

100-780

2/25/2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Ms Teresa Cox  
Syngenta Crop Protection  
P.O.BOX 18300  
Greensboro, NC 27419

FEB 25 2010

Subject: Notification(s) for Label Revisions under PRN 98-10, and PRN 2007-4  
Storage and disposal update and other changes  
Request Alternate Brand Name "**Mentor**"

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 and 98-10 dated January 14, 2010 for:

**EPA Registration 100-780 Tilt 45W**

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and 98-10 and finds that the label change(s) requested falls within the scope of PRN-2007-4 and 98-10. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Banza Djapao of my staff at 703-305-7269.

Sincerely,

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

Please read instructions on reverse before completing form.

 <b>United States</b> <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
	<b>Notification</b>	

**Application for Pesticide - Section I**

1. Company/Product Number 100-780	2. EPA Product Manager Shaja B. Joyner	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Tilt 45W Fungicide	PM# 20	
5. Name and Address of Applicant (Include ZIP Code) Syngenta Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419  <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____ Product Name _____

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.).

Notification of label change per PR Notice 2007-4. This Notification is consistent with the guidance of PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Syngenta is amending the Storage and Disposal section of the label by Notification according to the directions stated in PR Notice 2007-4.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
*Certification must be submitted		If "Yes" Unit Packaging wgt.    No. per Container	If "Yes" Unit Packaging wgt.    No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 4 oz.		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input checked="" type="checkbox"/> Other <u>Pressure Sensitive</u>	

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Pat Dinnen	Title Label Group Leader	Telephone No. (Include Area Code) 336-632-2494
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
Signature <i>Pat Dinnen</i>		
3. Title Regulatory Specialist		
4. Typed Name Pat Dinnen		5. Date July 23, 2009

<p style="margin: 0;">United States <b>Environmental Protection Agency</b> Washington, DC 20460</p>	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <hr/> <b>NOTIFICATION</b>
	<b>Application for Pesticide - Section I</b>	
	1. Company/Product Number 100-780	

2. EPA Product Manager Shaja B. Joyner	3. Proposed Classification  <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Tilt 45W (alternate brand name Mentor)	PM# 20
5. Name and Address of Applicant (Include ZIP Code) Syngenta Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419  <input type="checkbox"/> Check if this is a new address	6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg. No. _____ Product Name _____

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

NOTIFICATION  
FEB 25 2010

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)  
 This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Syngenta Crop Protection, Inc. is submitting Notification of an alternate brand name for Tilt 45W, EPA Reg. No. 100-780. The proposed alternate brand name is Mentor.

**Section - III**

<b>1. Material This Product Will Be Packaged In:</b>				<b>2. Type of Container</b>	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
*Certification must be submitted		If "Yes" Unit Packaging wgt.    No. per Container	If "Yes" Unit Packaging wgt.    No. per container	<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 8 oz		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input checked="" type="checkbox"/> Other <u>Pressure Sensitive</u>	

**Section - IV**

<b>1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)</b>		
Name Teresa Cox	Title Regulatory Product Manager	Telephone No. (Include Area Code) 396-852-2257
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Regulatory Product Manager	
4. Typed Name Teresa Cox	5. Date January 14, 2010	

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Syngenta Crop Protection, Inc.  
P.O. Box 18300  
Greensboro, NC 27419-8300  
www.syngenta.com



**FedEx**

July 23, 2009

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202-4501

Attention: Ms. Linda Arrington

**SUBJECT: TILT® 45W FUNGICIDE  
EPA REG. NO. 100-780  
NOTIFICATION OF LABEL CHANGE PER PR NOTICE 2007-4**

Syngenta Crop Protection, Inc. is submitting Notification for Tilt 45W Fungicide, EPA Reg. No. 100-780. Syngenta is amending the Storage and Disposal section of the label by Notification according to the directions stated in PR Notice 2007-4.

