more than a cumulative total of 1.18 lbs ai/acre/year of pyraclostrobin-containing products.

Detailed Corn Crop List - corn grown for seed, field corn, popcorn, silage, sweet corn.

Fruiting Vegetables

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Anthracnose Colletotrichum coccodes			
	Black mold Alternaria alternata	7 to 10	30	0
Foliar	Early blight Alternaria solani			
	Powdery mildew Leveillula taurica, Oidiopsis taurica			
	Septoria leaf spot Septoria lycopersici			
	Target spot Corynespora cassiicola			
	* Rhizoctonia stem rot Rhizoctonia solani			
	* Southern blight Sclerotium rolfsii			
	* Late blight Phytophthora infestans	10		

Spray Interval

- Apply before the onset of disease and on a minimum interval of 7 days.

* Suppression only

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 10 fl ozs per acre per year.
- **DO NOT** apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) per acre per year.
- DO NOT apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 1.12 lbs ai/acre/year of pyraclostrobin-containing products.

Detailed Fruiting Vegetables (crop group 8-10) Crop List - African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; non-bell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these.

Grasses

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Anthracnose Colletotrichum spp.			
	Leaf Spot/Blight <i>Bipolaris</i> spp., <i>Cochliobolus</i> spp., <i>Drechslera</i> spp., <i>Stagonospora</i> spp.			
	Net Blotch Drechslera spp., Helminthosporium spp.			
Foliar	Powdery Mildew Erysiphe spp.	7 to 10	30	0
	Purple Leaf Spot Stagonospora spp.			
	Rust Puccinia spp., Uromyces dactylidis			
	Septoria Leaf Spot Septoria spp.			
	Spray Interval	1		ı

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 10 fl ozs per acre per year.

- Apply at 14-day to 21-day intervals.

- **DO NOT** apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) per acre per year.
- DO NOT apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.73 lb ai/acre/year of pyraclostrobin-containing products.

Detailed Grasses (crop group 17) Crop List - any grass, Gramineae family (either green or cured) that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage, except sugarcane and those included in the cereal grains group.

Grass Grown for Seed

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
Foliar	Powdery mildew Erysiphe spp. Rust Puccinia spp.	7 to 10	20	0

Spray Interval

- Apply at 14-day to 21-day intervals.

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications at 10 fl ozs per acre per year.
- DO NOT apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.73 lb ai/acre/year of pyraclostrobin-containing products.

Detailed Grass Grown for Seed (crop group 17) Crop List - any grass, Gramineae family (either green or cured) that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage, except sugarcane and those included in the cereal grains group.

Legume Vegetables (crop group 6) (except soybean and edamame)

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Alternaria leaf and pod spot Alternaria spp.			
	Anthracnose <i>Colletotrichum</i> spp.			
	Ascochyta blight Ascochyta spp., Phoma exigua			
	Asian soybean rust <i>Phakopsora pachyrhizi</i>	7 to 10		
ar	Cercospora leaf spot Cercospora spp.	7 to 10	20	21
Foliar	Mycosphaerella blight Mycosphaerella spp.			
	Powdery mildew Erysiphe spp., Microsphaera diffusa			
	Rust Uromyces appendiculatus			
	* Downy mildew Peronospora spp., Phytophthora spp.	8 to 10		

Spray Interval

- Apply at 7-day to 14-day intervals.

* Suppression only

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- **DO NOT** apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.29 lb ai/acre/year of pyraclostrobin-containing products.
- Bean forage, bean hay, pea vines, and pea hay may be fed no sooner than 21 days after last application.

(continued)

Legume Vegetables (crop group 6) (except soybean and edamame) (continued)

Detailed Legume Vegetables (crop group 6) Crop List (except soybean and edamame; see **Soybean and Edamame** detailed use directions)

- broad bean (fava bean), chickpea (garbanzo bean), guar, jackbean, lablab bean, lentil, pigeon pea, sword bean.
- Lupinus spp.: grain lupin, sweet lupin, white lupin, white sweet lupin.
- **Phaseolus spp.:** field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean.
- *Vigna* spp.: adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean.
- *Pisum* spp.: dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea.

Non-grass Forages

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Anthracnose Colletotrichum trifolii			
	Common leaf spot Pseudopeziza medicaginis			
	Downy mildew Peronospora trifoliorum			14
	Leaf spot Leptosphaerulina briosiani		00	
	Powdery mildew <i>Erysiph</i> e spp.			
	Rhizoctonia blight/black patch Rhizoctonia spp.	71.40		
Foliar	Rust Phakopsora spp., Puccinia spp., Uromyces spp.	7 to 10	30	
_	Spring black stem and leaf spot Ascochyta medicaginicola			
	Stagonospora leaf spot Stagonospora meliloti			
	Stemphylium leaf spot Stemphylium spp.			
	Summer black stem and leaf spot Cercospora medicaginis			
	Yellow leaf blotch Leptotrichia medicaginis			

Spray Interval

- Apply at 14-day to 21-day intervals.

