



OxiDate® 2.0

Control of Bacterial Leaf Blight in Onions

Control of Bacterial Leaf Blight with OxiDate 2.0 in Onions, 2011

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Crop: Seeded Yellow Onion (*Allium cepa* 'Granero')

Organism: Bacterial Leaf Blight (*Xanthomonas campestris*)

Bacterial Leaf Blight (BLB) in Onion caused by bacterium *Xanthomonas campestris* can cause significant blighting of outer leaves resulting in stunted plants and reduced size of bulbs. The disease favors high temperatures, coupled with humid and overcast conditions. Copper based fungicides control BLB with only mixed results and there is concern about pathogen resistance.

The objective of this study was to evaluate OxiDate 2.0 as a copper alternative to control BLB in Onions. Transplanted yellow onions 'Granero' were planted on April 18, 2011. Plants were evaluated for percentage of leaf blight, phytotoxicity, and total yield.

Features & Benefits

- Zero-Hour REI, Zero-Days to Harvest
- Exempt from Pesticide Residue
- No Mutational Resistance
- Also Effective Against Bacterial Soft Rot & Botrytis Storage Rot

Application Program

- Treatments were applied starting two weeks pre-bulbing with a total of six sprays applied every seven days (07/11/11-08/15/11).
- Plants were inoculated with *Xanthomonas* at seven and 14 days post-bulbing (07/22 and 07/29).
- All treatments were applied using a spray volume equivalent to 25 gallons per application.

Table 1. Treatments and Rates

Treatment	Rate/Acre
1. Untreated Control	N/A
2. OxiDate 2.0 + Kinetic (Non-Ionic Surfactant)	1.0% v/v + 0.125% v/v

Summary & Results:

The *Xanthomonas* leaf blight infection of the susceptible transplanted yellow variety 'Granero' responded well to inoculation with the bacterial isolate collected previously from eastern Colorado. OxiDate 2.0 provided excellent control of the bacteria as noted by the significant reduction in percent of foliar damage on one or both evaluation dates and reduced effects of the pathogen when compared to the control that has nearly 70% damage on either evaluation date. Total yield was increased by up to 8.0% in OxiDate 2.0 treatment.

Weekly applications of OxiDate 2.0 in combination with a non-ionic surfactant can provide excellent control of BLB in Onions. When infection is already well established, OxiDate 2.0 can be rotated with residual bactericides such as copper based formulations to provide additional protection. Rotations with OxiDate 2.0 can reduce the number of copper applications and thereby decrease the total amount of residual copper that gets released into the environment. OxiDate 2.0 can also be an excellent tool in disease resistance management.

For full results, please contact BioSafe Systems.

Figure 1. OxiDate 2.0 and Xanthomonas Leaf Blight

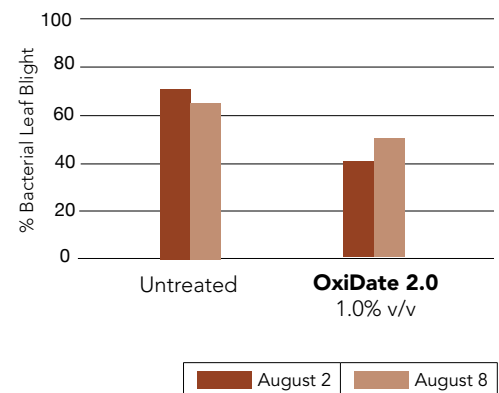


Figure 2. OxiDate 2.0 and Onion Yield