Attached are:

- One copy of the label with the changes clearly marked
- One unmarked copy of the label
- A CD of the unmarked copy of the label for "Electronic Comparison and Review"
- Certificate with Respect to Label Integrity Form
- Completed EPA Form 8570-1

Thank you in advance for approving this Notification. If you have any questions, please contact me at 336-632-2494.

Sincerely,

Pat Dinnen  
Label Group Leader  
Regulatory Affairs

Enclosures

Syngenta Crop Protection, Inc.  
P.O. Box 18300  
Greensboro, NC 27419-8300  
www.syngenta.com



FedEx

January 14, 2010

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202-4501

Attention: Ms. Linda Arrington

**SUBJECT: TILT® 45W FUNGICIDE  
EPA REG. NO. 100-780  
NOTIFICATION OF AN ALTERNATE BRAND NAME AND REVISED  
CONTAINER HANDLING DIRECTIONS**

Syngenta Crop Protection, Inc. is submitting Notification of an alternate brand name for Tilt 45W Fungicide, EPA Reg. No. 100-780. The proposed alternate brand name is Mentor. Syngenta is also revising the Container Handling section since our packaging has changed from water soluble packets to an 8 oz bag. One copy of the label with the alternate brand name highlighted is attached, a CD of the label with the alternate brand name for electronic comparison, a Certificate with Respect to Label Integrity form, and EPA Form 8570-1.

Thank you in advance for approving this request. If you have any questions, please contact me at 336-632-2257.

Sincerely,

Teresa Cox  
Regulatory Product Manager

Enclosures

# Certification with Respect to Label Integrity

Version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
100-780	07/23/2009	000100-00780.20090723.TILT-45W_PRN2007-4_JUL2009.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Pat Dinnen  
Signature

July 23, 2009  
Date

Pat Dinnen  
Name (typed)

Label Group Leader  
Title

# Certification with Respect to Label Integrity

Version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
100-780	1/14/2010	000100-00780.20100114.TILT-45W_NOTIF_JAN2010.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Teresa J. Cox  
Signature

January 14, 2010  
Date

Teresa Cox  
Name (typed)

Regulatory Product Manager  
Title

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**Mentor**

**Fungicide**

Master Label

**NOTIFICATION**

**FEB 25 2010**

Active Ingredient: Propiconazole: (CAS No. 60207-90-1) .....	45.0%
Other Ingredients:	55.0%
Total:	100.0%

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

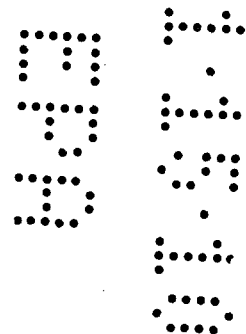
See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-780

EPA Est. --

SCP XXX

8 ounces  
Net Weight





<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.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</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>HOT LINE 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>	

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**PRECAUTIONARY STATEMENTS**

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**Hazards to Humans and Domestic Animals**

**CAUTION**

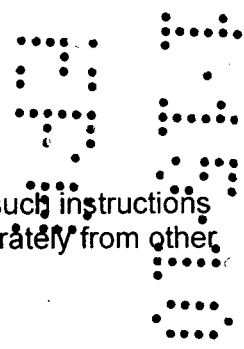
Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling.

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions 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.
- 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
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Environmental Hazards**

This pesticide is toxic to fish. 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. Do not contaminate water when disposing of equipment wash water. Refer to product labeling for use restrictions to protect endangered species.

**Physical or Chemical Hazards**

Do not use, pour, spill, or store near heat or open flame.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product should 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. All such risks shall be assumed by Buyer and User, and 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. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and Buyer and User assume the risk of any such use. SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **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.

Mentor should be used only in accordance with recommendations on this label or in separately published Syngenta supplemental labeling recommendations for this product.

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

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

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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

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## STORAGE AND DISPOSAL

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

### **Pesticide Storage**

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. 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 toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used 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 Handling**

Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

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## GENERAL INFORMATION

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Mentor is a broad-spectrum fungicide for the control of many important plant diseases.

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## GENERAL USE PRECAUTIONS

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**Important:** Do not use in nurseries, on turf, landscape plantings, or as a tree injection.

