-100-125



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUL 9 2009

WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Ruhi Rezaaiyan, Ph.D. Syngenta Crop Protection, Inc. P.O. Box 18300 Greensboro, NC 27419-8300

SUBJECT: Master and Supplemental Label Amendments to Add Hops Revus Fungicide EPA Reg. No. 100-1254 Your Submission Dated March 26, 2008 Decision No 391649

Dear Dr. Rezaaiyan:

The amended labeling referred to above submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. On page 8, in the Aerial Application section, the third bullet must read "Apply in a minimum of 5 gallons of water per acre unless specified otherwise on this label."

2. On page 8, in the Ground Application section, the first bullet must read "Apply in a minimum of 10 gallons of water per acre, unless specified otherwise on this label."

3. By separate notification or amendment as appropriate, satisfy the PR 2007-4 container revisions.

4. On page 16 (and on the supplemental label) for hops, change 0.40 to 0.39 to match page 13.

You must submit the following conditional data by September 30, 2011:

- 870.7800 Immunotoxicity Study

We note that tobacco was requested but not approved and withdrawn pending resolution of Agency policy on aggregation of tobacco in risk assessments.

Submit one copy of your final printed labeling with these changes before you release the product for shipment.

Please find enclosed the master and supplemental label stamped "Accepted with Comments". If you have any questions regarding this correspondence, contact Rose Kearns of my staff by phone at 703-305-5611 or via email at kearns.rosemary@epa.gov or myself at 703-308-9443 or via email at <u>kish.tony@epa.gov</u>.

Sincerely,

Tony Kish Product Manager Team 22 Fungicide Branch Registration Division (7505P)

Enclosures: Master label Supplemental label

## IMPORTANT NOTICE

U.S. LABEL – It is a violation of the United States law to use this product in the United States in a manner inconsistent with its United States labeling

Group 40 Fungicide

#### **Revus**®

#### Fungicide

For control of certain diseases in listed vegetable crops

Active Ingredient/Guarantee:

Mandipropamid*	
Other Ingredients:	76.7%
Total:	100.0%

\* CAS No. 374726-62-2

Contains 1,2-benzisothiazolin-3-one at 0.017% as a preservative.

Contains 23.3% Mandipropamid equivalent to 2.08 pounds per gallon or 250 grams per liter of active ingredient

#### KEEP OUT OF REACH OF CHILDREN.

See additional precautionary statements and directions for use inside booklet.

EPA Reg. 100-1254

EPA Est. 100-NE-001

Product of Switzerland

Formulated in USA

1 gallon Net Contents

#### ACCEPTED with COMMENTS In EPA Letter Dated

## JUL <sup>9</sup> 2009

Under the Federal Insecticide, Fundicide, and Rodenticide Ast as amended, for the pesticide registered under KPA Reg. No.

100-1254

#### **FIRST AID**

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

### HOT LINE 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

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#### Hazards to Humans and Domestic Animals

#### **Personal Protective Equipment (PPE)**

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

#### **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.

#### **User Safety Recommendations**

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### **Environmental Hazards**

Do not apply directly to water, 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 contaminate water through drift of spray in wind. This product has a potential for 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 for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

#### 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, INC. 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 this 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.

#### 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.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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 made of any waterproof material
- Shoes plus socks

#### GENERAL USE PRECAUTIONS

#### FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES.

#### GENERAL INFORMATION

Revus provides control of diseases caused by downy mildews. It has preventative and limited curative properties. Revus is applied as a foliar spray and can be used in block, alternating spray, or tank mix programs with other crop protection products. All applications must be made according to the use directions that follow.

#### **GENERAL USE INSTRUCTIONS**

**Application**: Thorough coverage is necessary to provide good disease control. Mix only the amount of spray solution needed for immediate application. Avoid spray overlap, as crop injury may occur.

**Adjuvants:** 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, SYNGENTA recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Efficacy:** Under certain conditions conducive to extended infection periods, use another registered fungicide for additional applications if maximum amount of Revus has been used. If isolates that are resistant to Group 40 fungicides are present, efficacy may 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, highly susceptible varieties, or when environmental conditions conducive to disease exist.

