

Workshop Title: New Biofungicides for Strawberry, Apple, Grape

Speaker and their title: Claude Dubois, AEF Global

Executive Summary: A review of AEF Global Biofungicides and their uses with Apples, Grapes, and Strawberries. All products are approved for organic agriculture.

Notes:

Active ingredients in Biofungicides:

- Citric acid and Lactic Acid (Tivano)
- Garlic extract (Buran)
- Potassium bicarbonate (Sirocco)

Tivano:

You don't need to apply the product before you see the symptoms.

Approved by Ecocert Canada.

The pH of water should be below 6.5

Suggest you use product with surfactant (hard with organic). If you use it without, they suggest a higher rate, make sure you have very good coverage.

Sidenote on spray coverage: You can use water sensitive paper to see what kind of coverage you're getting with your spray. Clip it under the leaf under the canopy so you can see if it's getting good coverage.

Website: sprayers101.com. Lots of info on how to evaluate spray coverage. By reducing size of droplet, you improve coverage, but smaller droplets can increase the drift. Water sensitive paper will help you figure out the best balance.

Is the disease on the underside of leaf? Need to know this info as the coverage is so important.

Tivano has been used most for strawberries for powdery mildew and angular leaf spot.

Angular Leaf Spot:

Spring infection from

- Debris, infected leaves
- Infected plants/transplants showing no symptoms

Under high moisture condition, need good coverage of Tivano on the underside of leaves.

Powdery Mildew:

High moisture is conducive.

The more you apply the product you won't necessarily get better coverage. Surfactant helps reduce the rate or coverage that's needed, but if you make sure you have good coverage, then it should be fine without surfactant.

Product will stop the spread and decrease the severity of angular leaf spot.

Buran:

Best for grapes and apples

Works for Apple scab and powdery mildew.

How does the product work?

For mildew, works best at early stage. It's not a protecting product but an early post-infection product.

Sirocco

Strawberries and apples and grapes

Should use rate as low as possible.

How does the product work? Increases pH on leaf surfaces.

Powdery Mildew on Grapes:

The fruit are very sensitive to infection. Early infection shows no symptoms. By the time you start to see signs of the disease, it's usually too late. Critical period: bloom to four weeks after bloom. If you do good pruning and have good circulation, you'll reduce the need for treatment. Powdery mildew is also an entry point for a secondary disease, so you want to avoid it!

Apple Scab

Primary infection is everything. You have to manage the risk of infection at the early stage. If you manage the early treatment, you can decrease your treatment later in the season.

Sanitation is very effective. Shred leaves in autumn, shred again in spring. You want to facilitate the leaves decomposition. The infection usually starts when the leaves are wet, a little after. Should apply during the first stage of infection.

Using Buran for Apple Scab: it's important to make sure you have good coverage on the top of the tree. Use Buran after the rain.

Combining Sulphur and Buran for apple scab is effective. Use sulphur as protective and Buran as post infection.

Questions:

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Halifax Harbourfront Marriott Hotel, NS**

Possible to just dip the plant as a preventative thing?

Looking into that. It's a wise way to apply early on, before they get into the field.
Wise to target the propagation stage.

Using Buran for Apple scab after each rainfall?

If you are using a protectant like sulphur, but there was a period when there might have been an infection, after heavy rain, then you can use Buran.

In grapes:

With Buran and Serrico, you don't need any surfactant and you shouldn't use any.