

Protective sprays for bacterial spot on tomato

Recognize the problem

Bacterial spot disease may appear wherever tomato and peppers are grown. It affects leaves, stems, fruits, seeds and flowers. Symptoms are small, dark-grey, greasy-looking spots. When severe, leaves shrivel and die. Bacterial spot is similar to another disease of tomato, bacterial speck. Symptoms of bacterial speck are small dark spots, initially surrounded by a yellow halo, whereas bacterial spot disease does not have this halo. In contrast, fungal disease spots are often brown, necrotic and have structures inside spots.

Background

The bacteria that cause the disease spread rapidly. They survive in infected plants, debris from infected plants, and in the seed. They do NOT spread by wind. Rain showers and high humidity make it easy for bacteria to spread to other tomato plants. People in the field also spread the disease. Prevention is key to disease control. Once the disease has started in a field, curative control is NOT possible. Copper sprays onto tomato plants may reduce the rate of bacterial spread. Copper products, when applied with mancozeb products, allow more copper to become available (although mancozeb is a fungicide). Spraying mancozeb alone does not help. Copper products are moderately poisonous to you and animals.

Management

- Consider control when 1 -3 plants out of 10 plants in the field show early symptoms, particularly after transplanting when plants are about 15 cm.
- When mixing and spraying a chemical, wear a spray suit, protective gloves and masks.
- Apply full rate of copper at 80 grams to 16L of water and half rate of 16g of mancozeb in 16L of water. But double check labels as products may differ.
- Fill the container to half and add the chemical. Close and mix well
- Fill to the mark, but not entirely to the edge of the sprayer to avoid overspill
- Spray plants with a very good coverage to prevent disease spread.
- Continue at 7-day intervals during wet weather at least three times, if disease pressure increases. Rain may wash off the chemicals.
- Copper is toxic to fish, so do not spray near water bodies
- Pre-harvest interval is 3 days
- Restricted re-entry interval is 1 days after spray
- If the disease is on most plants, any spray is too late

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Xanthomonas campestris*

Bacterial spots, small, angular, greasy, unstructured. (Photo by Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org)



Spotty, dark grey, unstructured, greasy bacterial spots on tomato fruit. (Photo by Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org)



The recommendations in this factsheet are relevant to: Zambia



Authors: Mtawa Mkulama
Zambia Agriculture Research Institute ZARI
tel: +260968280140 email: mtawa@outlook.com

Edited by Plantwise.