### **Rotational Crops**

Soybeans may be planted as a double crop following a cereal crop which has been treated with Mentor. Do not use hay, forage or fodder from the soybean crop as any component of animal feed or bedding.

To avoid possible illegal residues, do not plant any other crop intended for food, grazing, or any component of animal feed or bedding within 105 days of Mentor application to the preceding crop, unless the second crop appears on this label.

### **Spray Equipment**

Thorough coverage is necessary to provide good disease control.

To avoid spray drift, do not apply when conditions favor drift beyond the target area. Avoid spray overlap, as crop injury may occur.

Equip sprayers with nozzles that provide accurate and uniform application. Be certain that nozzles are the same size and uniformly spaced across the boom. Calibrate sprayer before use.

Use a pump with capacity to: (1) maintain 35-40 psi at nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10 percent of tank volume per minute. Use a jet agitator or liquid sparge tube for agitation. Do not air sparge.

Use screens 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.

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 experiment station recommendations.

### **Application Instructions**

**Aerial Application:** For those crops where aerial applications are indicated, apply in a minimum of 5 gals. 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.

**Ground Application:** Apply by ground equipment in a minimum of 15 gals. of water per acre.

**Application through Irrigation Systems (Chemigation) – Apply Mentor through irrigation equipment only to crops for which chemigation is specified on this label.**

Mentor, alone or in combination with other pesticides, which are registered for application through irrigation systems, may be applied through irrigation systems. 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, 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, 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.

### Center Pivot Irrigation Equipment

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

- Determine the size of the area to be treated.
- Determine the time required to apply  $\frac{1}{8}$ - $\frac{1}{2}$  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. 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 Mentor required to treat the area covered by the irrigation system.
- Add the required amount of Mentor 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 Mentor 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 Mentor solution has cleared the sprinkler head.

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

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



### **Mixing Instructions**

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary to maintain uniformity of the spray mixture. Maintain maximum agitation throughout the spraying operation. **Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.**

**Mentor Alone:** Add  $\frac{1}{3}$  of the required amount of plain water to the spray or mixing tank. With the agitator running, drop the required amount of Mentor into the tank all at once. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the Mentor has dissolved, and the material has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

**Mentor + Tank Mixtures:** Mentor is usually compatible with all tank mix partners listed on this label. Add  $\frac{1}{3}$  of the required amount of plain water to the spray or mixing tank. With the agitator running, drop the required amount of Mentor into the tank all at once. Continue agitation while adding the remainder of the water. Allow the Mentor to dissolve and the desired amount of other products recommended for tank mixture to become completely dispersed. Continue agitation to maintain a uniform suspension until all of the spray solution has been applied.

If using Mentor in a tank mixture, observe all directions for use, crops/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product, which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

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## CELERY

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**Early blight** (*Cercospora apii*) and **late blight** (*Septoria apicola*): Apply 0.25 lb./acre of Mentor on a 7-day schedule either by ground or aerial application. If desired, Mentor may be tank-mixed with an appropriate spreader-sticker.

**Notes:** To avoid possible illegal residues, (1) Do not apply more than 1.0 lb. of Mentor per crop, and (2) Do not apply during the last 14 days before harvest.

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## CEREALS

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### Wheat, Barley, Rye, Triticale and Oats

Mentor controls leaf diseases caused by **rusts** (*Puccinia* spp.), **powdery mildew** (*Erysiphe* spp.), **leaf blight** and **glume blotch** (*Septoria* spp.), **tan spot** (*Pyrenophora tritici-repentis*), **Helminthosporium leaf blight**, **spot blotch** (*Bipolaris sorokiniana*), **barley scald** (*Rhynchosporium secalis*), and **net blotch** (*Pyrenophora teres*). Highest yields are normally obtained when Mentor is applied to the emerging flag leaf. Mentor can be applied until the ligule of the flag leaf emerges. (Feekes growth stage 8). Do not apply after this growth stage to avoid possible illegal residues. Mentor may be applied earlier if disease symptoms appear (especially applicable to barley).

