

PROPICONAZOLE GROUP 3 FUNGICIDE

PULL HERE TO OPEN ►

PYDIFLUMETOFEN GROUP 7 FUNGICIDE



# Miravis<sup>®</sup> Ace

syngenta<sup>®</sup>

## Fungicide

*Active Ingredients:*

Pydiflumetofen\* ..... 13.7%

Propiconazole\*\* ..... 11.4%

*Other Ingredients:* ..... 74.9%

*Total:* ..... 100.0%

\*CAS No. 1228284-64-7

\*\*CAS No. 60207-90-1

Miravis<sup>®</sup> Ace is a suspoemulsion (SE) formulation and contains 1.254 lb of active ingredient pydiflumetofen and 1.047 lb ai active ingredient propiconazole per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

## CAUTION

See additional Precautionary Statements and Directions for Use inside booklet.

EPA Reg. No. 100-1645

EPA Est. 100-NE-001

SCP 1645A-L1 0219  
4104399

## 2.5 Gallons

Net Contents

®

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## **1.0 FIRST AID**

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
<b>HOTLINE NUMBER</b> For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call <b>1-800-888-8372</b>	

## 2.0 PRECAUTIONARY STATEMENTS

### 2.1 Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear appropriate protective eyewear such as goggles, face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### 2.2 Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of: Barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or Viton<sup>®</sup>  $\geq$  14 mils
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

#### User Safety Requirements

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

#### User Safety Recommendations

##### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/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.

### 2.2.1 ENGINEERING CONTROL STATEMENTS

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.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

### 2.3 Environmental Hazards

Propiconazole is toxic to fish and shrimp. Pydiflumetofen is toxic to fish, aquatic invertebrates, and oysters and shrimp. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated area.

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 runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

#### 2.3.1 GROUNDWATER ADVISORY

Pydiflumetofen and Propiconazole have properties and characteristics associated with chemicals detected in ground water. These chemicals may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

#### 2.3.2 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 medium potential for reaching surface water and for reaching aquatic sediment 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 pydiflumetofen and propiconazole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

## 2.4 Physical or Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a 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.

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

**FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY, POOR DISEASE CONTROL AND/OR ILLEGAL RESIDUES.**

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

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

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, wear:

- Coveralls
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks
- Protective eyewear

## 3.0 PRODUCT INFORMATION

- Miravis Ace is not for residential use.
- Read all label directions before use. All applications must be made according to the use directions that follow.
- Miravis Ace is a broad-spectrum, preventative fungicide for use in the control of many important plant diseases, formulated as a suspoemulsion (SE).
- Miravis Ace is a member of Syngenta's Plant Performance™ product line and may also improve the yield and/or quality of the crop. These additional benefits are due to positive effects on plant physiology. The effects may vary according to factors such as the crop, crop hybrid, or environment.

### 3.0.1 CROP TOLERANCE

Plant tolerance has been found to be acceptable for all crops on the label; however, not all possible tank-mix combinations have been tested under all conditions. When possible, test your tank-mix combination(s) on a small portion of the crop to ensure that a phytotoxic response will not occur as a result of application.

### 3.0.2 DISEASE SUPPRESSION

If a use indicates suppression it refers to control which can range from fair to good, or consistent control at a level below that obtained with products registered for control.

### 3.1 Integrated Pest (Disease) Management (IPM)

Miravis Ace should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. This should include selection of varieties with disease tolerance, removal of plant debris in which inoculum overwinters, and proper timing and placement of irrigation. Consult your local agricultural authorities for additional IPM strategies established for your area. Miravis Ace may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

### 3.2 Resistance Management

PROPICONAZOLE	GROUP	3	FUNGICIDE
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For resistance management, please note that Miravis Ace contains both a Group 7 [pydiflumetofen] and group 3 [propiconazole] fungicide. Any fungal population may contain individuals naturally resistant to either or both of the active ingredients in Miravis Ace and other Group 7 or Group 3 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.

Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Miravis Ace or other Group 7 and Group 3 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 treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Syngenta Crop Protection at 1-866-796-4368. You can also contact your university extension specialist to report resistance.

As part of a resistance management strategy:

- Apply no more than 2 sequential applications unless otherwise stated in the crop section.
- Follow the crop-specific resistance management recommendations in **Section 7.0**.