**Disease Suppression:** If a use indicates suppression it refers to erratic control from fair to good, or consistent control at a level below that obtained with products registered for control.

**Integrated Pest Management (IPM)**: Revus 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. Consult your local agricultural authorities for additional IPM strategies established for your area. Revus 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:**

## Group 40 Fungicide

Revus contains mandipropamid, a Carboxylic Acid Amide (CAA) fungicide in Group 40. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of this product should conform to resistance management strategies established for the crop and use area. Consult your local or State agricultural authorities for resistance management strategies that are complementary to those in this label. Resistance management strategies may include rotating and/or tank mixing with products having different modes of action or limiting the total number of applications per season. SYNGENTA encourages responsible resistance management to ensure effective longterm control of the fungal diseases on this label. Revus must not be alternated or tank mixed with any fungicide to which resistance has already developed.

As part of a resistance management strategy:

- Apply a maximum of 4 sprays during one crop cycle.
- Apply no more than 2 sequential applications unless otherwise stated in the crop section.
- When tank mixing or alternating, use an effective partner one that provides satisfactory disease control when used alone at the mixture rate.
- Do not use Revus in transplant production.

**Rotational Crops:** To avoid possible illegal residues, do not plant any other crop within 30 days of a Revus application to the preceding crop unless the crop appears on this label.

**Crop Tolerance:** Plant tolerance has been found acceptable for all crops on the label, however, not all possible tank mix combinations have been tested under all conditions. When possible, it is recommended to test the combinations on a small portion of the crop to ensure a phytotoxic response will not occur as a result of application.

**Spray Drift Management:** To avoid spray drift, do not apply when conditions favor drift beyond the target area. The interaction of many equipment and weather related factors determine the potential for spray drift. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER. More information on managing spray drift can be found on the SYNGENTA CROP PROTECTION website under Stewardship http://www.syngentacropprotection-us.com/enviro/driftmanagement/

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#### MIXING AND APPLICATION METHODS

#### Spray Equipment

#### Nozzles

- Equip sprayers with nozzles that provide accurate and uniform application.
- Nozzles should be the same size and uniformly spaced across the boom.
- Calibrate sprayer before use.
- It is suggested that screens be used to protect the pump and to prevent nozzles from clogging.
- 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.
- Check nozzle manufacturer's recommendations.

#### Pump

- Use a pump with capacity to:
  - (1) maintain 35-40 psi at nozzles
  - (2) provide sufficient agitation in tank to keep 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.

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.

#### **Mixing Instructions**

- Prepare no more spray mixture than is required for the immediate operation.
- Thoroughly clean spray equipment before using this product.
- 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.
- Do not allow spray mixture to stand overnight or for prolonged periods of time (more than 3 hours) without agitation.

#### Revus Alone (no tank mix):

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

**Revus + Tank Mixtures:** Revus is usually compatible with all tank-mix partners listed on this label. To determine the physical compatibility of Revus with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt. of

water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

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It is important to mix only the amount of product that can be sprayed immediately. Continuous agitation is recommended. If circumstances cause a delay of more than 3 hours, the product(s) may settle and be difficult to re-suspend. If this occurs, good agitation is required for a minimum of 15 minutes before and during spray operation.

#### Mixing in the Spray Tank

- Add 1/2-3/3 of the required amount of water to the spray or mixing tank.
- With the agitator running, add the tank mix partner(s) into the tank in the same order as described above.
- Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and Revus to the spray tank.
- Allow Revus to completely disperse.
- Spray the mixture with the agitator running.

#### **Application Instructions**

Revus may be applied with all types of spray equipment commonly used for making ground and aerial applications. Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

#### **Ground Application:**

- Apply in a minimum of 10 gallons of water per acre, unless specified otherwise.
- Do not apply through any ultra-low volume (ULV) spray system.
- Thorough coverage is necessary to provide good disease control.