**Early season leaf disease suppression:** Apply 0.125-0.25 lb/acre of Mentor for suppression of tan spot, Septoria, and powdery mildew.

**Leaf disease control:** Apply 0.25 lb/acre of Mentor at first appearance of disease. Protecting the flag leaf is important for maximizing the potential yield.

**Foot rot** (*Pseudocercospora* spp.): Apply 0.25 lb./acre of Mentor plus half rates of other EPA-registered fungicides such as Topsin® M. Apply at tillering, but before elongation has occurred.

**Notes:** To avoid illegal residues: (1) Do not apply more than 0.25 lb/acre of Mentor per season. (2) Do not apply to oats within 40 days of harvest. (3) Do not graze or feed livestock treated forage or cut the green crop for hay or silage. After harvest, the straw may be used for bedding or feed. (4) Mentor-treated oat forage may be grazed and oat forage and hay may be fed to livestock.

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### CITRUS (NONBEARING)

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**Greasy spot** (*Mycosphaerella citri*) in nonbearing citrus: Apply 0.375 – 0.5 lb/acre during June – August.

**Note:** Do avoid possible illegal residues, do not apply to citrus that will bear harvestable fruit within 12 months.

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### CORN (FIELD CORN, FIELD CORN GROWN FOR SEED, SWEET CORN, AND POPCORN)

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For control of **Helminthosporium leaf blights** (*Helminthosporium maydis*, *H. turcicum*, and *H. carbonum*), **rusts** (*Puccinia* spp.), **gray leaf spot** (*Cercospora zeae-maydis*), and **eye spot** (*Aureobasidium zeae*), apply Mentor according to the following schedule:

**Helminthosporium Leaf Blights:** Apply 0.125-0.25 lb./acre of Mentor when disease first appears and continue on a 7 to 14-day schedule.

**Rusts:** Apply 0.25 lb./acre of Mentor when rust pustules first appear and continue on a 7 to 14-day schedule.

**Gray Leaf Spot and Eye Spot:** Apply 0.25 lb./acre of Mentor when disease first appears. If conditions favorable for disease persist, continue to apply on a 14-day schedule.

**Important:** To avoid possible illegal residues: (1) Do not apply Mentor to field and field corn grown for seed after silking. (2) Do not apply more than 1 lb./acre of Mentor per season. (3) Do not apply to sweet corn within 14 days of harvest. (4) Do not harvest field corn, field corn grown for seed, or popcorn for forage within 30 days of application. (5) Do not harvest sweet corn for forage within 14 days of application.

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### GRASSES GROWN FOR SEED (NEBRASKA, OREGON, WASHINGTON, IDAHO, AND MINNESOTA ONLY)

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Mentor controls **rusts** (*Puccinia* spp.), **powdery mildew** (*Erysiphe* spp.), and **Selenophoma stem eyespot** (*Selenophoma*) in perennial ryegrass, fescues, bluegrass, orchardgrass, and/or wheatgrasses.

Mix 0.25-0.50 lb. of Mentor (maximum 0.25 lb. on bluegrass) in a minimum of 20 gals. of water per acre for ground application, or in a minimum of 10 gals. of water per acre for aerial application. Apply when powdery mildew and Selenophoma infections or rust pustules are noticeable and increasing in number, in late spring or early summer. Repeat at 14 to 21-day intervals. To maximize control under severe rust pressure, use the higher rate of 0.50 lb./acre (except on bluegrass), and make applications at 14-day

intervals until the seed is mature. Do not apply more than 2 lbs./acre of Mentor per growing cycle. Make the last application at least 20 days before seed matures. For bluegrass, it is important to begin application early in the growing season.

**Important:** To avoid possible illegal residues, do not: (1) feed hay cut within 20 days of the last application, or (2) graze treated areas within 140 days of the last application.

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## PEANUTS

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Mentor may be applied via ground, aerial and chemigation equipment.