## 4.0 APPLICATION DIRECTIONS

### 4.1 Methods of Application

Apply Miravis Ace at rates specified in the crop tables (Section 7.0). Thorough coverage will provide best results. Where permitted, applications can be made by ground, by air, and via chemigation as specified in Section 7.0. Refer to Section 4.5 for details of application by chemigation.

## 4.2 Application Equipment

Miravis Ace may be applied with all types of spray equipment commonly used for making aerial and ground applications. Proper adjustments and calibration of spray equipment are needed to provide penetration and coverage essential for good disease control. To ensure accuracy, calibrate sprayer before each use.

### 4.2.1 NOZZLES

- Equip sprayers with nozzles that provide uniform application and desired spray quality.
- Screens should be used to protect the pump and to prevent nozzles from clogging.

### 4.2.2 PUMP

- Use a pump with capacity to:
  1. Maintain 35-40 psi at nozzles
  2. Provide sufficient agitation in the tank to keep tank-mixture in suspension - this requires recirculation of 10% of tank volume per minute.
- Use a jet agitator or liquid sparge tube for agitation.
- Do not air sparge.
- Screens placed on suction side of pump should be 16-mesh or coarser.
- Do not place a screen in the recirculation line.
- Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles.

For more information on spray equipment and calibration, consult sprayer manufacturers and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

## 4.3 Application Volume and Spray Coverage

See **Crop use Directions (Section 7.0)** for additional application volume information.

- Thorough coverage is necessary to provide good disease control.
- Avoid spray overlap, as crop injury may occur.
- For aerial application, apply in a minimum of 5 gallons of water per acre unless specified otherwise on this label.
- For ground application, apply in a minimum of 10 gallons of water per acre unless specified otherwise on this label.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.

## 4.4 Mixing Directions

- *Prepare no more spray mixture than is required for the immediate operation.*
- Thoroughly clean spray application equipment before using this product.
- Thoroughly agitate the spray solution before and during application.
- Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

### 4.4.1 MIRAVis ACE ALONE

- Add 1/2-2/3 of the required amount of water to the spray or mixing tank.
- With the agitator running, add Miravis Ace to the tank.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after Miravis Ace has completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

#### 4.4.2 TANK-MIX PRECAUTIONS

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

- Miravis Ace can be tank-mixed with other fungicides, herbicides, insecticides, liquid fertilizers, adjuvants, and additives; however, not all combinations or environmental conditions have been tested.
- To ensure against incompatibility and crop injury, it is recommended to test the combinations on a small portion of the crop to be treated.
- **DO NOT** mix Miravis Ace with dodine containing products or crop injury may occur.

#### 4.4.3 TANK-MIX COMPATIBILITY TEST

A jar compatibility test is recommended prior to tank mixing with other pesticides and/or adjuvants/additives, in order to ensure the compatibility of Miravis Ace with other products, adjuvants or fertilizers. The recommended procedure for conducting jar tank-mix compatibility tests is as follows:

**Compatibility Test:** Always perform a tank-mix compatibility test when mixing with new or unknown tank-mix partners before use. Use compatibility agents or buffering agents as per manufacturer label recommendations when using fertilizer suspensions as carrier. The following test assumes a spray volume of 25 gal/A. For other spray volumes, make appropriate changes in the components. Perform tank-mix compatibility test as follows:

1. Add 1 pt of carrier (either the water or liquid fertilizer to be used in the spray operation) to each of two clear 1-qt jars with tight lids.
2. To **one** of the jars, add 1/4 tsp or 1.2 ml of a commercially available tank-mix compatibility agent approved for this use (1/4 tsp is equivalent to 2 pt/100 gallons of spray solution). Close the lid, invert the jar, shake or stir gently to ensure thorough mixing of the compatibility agent.
3. To **both** jars, add the appropriate amount of each tank-mix partner. If more than one tank-mix partner is to be used, follow the mixing order, add dry formulations (wetttable powders or water dispersible granules) first, followed by liquid flowables, capsule suspensions, emulsifiable concentrates, and finally add adjuvants. After each addition, invert the jar, shake or stir gently to thoroughly mix. The appropriate amount of each tank-mix partner for this test, is as follows:

**Dry formulations:** For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

**Liquid formulations:** For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

4. After adding all ingredients, close the jars and tighten, then invert each jar 10 times to fully mix. Let the mixtures stand for 15-30 minutes and then assess by looking for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if a compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) Pre-slurry dry formulations in water before addition to the jar, or (B) add the compatibility agent directly into liquid formulations, before addition to the jar. If these procedures are followed but incompatibility is still observed, do not prepare the tank-mix in the spray tank.

