

Plant Disease Notes

Potato Virus Y

ANR-879

Potato virus Y (PVY) occurs worldwide but has a narrow host range, affecting plants in the Solanaceae family (such as tomatoes, potatoes, and peppers).

Symptoms. On tomato, symptoms vary according to PVY strain, plant age, varieties infected, and environmental conditions. General symptoms on tomato are faint mottling and slight distortion of the leaves. Severe symptoms include dark brown, dead areas in the blade of nearly mature leaflets. Leaflets at the terminal end of a leaf usually are most adversely affected, often showing severe necrosis. In many cases, all leaflets are affected. Leaves formed after the onset of PVY exhibit mild wrinkling, slight distortion, and mild mottling. Leaflets of plants infected for some time are rolled downward with curved petioles (leafstalks), giving the plant a drooping appearance. Stems often show a purplish streaking, but no symptoms are produced on the fruit. Mature plants are stunted and unthrifty, and yield is reduced. Near total crop failures have been reported when PVY was detected early in the season and high aphid populations were present.

Persistence and Transmission. PVY is transmitted in the nonper-

sistent manner by many aphid species. Aphids can acquire the virus in less than 60 seconds from an infected plant and transmit it to a healthy plant in less than 60 seconds. The virus may be retained by the aphid for longer than 24 hours if feeding does not occur. PVY can also be transmitted mechanically. Potato is an important source of the virus for tomato and other solanaceous crops. The virus does not appear to be seed transmitted.

Control. Strategies for controlling PVY include the following:

- Eradicate all biennial and perennial weeds and wild reservoir hosts in and around fields, including those in ditch banks, hedge or fence rows, and other locations.
- Plant earlier to avoid high aphid populations that occur later in the season.
- Plant late settings as far as possible from fields used to produce early tomatoes and peppers. These areas can act as sources of viruses and aphids for subsequent crops.
- Scout fields for the first occurrence of virus disease. Where feasible, pull up and destroy infected plants but only after spraying them thoroughly with an insecticide to kill any insects they may be harboring.

- Use reflective mulches to repel aphids, thereby reducing the rate of spread of aphid-borne viruses.
- Monitor aphid populations early in the season and apply insecticide treatments when needed.
- Avoid planting tomatoes near potato fields.



Your Experts for Life

ANR-879

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Use chemicals **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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Web Only, **Revised Sept 2004**, ANR-879

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