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 10 fl ozs per acre per year.
- DO NOT apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- DO NOT apply more than a cumulative total of 0.73 lb ai/acre/year of pyraclostrobin-containing products.
- **DO NOT** apply within 14 days of grazing or harvest for forage or hay.
- DO NOT use on rangeland.

Detailed Non-grass Forages (crop group 18) Crop List - alfalfa; bean, velvet; clover (*Trifolium* spp., *Melilotus* spp.); kudzu; lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk.

Oilseeds

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Alternaria leaf spot <i>Alternaria</i> spp. Blackleg <i>Leptosphaeria maculans</i>			
	Blackspot Alternaria spp.			
	Cercospora leaf spot Cercospora spp.			
	Pasmo Septoria linicola	7 to 10	20	21
Foliar	Powdery mildew Erysiphe spp.			
	Rust <i>Puccinia</i> spp., <i>Uromyces</i> spp.			
	Septoria leaf spot Septoria spp.			
	White rust Albugo tragopogonis			

Spray Interval

- Apply at 7-day to 14-day intervals.
- Blackleg: Apply at 2-leaf to 4-leaf stage.
- Blackspot: Apply at early pod development.

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications at 10 fl oz per acre per year.
- DO NOT apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- DO NOT apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.73 lb ai/acre/year of pyraclostrobin-containing products.

Detailed Oilseeds (crop group 20B) Crop List - calendula; castor oil plant; Chinese tallowtree; euphorbia; evening primrose; jojoba; niger seed; rose hip; safflower; stokes aster; sunflower; tallowwood; tea oil plant; vernonia; cultivars, varieties, and/or hybrids of these.

Peanut

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Early leaf spot Cercospora arachidicola, Passalora arachidicola Late leaf spot Cercosporidium personatum, Nothopassalora personata			
	Pepper spot Leptosphaerulina crassiasca	7 to 13.5		
	Rust Puccinia arachidis			
	Web blotch Phoma arachidicola		40.5	14
ır	Rhizoctonia limb rot, Peg rot, Pod rot Rhizoctonia solani	10 to 13.5		
Foliar	* Cylindrocladium black rot Cylindrocladium crotalaria			
	* Sclerotinia blight Sclerotinia minor	13.5		
	* Sclerotium rot, Southern blight, Southern stem rot, White mold Sclerotium rolfsii			

Spray Interval

- Early leaf spot, Late leaf spot: Apply at 14-day to 21-day intervals.
- Rhizoctonia rot, Sclerotium rot: Apply at 14-day to 28-day intervals.
- Use the higher specified rate and/or shorter specified spray interval in fields with a history of disease.

Additives and Adjuvants - **Veltyma[™] fungicide** can be used with adjuvants in peanut; however, mixes with silicone containing adjuvants may cause crop injury under certain conditions. See **Tank Mix Information** section for more information.

* Suppression only

Use Restrictions

- DO NOT apply more than 13.5 fl ozs (0.18 lb mefentrifluconazole, 0.18 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 13.5 fl ozs or 5 applications at 7 fl ozs per acre per year.
- DO NOT apply more than 40.5 fl ozs (0.54 lb mefentrifluconazole, 0.54 lb pyraclostrobin) per acre per year.
- DO NOT apply more than a cumulative total of 0.54 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.73 lb ai/acre/year of pyraclostrobin-containing products.
- DO NOT graze or harvest for forage use.

Rapeseed (canola)

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
Foliar	Blackleg Leptosphaeria maculans Blackspot Alternaria spp.	7 to 10	20	21

Spray Interval

- Apply at 14-day intervals.
- Blackleg: Apply at the 2-leaf to 6-leaf stage.
- Blackspot: Apply at early pod development.

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- DO NOT apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of pyraclostrobin-containing products.

Detailed Rapeseed (subgroup 20A) Crop List - borage; crambe; cuphea; echium; flax seed; gold of pleasure; hare's ear mustard; lesquerella; lunaria; meadowfoam; milkweed; mustard seed; oil radish; poppy seed; rapeseed, canola; sesame; sweet rocket; cultivars, varieties, and/or hybrids of these.

Sorghum

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Anthracnose Colletotrichum graminicola			
	Gray leaf spot and Cercospora leaf spot Cercospora spp.			
Foliar	Northern leaf blight Exserohilum turcicum	7 to 10	10	21
	Rust <i>Puccinia</i> spp.			
	Southern leaf blight and Bipolaris leaf spot Bipolaris spp.			