#### 4.4.4 MIRAVIS ACE IN TANK MIXTURES

- Add 1/2-2/3 of the required amount of water to the spray or mixing tank.
- Start the agitator before adding any tank-mix partners
- When using in a tank-mix, add different formulation types in the sequence indicated below.
  1. products packaged in water-soluble packaging
  2. wetttable powders
  3. wetttable granules (dry flowables)
  4. liquid flowables such as Miravis Ace
  5. capsule suspensions
  6. soluble liquids
  7. emulsifiable concentrates
  8. surfactants / adjuvants.



- Allow each product to completely dissolve and disperse into the mix water before adding the next product. Continue agitation while the next product is added.
- Continue agitation while adding the remainder of the water.
- Begin application of the spray solution after all products have completely dispersed into the mix water.
- Maintain agitation until all of the mixture has been sprayed.

#### **4.4.5 SPRAY ADDITIVES**

- For some uses on this label, a spreading/penetrating type adjuvant such as a non-ionic surfactant, crop oil concentrate, silicone based, or blend must be added at the manufacturer's recommended rates.
- For other crop uses, an adjuvant is recommended. When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Council of Producers and Distributors of Agrotechnology (CPDA) certification program is recommended.

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

#### **4.5.1 APPLICATION DIRECTIONS FOR OVERHEAD IRRIGATION SYSTEMS**

- Use only on crops for which chemigation is specified on this label.
- Use only with drive systems which provide uniform water distribution.
- Do not use end guns because of non-uniform application
- Apply this product only through center-pivot, solid-set, hand-move, or moving-wheel irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or chemigation experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- 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.
- Chemical tank and injector system should be thoroughly cleaned and flushed with clean water prior to use.
- Do not apply when winds are greater than 10 mph to avoid drift or wind skips.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Thorough coverage of foliage is required for good control.
- Good agitation should be maintained in the tank during the entire application period.
- Miravis Ace has not been sufficiently tested via irrigation systems to determine product efficacy.
- In general, best performance via irrigation is 0.1 to 0.25 inches of water per acre.

#### **4.5.2 CENTER-PIVOT IRRIGATION**

- Determine the size of the area to be treated.
- Determine the time required to apply  $1/8$ - $1/2$  inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying Miravis Ace through irrigation equipment, use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Miravis<sup>®</sup> Ace required to treat the area covered by the irrigation system.
- Add the required amount of Miravis Ace and sufficient water to meet the injection time requirements for the solution tank.
- Make sure the system is fully charged with water before starting injection of the Miravis Ace solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Miravis Ace solution has cleared the last sprinkler head.

#### **4.5.3 SOLID-SET, HAND-MOVE, AND MOVING-WHEEL IRRIGATION**

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying Miravis Ace through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Miravis Ace required needed to treat the area covered by the irrigation system.
- Add the required amount of Miravis Ace into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Miravis Ace solution has cleared the last sprinkler head.

#### **4.5.4 OPERATING INSTRUCTIONS FOR CHEMIGATION**

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

**Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.**

#### **4.5.5 SPECIFIC INSTRUCTIONS FOR PUBLIC WATER SYSTEMS**

1. 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, 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 shall be a complete physical break (air gap) between the flow 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

## 5.0 ROTATIONAL CROP RESTRICTIONS

The following crops may be planted at the specified interval following application of Miravis Ace:

Crop, Crop Group, or Crop Subgroup	Plant-Back Interval
Bean; <i>Lupinus</i> spp. (Grain Lupin, Sweet Lupin, White Lupin, White Sweet Lupin) Bean; <i>Phaseolus</i> spp. (Kidney Bean, Lima Bean (dry), Navy Bean, Pinto Bean) Bean; <i>Vigna</i> spp. (Blackeyed Pea, Cowpea, Mung Bean) Broad Bean (dry) Chickpea (Garbanzo Bean) Cereals (barley, oats, wheat, triticale, rye) Celery Corn (field, pop) Corn, sweet Peanut Quinoa Rapeseed Crop Subgroup 20A (canola) Soybean	0 days
Carrots Garden beets Sugar beets	30 days
Cucurbit Vegetables (Crop Group 9) Fruiting Vegetables (Crop Group 8-10) Leafy Greens (Crop Subgroup 4-16A) Leafy Petiole Vegetables (Crop Subgroup 22B) Leaves of Root and Tuber Vegetables Members of Crop Subgroup 6C not listed above Peppers Potato Root & Tuberous Vegetables (Crop Group 1) not listed above Tomatoes	105 days
All other crops Intended for Food and Feed	365 days

## 6.0 RESTRICTIONS AND PRECAUTIONS

### 6.1 Use Restrictions

- **DO NOT** apply through any ultra-low volume (ULV) spray system.
- **DO NOT** apply to plants grown for transplanting purposes.
- **DO NOT** use in greenhouses.
- **DO NOT** use as a tree injection.
- **DO NOT** apply in a manner that will result in exposure to humans or animals.