### **Peanuts - Mentor Alone For Foliar Disease Control**

**Late Leaf Spot (*Cercosporidium personatum*)** - Apply 0.25 lb./acre of Mentor beginning applications 35-40 days after planting or at the first appearance of disease. Continue applications on a 10 to 14-day schedule. Mentor also may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

**Early Leaf Spot (*Cercospora arachidola*)** - Apply 0.16-0.25 lb./acre of Mentor beginning applications 35-40 days after planting or at the first appearance of disease. Continue applications on a 14-day schedule. Under heavy disease pressure use higher recommended application rates. Mentor also may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

**Rust (*Puccinia arachidis*)** - Apply 0.25 lb./acre of Mentor beginning when pustules first appear. Continue on a 14-day schedule.

**Important:** To avoid possible illegal residues: (1) Do not apply more than 1 lb./acre Mentor per season. (2) Do not apply within 14 days of harvest.

### **Peanuts - Mentor Plus Chlorothalonil For Foliar Disease Control**

**Early and Late Leafspot** - Combinations of Mentor with products containing chlorothalonil may be used for early and late leaf spot control. Apply 0.125 lb. of Mentor as a tank mixture with 0.75 lb. active ingredient chlorothalonil per acre. Use the following table as a guide to determine the appropriate amount of chlorothalonil to use in the tank mixture. Begin applications 35-40 days after planting or at the first appearance of disease and continue applications on a 10 to 14-day schedule. Mentor plus chlorothalonil also may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

**Important:** Use the following table as a guide to determine the amount of product needed for the recommended tank mix ratios of Mentor with various chlorothalonil formulations. To avoid possible illegal residues: (1) Do not apply more than 1 lb./acre of Mentor per season. (2) Do not apply within 14 days of harvest. (3) Do not graze livestock in treated area. (4) Do not feed hay or threshings from treated fields to livestock.

Number of acres to be treated	Amount of Mentor required for treated area (total acres to be treated)	Amount of chlorothalonil product required for treated area by formulation type (total acres to be treated)	
		6 lbs. a.i./gal.	
10	1.25 lbs.	10 pts.	
50	6.25 lbs.	50 pts.	
100	12.50 lbs.	100 pts.	

**Peanuts - Mentor Alone for Southern Stem Rot Control**

For the control of Southern Stem Rot (*Sclerotium rolfsii*), apply Mentor using one of the following schedules:

- A. Apply 0.25 lb./acre of Mentor to the crown and pegging zones of the plant using chemigation or directed ground application. Begin applications 45 days after planting, or at the first appearance of disease, and repeat on a 14-day schedule.

**Important:** To avoid possible illegal residues: (1) Do not apply more than 1 lb. Mentor per acre per season. (2) Do not feed green vines to livestock or graze livestock in treated area. (3) Do not apply within 14 days of harvest.

- B. Apply 0.50 lb./acre Mentor to the crown and pegging zones of the plant using chemigation or directed ground application. Make 2 applications: the first at pegging (approximately 60 days after planting) or at the first appearance of disease, and the second application 3-4 weeks later.

**Irrigation:** When applying Mentor in irrigation water for Southern Stem Rot Control of Peanuts, use a minimum of ¼-½ inches of irrigation water per acre. Use enough water so that the fungicide penetrates the peanut canopy and reaches the crown of the plant where *Sclerotium rolfsii* is most active.

**Ground Application:** When applying Mentor by ground equipment, use a minimum of 20-60 GPA directed to the crown of the plant where *Sclerotium rolfsii* is most active. For best disease control, the higher carrier volume is recommended. Canopy openers also may be used to improve fungicide placement.

**When applying Mentor via irrigation or as a directed ground application, additional methods should be employed for leaf spot control.**

**Banded Application:** For banded applications, the treated area is the area covered by the band, not total cropland planted. The following formula can be used to calculate the amount of Mentor needed per acre of crop when banded applications are made.

