

Update on Potato and Tomato Late Blight Control in Organic Production

by

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Late blight is caused by *Phytophthora infestans*, a fungus-like organism. Few plant diseases can rival the widespread misery and despair of late blight. Many tomato and potato growers are getting their first introduction to late blight. I'm afraid that many are unprepared for the level of destruction that this pathogen can cause.

The pesticide, Champ WG (copper hydroxide), is approved for late blight control in organic tomato and potato production (<http://www.umaine.edu/umext/potatoprogram/Pest%20Control%20Guide/Organic.pdf>). As with any pesticide, there are specific procedures that need to be followed when using Champ WG.

The applicator and other handlers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, shoes, socks, and protective eyewear. First and foremost, workers need to be trained under appropriate WPS (worker protection standards). This includes having a decontamination kit available for each worker. Workers must be notified orally that the treated areas may be highly irritating to their eyes and to avoid rubbing their eyes. Should eyes get residue in them, flush with water. An eye-flush container must be made available before entering the treated area for 7 days following application. Reentry into the treated area for 24 hours after application is prohibited unless coveralls, chemical resistant gloves shoes, socks and protective eyewear is worn. **Failure to do any of the above is a violation of pesticide laws.** Greenhouses and tunnel houses are an application site that applicators and workers should exercise extreme caution.

Severe over application of copper hydroxide in greenhouses this year has been reported (see attached photo). The legal Champ WP rate in the greenhouse is the same rate as in the field, that being 1 to 1.5 pounds (up to

4 pounds in severe cases) per acre for potatoes and 2 to 4 pounds per acre for tomatoes.

Greenhouse tomato coverage is about 1 ounce per square foot (the 1 ounce per square foot rate is equivalent to 340 gallons per acre in a field rate). Two level tablespoons of Champ WG per 1000 square feet of greenhouse is equivalent to 1 pound per acre. One level tablespoon of Champ WG per gallon of water is equivalent to 1 pound per 100 gallons.

For example, a greenhouse that is 50 feet by 20 feet is 1000 square feet. Two level tablespoons on this area is equivalent to 1 pound per acre. These two level tablespoons would be mixed with 8 gallons of water. This method uses the rate and calculates the water carrier.

Another method is to calculate the carrier and put the appropriate rate in the solution. At the water rate of one ounce per square foot, one gallon should cover a 10 foot by 13 foot area. One teaspoon (NOT tablespoon) of Champ WG per gallon is equivalent to 1.3 pounds per acre.

If your plants are blue – you are using too much copper hydroxide and likely have made an illegal pesticide application. Know the rules, know the rates, know the label. It's the law.