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 1 application per acre per year.
- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.20 lb ai/acre/year of pyraclostrobin-containing products.

Detailed Sorghum Crop List - sorghum (milo).

Soybean and Edamame

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Alternaria leaf spot Alternaria spp. Anthracnose			
	Colletotrichum truncatum	7 to 10		
	Asian soybean rust Phakopsora pachyrhizi			
	Brown spot Septoria glycines			
· ·	Cercospora blight/Purple seed stain Cercospora kikuchii		20	21
Foliar	Frogeye leaf spot Cercospora sojina			
	Pod and Stem blight Diaporthe phaseolorum			21
	Rhizoctonia aerial blight Rhizoctonia solani			
	* Southern blight Sclerotium rolfsii	10		

Spray Interval

- Apply at 14-day intervals.
- Soybean rust: Apply before onset of infection.

* Suppression only

Use Restrictions

- DO NOT apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- **DO NOT** apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year to soybean of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.39 lb/ai/acre/year to edamame of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year to soybean of pyraclostrobin-containing products.
- **DO NOT** apply more than a cumulative total of 0.29 lb/ai/acre/year to edamame of pyraclostrobin-containing products.
- Soybean forage may be fed no sooner than 14 days after last application. Soybean hay may be fed no sooner than 21 days after last treatment.

Sugar Beet

ı	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
	Cercospora leaf spot Cercospora beticola Powdery mildew Erysiphe betae	7 to 10	20	7

Spray Interval

- Apply at 14-day intervals.
- Aids in the control of Rhizoctonia stem canker and crown rot.

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 2 applications per acre per year.
- **DO NOT** apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.78 lb ai/acre/year of pyraclostrobin-containing products.

Sugarcane

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
Infurrow	Sugarcane pineapple disease Ceratocystis paradoxa Rhizoctonia seed and seedling rot Rhizoctonia solani * Fusarium seed rot, Seedling blight Fusarium spp.	7 to 10	20	14
Foliar	Brown rust Puccinia melanocephala Orange rust Puccinia kuehnii			
	Spray Interval Apply at 14-day to 28-day intervals.			

* Suppression only

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- DO NOT make more than 2 applications at 10 fl ozs per acre per year.
- DO NOT apply more than 20 fl ozs (0.26 lb mefentrifluconazole, 0.26 lb pyraclostrobin) per acre per year.
- DO NOT apply more than a cumulative total of 0.26 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 0.78 lb ai/acre/year of pyraclostrobin-containing products.
- DO NOT apply this product to sugarcane through any type of irrigation system.
- DO NOT feed treated sugarcane commodities to livestock.
- Aerial Application DO NOT use less than 5 gallons of spray solution per acre. Veltyma[™] fungicide can be applied by ground or air.

SUGARCANE ONLY Infurrow and Soil-directed Banded Rates

Rate per 1000 Row Feet (fl ozs product)	(fl	duct Rate ozs/A) width (feet)
(ii ozs product)	5 feet	6 feet
0.80	7.0	
0.92	8.0	
0.96		7.0
1.03	9.0	
1.10		8.0
1.15	10.0	
1.24		9.0
1.38		10.0

Tuberous and Corm Vegetables (including potato - subgroup 1C)

	Disease Controlled	Rate per Acre (fl ozs product) per application	Rate per Acre (fl ozs product) maximum per year	PHI (days)
_	Black dot Colletotrichum coccodes Brown spot, Black pit Alternaria alternata Early blight Alternaria solani	5 to 10	30	7
Foliar	* Late blight Phytophthora infestans Powdery mildew Erysiphe spp., Leveillula spp.	10		

Spray Interval

- Apply before the onset of disease and on a minimum interval of 14 days.
- Late blight: Follow application with a labeled **non-Group 11** late blight specific fungicide 5 to 7 days later.

* Suppression only

Use Restrictions

- **DO NOT** apply more than 10 fl ozs (0.13 lb mefentrifluconazole, 0.13 lb pyraclostrobin) per acre per application.
- **DO NOT** make more than 3 applications at 10 fl ozs per acre per year.
- DO NOT apply more than 30 fl ozs (0.39 lb mefentrifluconazole, 0.39 lb pyraclostrobin) per acre per year.
- **DO NOT** apply more than a cumulative total of 0.39 lb ai/acre/year of mefentrifluconazole-containing products.
- **DO NOT** apply more than a cumulative total of 1.18 lbs ai/acre/year of pyraclostrobin-containing products.

Detailed Tuberous and Corm Vegetables (subgroup 1C) Crop List - arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; yam, true.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

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TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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