

# PLANT DISEASE CONTROL NOTES

EXTENSION DIVISION • VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Revised  
January 1979

## VEGETABLE DISEASES

.P.I. Control Series 180

### BACTERIAL SPOT OF PEPPERS

FEB 27 1979

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Bacterial spot caused by the bacterium, *Xanthomonas vesicatoria*, is one of the most serious leaf and fruit diseases of sweet peppers in Virginia. The disease is also capable of infecting and causing similar damage to tomatoes. Infection usually occurs through natural openings (stomata) on leaves, stems, or through injuries caused by wind-blown sand, insect punctures or other mechanical wounds. The causal bacteria is seed-borne and is capable of overwintering on old plant debris in the soil. Frequent, warm driving rains favor the development of the disease. Seedlings infected in the plant bed carry the disease to the field and are sources of further infection. Contaminated seed is a common source of primary infection. Secondary spread of the disease in the field occurs from the combination of driving rains and movement of equipment.



**SYMPTOMS:** Infected plants in the seed-bed usually have small irregular, black spots along the edge of the first leaves. Older plants develop small, pale green, slightly raised lesions on the underside of the leaf. As the spots enlarge they become straw-colored with dark brown margins. Generally the spots, which are 1/8 to 1/4 inch in diameter, do not run together. Severely infected leaves usually turn yellow and drop. Some leaves may drop while still green. Young infected seedlings may lose all but their top leaves.

*Bacterial spot of pepper. Severely spotted leaves usually turn yellow and drop.*

The first symptoms on the fruit are dark colored raised spots, frequently surrounded by a water-soaked border. As the lesions enlarge they become brown and rough with a cracked and warty appearance. During moist weather secondary organisms may enter through these lesions.

#### CONTROL:

1. Use transplants that come from fields certified as free from disease. This disease is difficult to control in the field; therefore, seedling infection should be prevented at all cost.
2. If plants are grown in permanent seedbeds, disinfest the soil with steam or chloropicrin-methyl bromide before planting.
3. Rotation of fields for at least three years with peppers or tomatoes.

4. Cultivate and handle plants only when they are dry. Avoid overhead irrigation.
5. Bury infected plant debris after harvest.
6. Maintain a high balanced fertility, based on a soil test.

Trade and brand names are used only for the purpose of information and the Virginia Cooperative Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

#### KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.

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