SPECIFIC BRASSICA HEAD AND STEM VEGETABLES

General Information

PRODUCT INFORMATION

- Miravis Prime is not for residential use.
- Read all label directions before use. All applications must be made according to the use directions that follow.
- Miravis Prime is a broad-spectrum, preventative fungicide for the control of many important plant diseases, formulated as a suspension concentrate (SC).
- Miravis Prime 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.
- Not for use in the state of Hawaii.
- Not for use in Nassau and Suffolk counties of New York.

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.

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.

Integrated Pest (Disease) Management (IPM)

Miravis Prime 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 Prime may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

Resistance Management

For resistance management, please note that Miravis Prime contains both a Group 7 [pydiflumetofen] and group 12 [fludioxonil] fungicide. Any fungal population may contain individuals naturally resistant to either or both of the active ingredients in Miravis Prime and other Group 7 or Group 12 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 Miravis Prime or other Group 7 and 12 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.

APPLICATION DIRECTIONS

Methods of Application

Apply Miravis Prime at rates specified in the crop tables (Section 7.0). 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.

OBSERVE THE FOLLOWING RESTRICTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS, ESTUARIES, AND COMMERCIAL FISH FARM PONDS.

- Do not apply within 75 ft of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes, or estuaries.
- Shut off the sprayer when at row ends.
- Do not cultivate within 10 ft of aquatic areas as to allow a vegetative filter strip.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.
- For perennial crops such as tree crops and grapes:
  - For all plantings within 150 ft of bodies of water as described above, spray crops from outside the planting away from the bodies of water.
  - Spray last three rows windward of aquatic areas using nozzles on one side only, with spray directed away from aquatic areas. Adjust or turn off top nozzles on the side away from the grove/orchard when spraying the outside row. Shut off nozzles when turning at ends of row or passing tree gaps in the rows.

Ground Application
- Apply in a minimum of 10 gallons of water per acre, unless specified otherwise.

Aerial Spray Directions
Avoid applications under conditions when uniform coverage cannot be obtained or
when excessive drift may occur.

Aerial Spray Restrictions

Observe the following restrictions when spraying in the vicinity of aquatic area such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.
- Use only on crops where aerial applications are indicated.
- Do not apply by air within 150 ft of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.
- Mount the spray boom on the aircraft so as to minimize the drift caused by wing tip vortices. Use the minimum practical boom length, and do not exceed 75% of wing span or rotor diameter.
- Release spray at the lowest height consistent with pest control and flight safety. Do not make applications more than 10 feet above the crop canopy.
- Do not apply when weather conditions favor drift to aquatic areas. Do not apply when gusts or sustained winds exceed 10 mph.
- Do not apply during a temperature inversion. Mist or fog may indicate the presence of an inversion in humid areas.

Aerial Spray Precautions

Observe the following precautions when spraying in the vicinity of aquatic area such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.
- Use the largest droplet size consistent with good pest control.
- Formation of very small droplets may be minimized by appropriate nozzle selection, by orientating nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Reduce risk of exposure to aquatic areas by avoiding applications when wind direction is toward the aquatic area.
- Low humidity and high temperatures increase the evaporation rate of spray droplets, and therefore the likelihood of increased spray drift to aquatic area. Avoid spraying during conditions of low humidity and/or high temperatures.
- For the crops to which aerial applications are allowed, refer to the specific crop directions for use.
- Apply in a minimum of 5 gallons of water per acre, unless specified otherwise.
Application Equipment

Miravis Prime 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.

Application Volume and Spray Coverage

See Crop Use Directions (Section 7.0) for 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 2 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.

Application through Irrigation Systems (Chemigation)

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 nonuniform 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 10-15 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 Prime 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.

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 Prime 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 Prime required to treat the area covered by the irrigation system.
- Add the required amount of Miravis Prime and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the Miravis Prime solution.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Miravis Prime solution has cleared the last sprinkler head.

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 Prime through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Miravis Prime required to treat the area covered by the
irrigation system.
- Add the required amount of Miravis Prime 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 Prime solution has cleared the last sprinkler head.

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 back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards 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.

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 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.

See table in the label for ROTATIONAL CROP RESTRICTIONS.

RESTRICTIONS AND PRECAUTIONS

Use Restrictions
- Do not apply through any ultra-low volume (ULV) spray system.
- Do not apply to plants grown for transplanting purposes.
- Not for greenhouse use unless otherwise specified in the specific crop directions for use table.
- Aerial applicators must be in enclosed cockpits.

Use Precautions
- Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if maximum amount of Miravis Prime has been used.
- If isolates resistant to Group 7 or 12 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.

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.
- 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.

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.

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.
- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).

HANDHELD TECHNOLOGY APPLICATIONS
- Take precautions to minimize spray drift.

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).

Limitations, Restrictions, and Exceptions

Specific Brassica Head and Stem Vegetables

Application Timing
- Begin applications prior to disease development.
- Continue applications through season on a 7-day interval, following the resistance management guidelines.

Use Directions
- Apply by ground or air.
- An adjuvant may be added at recommended rates.
- Apply in sufficient water volume to ensure good coverage.

Rate
- 11.4 fl oz product/A is equivalent to 0.11 lb ai pydiflumetofen and 0.186 lb ai fludioxonil.

Resistance Management:
- Do not make more than two consecutive applications of Miravis Prime or other Group 7 and 12 fungicides before alternation with a fungicide that is not in Group 7, or 12.

USE RESTRICTIONS
1) Maximum Single Application Rate: Do not exceed the maximum rate listed in the table.
2) Maximum Number of Applications per Year: Do not make more than 3
applications at the maximum application rate per year.
3) Minimum Application Interval: 7 days
4) Maximum Annual Rate: 34.2 fl oz/A/year (equivalent to 0.33 lb ai pydiflumetofen and 0.558 lb ai fludioxonil)
a. Do not apply more than 0.335 lb ai/A/year of pydiflumetofen-containing products
b. Do not apply more than 0.9 lb ai/A/year of fludioxonil-containing products.
5) Do not use roots of treated turnips for food or feed. Only turnip varieties harvested for their leaves may be treated.
6) Pre-harvest Interval (PHI): 7 days
7) Make no more than two applications by air.

Method
Broadcast/Foliar Air
Broadcast/Foliar Ground
Pre-Harvest Interval

7 days

Restricted Entry Interval

12 hours

Timings
Begin applications prior to disease development.