

No resistance is good resistance

Resistance management is important. UAP recommends rotating products between crops.

Resistance to SERENADE is unlikely to develop as disease organisms have great difficulty overcoming the multiple modes of action. In addition, the disease cell membrane destruction caused by SERENADE is difficult for the pathogen to develop resistance to.

In numerous greenhouse studies, resistance has been unable to be forced. Rotating with SERENADE will help extend other chemistries.

Recognized and certified

SERENADE's unique chemistry has earned it a number of certifications: Japanese Agricultural Standards (JAS), Washington State Department of Agriculture (WSDA), America's National Organic Program (NOP), and Organic Materials Review Institute (OMRI). These certifications allow for easy export of SERENADE treated fruits and vegetables.

For more information see your crop input dealer or log on to www.uap.ca for full label information.



Rotate to manage resistance

Rotating crop protection products is a key practice to prevent the build-up of weed, insect or disease resistance. Different products have different risks for developing resistance, and scientists recommend using high-risk products more sparingly. UAP encourages farmers to rotate their crop protection products to ensure they continue to be effective.



Some things just work.



UAP Canada markets over 100 other fungicide, insecticide and herbicide products. Choose from adjuvants like LI 700®, herbicides like Sword®, Oracle®, and Turboprop®, insecticides like Rimon®, Lagon® and Pounce®, or fungicides like Ranman®, Gavel® and Potato ST 16%®.

Look to UAP to deliver flexibility, freedom and choice in your crop protection decisions.

Call your nearest crop input dealer today for UAP products. Always read and follow label directions.

www.uap.ca

Western Canada: 1-800-561-5444

Ontario & Maritimes: 1-800-265-5444

Quebec: 1-800-361-9369

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SERENADE®

It just works.

Keep your fruit and vegetable crops from getting into a rough spot. With three modes of action, SERENADE harnesses the power of biochemistry in a way that sets it apart from other fungicides, protecting your crops from diseases and leaving fruits and vegetables unblemished.

Use Mother Nature to fight Mother Nature

The best way to outwit Mother Nature is by using her own devices against her. SERENADE is a broad-spectrum fungicide derived from a natural soil bacterium, and is registered for the control of downy and powdery mildews, bacterial blight, white and gray moulds, Sclerotinia, Botrytis, and fire blight in apples, as well as many other diseases in fruit and vegetable crops.

How it works:

The soil bacteria found in SERENADE, *Bacillus subtilis* – QST713 strain, produces a unique and patented combination of three groups of biochemicals called *lipopeptides*, which make it more effective. It also harnesses the power of biochemistry, providing three benefits:

1. Broad anti-fungal activity
Three different classes of Lipopeptides kill fungal cells by puncturing the cell membranes. They are highly stable and resistant to elevated temperature and pH extremes. They do not require time or weather to activate.
2. Anti-bacterial activity
Contains more than three major chemical classes that produce activity on pathogens and remain stable through the drying process. They block bacterial cell protein production and cell wall formation.
3. Plant activating
Elicits plant responses through Induced Systemic Resistance (ISR), resulting in enhanced yield and quality, proven with bioassay and RNA analysis.

SERENADE is safe to use on many crops.



Untreated pathogen spore on plant leaf.

Serenade's lipopeptides puncture cell membranes, killing the pathogen spore.

Appressorium is destroyed, preventing the spread of disease.

Fast acting with faster results

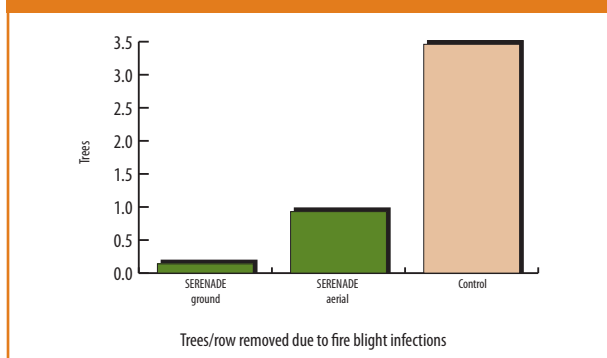
SERENADE has a minimal re-entry interval, so you can spray your plants and be back in the field as soon as the spray dries. Its easy-to-use formula is highly stable, while resistant to elevated temperatures and pH – you can even spray the same day as harvest. SERENADE also offers excellent disease management.

Controlling disease in fruit and vegetable crops

Diseases affecting fruit and vegetable crops, such as downy and powdery mildews, Sclerotinia and Botrytis, can severely hinder growth and production, resulting in reduced quality, lower yields and profit loss.

SERENADE trials showed that it was equivalent to the conventional standard. It also has an advantage; SERENADE is a protectorate that offers residual control of 7 to 14 days.

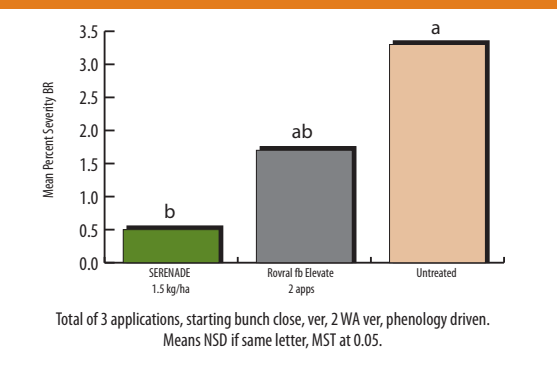
THE PERFORMANCE OF SERENADE: PROVEN & ACCEPTED SERENADE vs Fire Blight in Apples Ron Britt., Yakima, WA – 2003



Apply SERENADE just like any other crop protection product. The SERENADE spores cover the leaf surface and prevent fungal spores from penetrating and infecting the plant. The lipopeptides then break down pathogen cell membranes, causing them to rupture, collapse and die, and preventing pathogens from multiplying.



SERENADE FOR BOTRYTIS BUNCH ROT OF GRAPES (W. McFadden-Smith, Vineland, ONT, CAN – 2007) #70597



Use SERENADE to protect apples, blueberries, grapes, lettuce and tomatoes, as well as numerous other fruit and vegetable crops.

SERENADE FOR WHITE MOULD SCLEROTINIA CONTROL IN LETTUCE (F. Charbonneau, HectAg, Quebec, CAN – 2007) #70596