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

**Important:** To avoid possible illegal residues: (1) Do not apply more than 1 lb. Mentor per acre per season. (2) Do not feed hay from treated fields to livestock. (4) Do not apply within 21 days of harvest.

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**PECANS**

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Ground application (enclosed cabs only): Apply in sufficient water to provide for full coverage.

Aerial: Apply in a minimum of 20 gallons of water.

**Pecan scab** (*Cladosporium caryigenum*), **downy spot** (*Mycosphaerella caryigena*), **liver spot** (*Gnomonia caryae pv pecanae*), **vein spot** (*Gnomonia nerviseda*), **zonate leaf spot** (*Cristulariella moricola*) and **powdery mildew** (*Microsphaera penicillata*) : Apply 0.25 - 0.50 lb./acre on a 14 day schedule during bud break and pre-pollination sprays. Apply 0.375 – 0.50 lb/acre during nut formation and cover sprays. Use higher rates when disease pressure is heavier. Do not apply after shuck split.

**Other foliar diseases:** Mentor may be applied for control of mid to late season foliar diseases at 0.25 lb/ acre with other registered pecan products labeled for these diseases. Observe all directions, precautions, and limitations for the other products.

NOTES: Do not graze livestock in treated areas or cut treated cover crops for feed. Observe endangered species restrictions.

**Endangered Species Restrictions:** The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species, or adversely modify their habitat, is a violation of federal laws. The use of this product in pecans is controlled to prevent death of harm to endangered species. Do not use Mentor in the following counties:

State	Counties		
Alabama	Colbert Greene Jackson Lamar	Lauderdale Limestone Madison Marshall	Morgan Pickens Sumter
Arkansas	Clark Clay Cross	Dallas Hot Springs Randolph	Sharp St. Francis
Kentucky	Ballard Butler Green	Hart Livingston McCracken	Taylor Warren
Mississippi	Lowndes	Monroe	Noxubee
Missouri	Gasconade Jefferson Miller	Osage Ripley St. Louis	Wayne
Tennessee	Bedford Decatur Hardin	Lincoln Marshall Maury	Perry Sequatchie

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**PINEAPPLE (HAWAII ONLY)**

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Butt rot disease of pineapple (*Ceratocystis paradoxa*): apply 0.25 lb. of Mentor per 500 gals. of water. Treatments can be made in either a cold or hot water dip.

**Cold Water Dip:** Immerse crowns to give thorough wetting, remove and allow to drain.

**Hot Water Dip:** Maintain water temperature at 125°F (52°C). Soak crowns for 20-30 minutes, remove and allow to drain.

**Important:** To avoid possible illegal residues: (1) Do not use treated crowns for food or feed. (2) Do not graze while plant is growing. (3) Do not graze tops until fruit is harvested. (4) Dispose of used dip solution according to local, state, and federal regulations.

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**RICE (DO NOT USE IN CA)**

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In rice, Mentor controls **sheath blight** (*Rhizoctonia solani*), **brown leaf spot** (*Helminthosporium oryzae*), **narrow brown leaf spot** and **brown blotch** (*Cercospora oryzae*), **leaf smut** (*Entyloma oryzae*), **sheath spot** (*Rhizoctonia oryzae*), and **black sheath rot** (*Gaeumannomyces graminis*). Mentor also suppresses **stem rot** (*Sclerotium oryzae*). Apply Mentor on either of the following schedules as an aerial spray in 5-10 gals. of water per acre:

- A. 0.375 lb./acre at first internode elongation (up to 2-inch panicle) and repeat at swollen boot. Make the second application 10-14 days after the first application, but before the boot splits and head emerges. Mentor provides best control of sheath blight when the first application is applied at disease appearance in the field. The first application is recommended when 5 percent or fewer of the tillers are infected.
- B. 0.625 lb./acre at first internode elongation (up to 2-inch panicle). The 0.625 lb. rate is recommended if greater than 10 percent of the tillers are infected with sheath blight. If disease reappears, use another registered fungicide for the second application.

