

2016-5918  
2016-11-02

**PRINCIPAL PANEL**

Bloomtime Biological™ FD Biopesticide

Fast Dissolving Powder

“LIVE ORGANISM”

For suppression of fire blight in apple and pear trees.

COMMERCIAL (AGRICULTURAL)

POTENTIAL SENSITIZER  
CAUTION: EYE IRRITANT

READ THE LABEL BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

GUARANTEE: *Pantoea agglomerans*, strain E325 (NRRL B-21856)  $1 \times 10^{10}$  CFU/g (min.)

REGISTRATION NUMBER 28436 PEST CONTROL PRODUCTS ACT

Net Contents: 100g -1 kg (150g)

VERDESIAN LIFE SCIENCES U.S., LLC  
1001 Winstead Drive, Suite 480  
Cary, NC 27513  
United States  
919-825-1901

## SECONDARY PANEL

Mode of Action: Bloomtime Biological™ FD Biopesticide is a bacterial antagonist. Its mode of action has been characterized as competitive inhibition against the fire blight bacteria, *Erwinia amylovora* (Ea). When Bloomtime Biological™ FD Biopesticide is applied to open pear or apple flowers, it rapidly colonizes the flora tissues. Because it colonizes the same sites and utilizes the same nutrients as Ea, this competitive exclusion by Bloomtime Biological™ FD Biopesticide can greatly suppress the ability of Ea from reaching the critical numbers necessary to trigger fire blight disease development.

DO NOT APPLY THROUGH ANY TYPE OF IRRIGATION SYSTEM

### DIRECTIONS FOR USE

For suppression of fire blight on pears and apples, apply Bloomtime Biological™ FD Biopesticide at a rate of 375 to 500 g of product per hectare in 1000 to 2000 L of water per hectare. Apply the higher rate (500 g product/ha) under conditions of high disease pressure. Make first application at 15-20% bloom, followed by a second application at full bloom to petal fall. A maximum of two applications per season may be made. Ensure thorough coverage of the blooms.

Bloomtime Biological™ FD Biopesticide is compatible with streptomycin and should be used with it in an integrated fire blight suppression program. Copper-based product are incompatible with Bloomtime Biological™ FD Biopesticide.

DO NOT APPLY AFTER FRUIT SET.

Spray solution should be used within 24 hours of mixing.

### **NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:**

The DIRECTIONS FOR USE for this product for the use described below were developed by persons other than VERDESIAN LIFE SCIENCES U.S., LLC and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. VERDESIAN LIFE SCIENCES U.S., LLC itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold VERDESIAN LIFE SCIENCES U.S., LLC harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

Product Name/Reg.No #	Bloomtime Biological FD Biopesticide/ 28436
Pest(s)	Suppression of fireblight
Site (crop)	Caneberries, Saskatoon berries, non-bearing pome fruit (nursery stock)
Method of application	Foliar spray
Rate of Application and Spray Volume	375 - 500 grams per hectare in a minimum of 1000 to 2000 L water per hectare

Number of applications	Maximum of 2
Application Interval	As per Application timing
Application timing	<b>Saskatoons, Caneberries:</b> 1st application at 15-20% bloom, 2nd application at full bloom to petal fall. <b>Non-bearing pome fruits:</b> 1st application should be made at 15-20% bloom, 2nd application at full bloom to petal fall.
Pre-harvest interval	0 days
<p>Mode of Action: Bloomtime Biological™ FD Biopesticide is a bacterial antagonist. Its mode of action has been characterized as competitive inhibition against the fire blight bacteria, <i>Erwinia amylovora</i> (Ea). When Bloomtime Biological™ FD Biopesticide is applied to open caneberry, Saskatoon and pome fruit flowers, it rapidly colonizes the flora tissues. Because it colonizes the same sites and utilizes the same nutrients as Ea, this competitive exclusion by Bloomtime Biological™ FD Biopesticide can greatly suppress the ability of Ea from reaching the critical numbers necessary to trigger fire blight disease development.</p>	

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN.

May cause sensitization. Avoid contact with skin and eyes or clothing. Avoid breathing dust and spray mist. Workers (including mixer/loader, applicators, and early-entry workers) must wear a long-sleeved shirt, long pants, shoes plus socks, waterproof gloves and a NIOSH approved respirator with any N-95, R-95, P-95 or HE filter for biological products when mixing/loading or applying the product and during all cleanup/repair activities. Workers wearing appropriate PPE can enter treated areas during the restricted entry interval (REI) of 4 hours. Wash thoroughly with soap and water after handling. Remove contaminated clothing and follow manufacturers directions for cleaning/maintaining personal protective equipment (PPE) before reuse. If no such instructions are available, use clothing detergent and hot water for cleaning all washable PPE. Keep and wash PPE separately from other laundry.

## ENVIRONMENTAL PRECAUTIONS

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuarine or marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

Airblast or Mist blower applications: DO NOT direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. DO NOT apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

DO NOT apply this product by air.

To reduce runoff from the treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil ( e.g. soils that are compacted or fine textured such as clay). Avoid application of this product when heavy rain is forecast. Applications of Bloomtime Biological™ FD Biopesticide should be avoided on orchards abutting newly-planted conifer forestry blocks.

#### FIRST AID:

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

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

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

STORAGE: Bloomtime Biological™ FD Biopesticide must be kept frozen in the original container at temperatures between -10°C to 0°C. The product may be held in refrigerated storage below 4 °C for a short period of time (e.g. 1 to 2 weeks) prior to use.

#### DISPOSAL:

1. Triple-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.