#### **Aerial Application:**

- Use only on crops where aerial applications are indicated.
- Thorough coverage is necessary to provide good disease control.
- Apply in a minimum of 5 gallons of water per acre unless specified otherwise.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.
- Do not apply directly to humans or animals.
- Do not apply through any ultra-low volume (ULV) spray system.

#### Application Through Irrigation Systems (Chemigation) -

- Use only on crops for which chemigation is specified on this label.
- 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.

- Apply Revus use rates in 0.1 0.25 inches per acre. Excessive water may reduce efficacy.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other 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.

#### **Operating Instructions**

- 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, quickclosing 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.

#### **Center Pivot Irrigation Equipment**

**Notes:** (1) Use only with drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating Revus through center pivot systems, because of non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply <sup>1</sup>/8-<sup>1</sup>/2 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. When applying Revus through

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irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.

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- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Revus required to treat the area covered by the irrigation system.
- Add the required amount of Revus 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 Revus 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 Revus solution has cleared the sprinkler head.

#### Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

• Determine the acreage covered by the sprinklers.

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- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying Revus through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Revus required to treat the area covered by the irrigation system.
- Add the required amount of Revus 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 Revus solution has cleared the last sprinkler head.

#### 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, quickclosing 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.

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## SPECIFIC DIRECTIONS FOR USE

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Сгор	Disease	Rate fl. oz./Acre (lb ai/A)	Remarks
Brassica – all crops in head/stem and leafy greens subgroups Broccoli Brussels sprouts Cabbage Cauliflower Collards Kale Mustard greens Including all cultivars and/or hybrids of these.	Downy mildew ( <i>Peronospora</i> <i>parasitica</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. Revus may be tank mixed with another fungicide labeled for downy mildew that has a different mode of action. A spreading/penetrating type adjuvant such as a silicone based adjuvant, non- ionic surfactant, crop oil concentrate, or blend must be added at recommended rates when applied by ground or air.
See additional crops below.			se sufficient water volume to provide be applied by ground, chemigation, or

Additional Crops in Head and Stem subgroup: Chinese broccoli (gai lon), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cavalo broccolo, Kohirabi

Additional Crops in the Leafy Greens subgroup: Broccoli raab, Chinese cabbage, Mizuna, Mustard spinach, Rape greens

## Specific Use Restrictions:

- Do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season).
- Do not apply within 1 day of harvest (1 day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Bulb Vegetables: Dry bulb Onion, bulb Garlic Shallot Green Onion Onions, green Leek Welch onion	Downy mildew (Peronospora destructor)	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non- Group 40 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. Revus may be tank mixed with another fungicide labeled for downy mildew that has a different mode o action. A silicone-based adjuvant must be added at recommended rates.
Specific Use Restr	thorough coverage aerial application.		se sufficient water volume to provide be applied by ground, chemigation, or

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• For dry bulb vegetables do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season).

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- For green onions do not apply more than 24 fl oz of product/A/season (0.39 lb a.i./A/season).
- Do not apply within 7 days of harvest (7 day PHI).

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+	(Ib ai/A)	
For suppression of: Downy mildew ( <i>Pseudopero-</i> <i>nospora</i> <i>cubensis</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 1 application before switching to another effective non-Group 40 fungicide. Revus must be tank mixed with another fungicide labeled for downy mildew that has a different mode of action. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. A spreading/penetrating type adjuvant such as a non-ionic surfactant, crop oil concentrate, or blend must be added at recommended rates.
For suppression of: Phytophthora blight ( <i>P. capsici</i> )	8.0 (0.13)	For best results, begin the disease management program with an initial treatment at planting or transplanting with a fungicide registered for this use. Apply Revus as a foliar spray in a mixture with a copper based fungicide (at the recommended rate) beginning at first sign of disease or based on local recommendations. Revus should be alternated with another registered fungicide such as Ridomil Gold® Copper on a 7-14 day interval. Use adjuvants as recommended above.
	suppression of: Downy mildew ( <i>Pseudopero-</i> <i>nospora</i> <i>cubensis</i> ) For suppression of: Phytophthora blight ( <i>P. capsici</i> ) Application: For	suppression of:(0.09 - 0.13)Downy mildew (Pseudopero- nospora cubensis)(0.09 - 0.13)For suppression suppression of:8.0 (0.13)Phytophthora blight1000000000000000000000000000000000000