**Important:** To avoid possible illegal residues: (1) Do not apply to stubble or ratoon crop rice; (2) Do not use in rice fields where commercial farming of crayfish will be practiced; (3) Do not drain water from treated rice fields into ponds used for commercial catfish farming; and (4) Do not use water drained from treated fields to irrigate other crops.

**Endangered Species Restrictions:** The use of Mentor (propiconazole) on rice is restricted to protect the endangered fat pocketbook pearly mussel (*Potamilus capax*) and its habitat. Use is prohibited in the following areas of AR:

**Mississippi County** - Within the basin that drains directly into the Right Hand Chute of Little River, south of Big Lake National Wildlife Refuge.

**Poinsett County** - Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River and the St. Francis Floodway. Use is also prohibited west of Rt. 140 and north of Rt. 63 at the siphon near Marked Tree. Except that the prohibited area does not include the area bounded by Arkansas highway 373 on the west, highway 63 on the east, and highway 14 on the south.

**Cross, St. Francis, and Lee Counties** - Between Crowley's Ridge and the levee east of the Right Hand Chute of Little River, and the St. Francis Floodway as far south as the confluence of L'Anguille River (Lee County).

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**Wild Rice (MN only)**

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For control of **Helminthosporium leaf blight** and **brown spot** (*Bipolaris* spp.), apply 0.375 lb./acre of Mentor per acre at both booting and heading, or make a single application of 0.50 lb./acre booting. For aerial applications, apply in a spray volume of 5-10 gals./acre.

**Important:** Do not use water drained from treated fields to irrigate other crops.



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**STONE FRUIT: APRICOTS, CHERRIES (SWEET AND TART), NECTARINES, PEACHES, PLUMS, PLUMCOT, PRUNES AND CULTIVARS AND/OR HYBRIDS OF THESE.**

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Stone fruit diseases are most effectively controlled by ground application, using sufficient water volume to provide thorough and uniform coverage.

**Brown Rot Blossom Blight (*Monilinia* spp.):** Apply 0.25 lb./acre of Mentor at early bloom stage. If disease pressure is low, a second application of 0.25 lb./acre may be made as needed through petal fall. Under conditions of high disease pressure and/or very susceptible varieties, make a second application from 75-100% bloom and a third application at petal fall.

**Fruit Brown Rot (*Monilinia* spp.):** Apply as needed a maximum of 2 sprays of Mentor at 0.25 lb./acre during the preharvest period up to the day of harvest (0 day PHI).

**Powdery Mildew (*Podosphaera* spp.) and Cherry Leafspot (*Blumeriella jaapii*):** Follow the brown rot blossom blight schedule. Make up to 2 additional applications at 0.25 lb./acre on a 10-14 day interval from the end of petal fall to harvest.

**Notes:** (1) Do not apply more than 0.75 lb /acre of Mentor per crop from early bloom through petal fall. (2) Do not apply more than 0.5 lb./acre /crop of Mentor from early bloom through harvest. (3) Do not apply more than 1.25 lb./acre /season of Mentor.

*Precaution: Applications of Mentor during bloom to Stanley plums have occasionally caused fruit to be less oval in shape and smaller in size at harvest. To avoid this, do not apply Mentor to Stanley plums earlier than 21 days prior to harvest.*

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**SUGARCANE (HAWAII ONLY)**

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**Pineapple disease of sugarcane (*Ceratocystis paradoxa*):** Apply Mentor to cut seed pieces using 0.25 lb./500 gals. of water. Treatments can be applied in either a cold or hot water dip. Do not use treated seed pieces for food or feed purposes. Dispose of spent dip solution according to state and federal regulations.

**Cold Water Dip -** Immerse seed pieces to give thorough wetting, remove, and allow to drain.

**Hot Water Dip -** Maintain water temperature at 125°F (52°C). Soak the seed pieces for 20-30 minutes, remove, and allow to drain.

**Conveyer Spray Treatment:** Add 0.25 lb of Mentor to 500 gallons of water (1:17000). Treat seed pieces with Mentor/water solution using in-line directed spray to sufficiently wet cut ends.

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