### 6.2 Use Precautions

- Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if maximum amount of Miravis Ace has been used.
- If isolates resistant to Group 7 or 3 fungicides are present, efficacy can be reduced for certain diseases.
- The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, with highly susceptible varieties, or when environmental conditions are conducive to disease.

## 6.3 Spray Drift Management

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- Do not apply when conditions favor drift beyond the target area.
- Applicators must follow all state and local pesticide drift requirements regarding application of this product. Where states have more stringent regulations, they must be observed.
- The interaction of many equipment- and weather-related factors determines the potential for spray drift.
- DO NOT apply when the wind speed is greater than 10 mph or during periods of temperature inversions.
- Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat.
- Avoid spray overlap, as crop injury may occur.

### 6.3.1 AERIAL APPLICATIONS

- Do not release spray at a height greater than 10 ft above the vegetative canopy unless a greater application height is necessary for pilot safety.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.

### 6.3.2 GROUND APPLICATIONS

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a pasture or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).

### 6.3.3 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.

### 6.3.4 CONTROLLING DROPLET SIZE

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Spray Nozzle** – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### 6.3.5 APPLICATION HEIGHT

Applications must be made at the lowest height above the target area that still provides uniform coverage of the target. Making applications at the lowest yet effective height reduces exposure of droplets to wind.

### 6.3.6 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.

### 6.3.7 TEMPERATURE AND HUMIDITY

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

### 6.3.8 WIND

Drift potential is lowest when wind speeds are 10 mph or less. However, many factors, including droplet size, pressure, and equipment type determine drift potential at any given wind speed. Note: Local terrain can influence wind patterns. Leave a 25-foot buffer downwind of the application to avoid drift to non-target areas.

AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

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

### 6.3.9 TEMPERATURE INVERSIONS

- Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.
- Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.
- If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

### 6.3.10 NON-TARGET AREAS

Do not apply this pesticide when the product may drift to non-target areas (i.e. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

## 7.0 CROP USE DIRECTIONS

### 7.1 Cereals Grains

Crops (Including cultivars and/or varieties of these)			
Barley Oats	Rye Triticale	Wheat	
Target Disease	Rate (fl oz/A)	Application Timing	Use Directions
Fusarium head blight ( <i>Fusarium</i> spp.)  <b>Control of Leaf Diseases:</b> Barley scald ( <i>Rhynchosporium secalis</i> ) Black point ( <i>C. sativus</i> , <i>Alternaria</i> spp) Helminthosporium leafspot ( <i>Drechslera avenae</i> ) Powdery mildew ( <i>Blumeria graminis</i> ) Leaf and glume blotch ( <i>Stagonospora nodorum</i> ) Net blotch ( <i>Pyrenophora teres</i> ) Septoria blotch ( <i>S. tritici</i> ) Spot blotch ( <i>Cochliobolus sativus</i> ) Tan spot ( <i>Pyrenophora tritici-repentis</i> )	13.7*	Apply between Feekes growth stage 10.3 (Zadoks 55) and Feekes 10.5.2 (Zadoks 65). (See growth stage descriptions below.)  Protecting the flag leaf is important for maximizing the potential yield.	Apply by ground, air, or chemigation.  An adjuvant may be added at recommended rates.  Use spray nozzles configured to provide thorough coverage of the head.
*13.7 fl oz/A is equivalent to 0.134 lb ai pydiflumetofen/A and 0.112 lb ai propiconazole/A.			

**Feekes Growth Stage and Zadoks description:** Feekes 2-5/Zadoks 21-30 – tillering; Feekes 6-7/Zadoks 31-32 – 1<sup>st</sup> and 2<sup>nd</sup> node; Feekes 8 / Zadoks 37 – flag leaf just visible; Feekes 10 / Zadoks 45 – swollen boot; Feekes 10.3 / Zadoks 55 – 50% of ear has emerged; Feekes 10.5.1 / Zadoks 61 – beginning anthesis; Feekes 10.5.2 / Zadoks 65 – mid-flowering (mid-anthesis); Feekes 10.5.4 / Zadoks 71 (Flowering complete)

**Precaution:**

- Under certain environmental conditions, tank mixes of Miravis Ace plus herbicides and/or fertilizers may cause crop injury.