Additional cucurbit crops: Chayote, Chinese waxgourd, Gourds, *Momordica* spp. (Bitter melon, Balsam apple)

Specific Use Restrictions:

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- Do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season).
- May be applied the day of harvest (0 day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Grapes	Downy mildew ( <i>Plasmopora</i> <i>viticola</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. The addition of a spreading/penetrating type adjuvant such as a non-ionic based surfactant or crop oil concentrate or blend is recommended.
	1	e. Revus may	se sufficient water volume to provide be applied by either ground (15 gal 0 gal minimum).

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### **Specific Use Restrictions**

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- Do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season). Do not apply within 14 days of harvest (14 day PHI). •
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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Hops	Downy mildew (Pseudopero- nospora humuli)	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to an effective non-Grou 40 fungicide. For resistance management, no more than 50% of the sprays should be Revus. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. Revus may be tan mixed with another fungicide labeled for downy mildew that has a different mode of action. The addition of a spreading/penetrating type adjuvant such as a non-ionic based surfactant or blend is recommended.
			se sufficient water volume to provide be applied by ground, chemigation, or

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- Do not apply more than 24 fl oz of product/A/season (0.40 lbs. a.i./A/season).
- Do not apply within 7 days of harvest (7-day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Leafy Vegetables Lettuce, leaf and head Spinach Celery Including cultivars and/or hybrids of these. See additional crops below.	Blue mold ( <i>Peronospora</i> <i>effusa</i> ) Downy mildew ( <i>Bremia</i> <i>lactucae</i> ) Downy mildew ( <i>Plasmopora</i> <i>umbelliferarum</i> ) Downy mildew ( <i>Peronospora</i> <i>spp.</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use the shorter interval and/or higher rates unde high pressure or when conditions are conducive to disease. The addition of a spreading/ penetrating type adjuvant such as a non-ionic surfactant or crop oil concentrate or blend is recommended.
			e sufficient water volume to provide be applied by ground, chemigation, or

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Additional Leafy Vegetables: Amaranth, Arugula, Cardoon, Celery (Chinese), Celtuce, Chervil, Chrysanthemum (edible-leaved and garland), Corn salad, Cress (garden and upland), Dandelion, Dock, Endive, Fennel (Florence), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach (New Zealand and vine), Swiss chard.

#### **Specific Use Restrictions**

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- Do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season).
- Do not apply within 1 day of harvest (1 day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Peppers and Other Fruiting Vegetables: Peppers Bell pepper Non-bell pepper Sweet non-bell Eggplant Okra Groundcherry Pepino	Downy mildew (Peronospora tabacina)	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. The addition of a spreading/penetrating type adjuvant such as a non-ionic surfactant or crop oil concentrate or blend is recommended.
See Tomatoes section for specific directions.	For suppression of: Phytophthora blight ( <i>P. capsici</i> )	8.0 (0.13)	For best results, begin the disease management program with an initial treatment at planting or transplanting with a fungicide registered for this use. Apply Revus as a foliar spray in a mixture with a copper based fungicide (at the recommended rate) beginning at first sign of disease or based on local recommendations. Alternate Revus with another registered fungicide such as Ridomil Gold Copper on a 7-14 day interval or use in a blocking program of 2 applications of Revus, followed by another fungicide for additional applications. Use adjuvants as recommended above.
	thorough coverage	e. Revus may l	se sufficient water volume to provide be applied by ground, chemigation, or applications use a minimum of 20 gal/A

Specific Use Restrictions:

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- Do not apply more than 32 fl oz of product/A/season (0.52 lb a.i./A/season).
- Do not apply within 1 day of harvest (1 day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Potatoes and other Vegetables, tuberous and corm, subgroup See additional crops below.	Late blight ( <i>Phytophthora</i> <i>infestans</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. The addition of a spreading/ penetrating type adjuvant such as a non-ionic surfactant or crop oil concentrate or blend is recommended when applying by ground or air.
			se sufficient water volume to provide be applied by ground, chemigation, or

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Additional Tuberous and Corm Subgroup Vegetables: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna, Cassava (edible, bitter, and sweet), Chayote (root), Chufa, Dasheen (taro), Ginger, Sweet potato, Taneir, Turmeric, Yam (bean), Yam (true)

#### Specific Use Restrictions:

- Do not apply more than 32 fl oz of product/A/season (0.52 lbs. A.i./A/season).
- Do not apply within 14 days of harvest (14 day PHI).

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Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
<b>Tomatoes</b> Tomatillo	Late blight ( <i>Phytophthora</i> <i>infestans</i> )	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 2 fungicide. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. The addition of a spreading/ penetrating type adjuvant such as a non-ionic surfactant or crop oil concentrate or blend is recommended when applying by ground or air.
	1		e sufficient water volume to provide e applied by ground, chemigation, or

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## Specific Use Restrictions:

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- Do not apply more than 32 fl oz of product/A/season (0.52 lbs. a.i./A/season).
  Do not apply within 1 day of harvest (1 day PHI).

Revus Conversion Table		
Oz product/acre	Lb ai/acre	
5.5	0.09	
7	0.11	
8	0.13	

#### Peyus Conversion Table

#### STORAGE AND DISPOSAL

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

#### **Pesticide Storage**

Store in original containers only. Store in a cool, dry place. Keep container closed when not in use. Do not store near food or feed. 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 the label.

#### **Pesticide Disposal**

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

#### **Container Disposal**

Triple rinse container (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or alternatives allowed by state and local authorities.

#### For Bulk and Minibulk Containers:

**Container Disposal:** Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

**Container Precautions:** Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.

**Refill Only With Revus:** The contents of this container cannot be completely removed by cleaning. Refilling with materials other than Revus will result in contamination and may weaken container.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

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

Revus®, Ridomil Gold®, the Syngenta logo and the CP FRAME 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, Inc. P.O. Box 18300 Greensboro, North Carolina 27419-8300

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#### SUPPLEMENTAL LABEL

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## **ADDITION OF HOPS**

40 Fungicide Group

**Revus**<sup>™</sup>

Fungicide

For control of certain diseases in listed crops

Active Ingredient:	
Mandipropamid (CAS No. 374726-62-2)	
Other Ingredients:	76.7%
Total:	100.0%

Contains 2.08 pounds of active ingredient per gallon

#### KEEP OUT OF REACH OF CHILDREN.

See additional precautionary statements and directions for use inside booklet.

EPA Reg. 100-1254

#### ACCEPTED with COMMENTS In EPA Letter Dated

JUL <sup>9</sup> 2009

Under the Federal Insecticide, Fundicide, and Redenticide Ast as amended, for the pesticide registered under GPA Reg. No. 100-1254

## DIRECTIONS FOR USE

Сгор	Disease	Rate fl. oz./Acre (Ib ai/A)	Remarks
Hops	Downy mildew (Pseudopero- nospora humuli)	5.5 - 8.0 (0.09 - 0.13)	Begin applications prior to disease development and continue throughout the season on a 7-10 day interval. Make no more than 2 consecutive applications before switching to an effective non-Group 40 fungicide. For resistance management, no more than 50% of the sprays should be Revus. Use the shorter interval and/or higher rates under high pressure or when conditions are conducive to disease. Revus may be tank mixed with another fungicide labeled for downy mildew that has a different mode of action. The addition of a spreading/penetrating type adjuvant such as a non-ionic based surfactant or blend is recommended.
	<b>Application:</b> For best results, use sufficient water volume to provide thorough coverage. Revus may be applied by ground, chemigation, or aerial application.		

- Do not apply more than 24 fl oz of product/A/season (0.40 lbs. a.i./A/season).
- Do not apply within 7 days of harvest (7 day PHI).

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

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