**Resistance Management:**

- Refer to **Section 3.1**.
- Do not make more than two applications of Miravis Ace or other Group 7 and 3 fungicides before alternation with a fungicide that is not in Group 7 or 3.

**USE RESTRICTIONS**

- 1) Refer to **Section 6.1** for additional product use restrictions.
- 2) **Maximum Single Application Rate:**
  - a. **Forage and Hay: DO NOT** exceed the maximum rate listed in the table.
  - b. **Grain: DO NOT** exceed the maximum rate listed in the table.
- 3) **Maximum Number of Applications per Year:**
  - a. **Forage and Hay: DO NOT** make more than 1 application per year.
  - b. **Grain: DO NOT** make more than 2 applications at the maximum rate per year
- 4) **Minimum Application Interval:** 14 days
- 5) **Maximum Annual Rate:**
  - a. **Forage and Hay:** 13.7 fl oz/A
  - b. **DO NOT** apply more than 0.134 lb ai/A/year of pydiflumetofen-containing products.
  - c. **DO NOT** apply more than 0.112 lb ai/A/year of propiconazole-containing products.
  - d. **Grain:** 27.4 fl oz/A/year
  - e. **DO NOT** apply more than 0.31 lb ai/A/year of pydiflumetofen-containing products.
  - f. **DO NOT** apply more than 0.224 lb ai/A/year of propiconazole-containing products.
- 6) **Pre-harvest Interval (PHI):**
  - a. **Forage and Hay:** 7 days
  - b. **Grain: DO NOT** apply Miravis Ace after full head emergence (Feekes 10.5.4).

## 8.0 STORAGE AND DISPOSAL

### STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

Keep this product in its tightly closed original container, when not in use. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

#### **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 of the nearest EPA Regional Office for guidance.

#### **Container Handling [less than or equal to 5 gallons]**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### **Container Handling [greater than 5 gallons]**

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### **Container Handling [greater than 5 gallons]**

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

## 9.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.



To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## 10.0 APPENDIX

### 10.1 Miravis Ace Rate Conversion Chart (for use with Section 7.0)

Fl oz Product/A	Pydiflumetofen Lb ai/A	Propiconazole Lb ai/A	Acres Treated per gallon
13.7	0.134	0.112	9.3

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the SYNGENTA Logo and the PURPOSE ICON   
are Trademarks of a Syngenta Group Company

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For non-emergency (e.g. current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

**SCP 1645A-L1 0219  
4104399**



PROPICONAZOLE GROUP 3 FUNGICIDE

PYDIFLUMETOFEN GROUP 7 FUNGICIDE



## Fungicide

Active Ingredients:	
Pydiflumetofen*:	13.7%
Propiconazole**:	11.4%
Other Ingredients:	74.9%
Total:	100.0%

\*CAS No. 1228284-64-7

\*\*CAS No. 60207-90-1

Miravis<sup>®</sup> Ace is a suspoemulsion (SE) formulation and contains 1.254 lb of active ingredient pydiflumetofen and 1.047 lb ai active ingredient propiconazole per gallon.

## KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional Precautionary Statements and Directions for Use inside booklet.

### AGRICULTURAL USE REQUIREMENTS

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

EPA Reg. No. 100-1645

EPA Est. 100-NE-001

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Manufactured for:  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, North Carolina 27419-8300

**SCP 1645A-L1 0219  
4104399**

### FIRST AID

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

**If 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**HOTLINE NUMBER:** For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call **1-800-888-8372**.

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear appropriate protective eyewear such as goggles, face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Environmental Hazards:** Propiconazole is toxic to fish and shrimp. Pydiflumetofen is toxic to fish, aquatic invertebrates, and oysters and shrimp. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated area.

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 runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

**Groundwater Advisory:** Pydiflumetofen and Propiconazole have properties and characteristics associated with chemicals detected in ground water. 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 medium potential for reaching surface water and for reaching aquatic sediment 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 pydiflumetofen and propiconazole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

**Physical or Chemical Hazards:** Do not use or store near heat or open flame.

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**CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.**

**2.5 Gallons**  
Net Contents

