

(revision date:5/25/2017)

Blueberry: Viruses

Use Integrated Pest Management (IPM) for successful plant problem management.

Biology

Three major viruses continue to significantly impact blueberry plantings in the Pacific Northwest: Blueberry scorch virus, Blueberry shock virus, and Tomato ringspot virus. Blueberry scorch virus is spread by an aphid vector, and causes vegetative shoot tip dieback in the spring. Flowers blight just as the earliest ones begin to open. The entire bush may be blighted, but usually only a portion of the branches will show dieback. Scorch virus symptoms may resemble those of mummyberry or bacterial canker, and infected plants repeat this symptom cycle each spring. 'Atlantic', 'Berkeley', 'Collins', 'Herbert', and 'Pemberton' are particularly susceptible; several other cultivars are symptomless and considered tolerant. Blueberry shock virus symptoms resemble those of scorch virus, but may not reappear in spring growth in years following the initial infection. Shock virus is spread by pollen moved by wind or bees. 'Berkeley', 'Bluegold', and 'Bluetta' are highly susceptible, while a few cultivars are symptomless and considered tolerant. Tomato ringspot virus causes distortion, circular chlorotic lesions on leaves, and necrotic stem lesions. Shoot dieback, stunting, and plant death may eventually occur, while fruit yield and quality are severely depressed. The virus is spread in the soil by the dagger nematode. 'Atlantic', 'Dixie', 'Earliblue', 'Olympia', and 'Pemberton' cultivars are the most susceptible to tomato ringspot infection; 'Bluecrop' appears to be resistant. Other viruses that may affect blueberry plantings in the Northwest include Blueberry mosaic virus, Blueberry red ringspot virus, Blueberry shoestring virus, and Tobacco ringspot virus.

Management Options

Non-Chemical Management

- ~ If available, use resistant or tolerant cultivars to avoid repeat damage by a specific virus.
- ~ For all viruses (except blueberry shock virus), rogue out infected plants and plant only virus-tested certified stock.
- ~ For blueberry shock virus, let the virus run its course. Plants that have recovered from symptoms appear to produce a full crop.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides

Controlling aphid populations may limit the spread of Blueberry scorch virus.

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Images



*~ Caption: Blueberry mosaic virus symptoms
~ Photo by: R.S. Byther*



*~ Caption: Blueberry shoestring virus symptoms
~ Photo by: R.S. Byther*



*~ Caption: Leaf and shoot symptoms of blueberry
shoestring virus
~ Photo by: R.S. Byther*



~ *Caption: Stem symptoms of blueberry shoestring virus*
~ *Photo by: R.S. Byther*



~ *Caption: Plant with partial blueberry shock virus blighting*
~ *Photo by: P.R. Bristow*



~ *Caption: Blueberry shock virus shoot tip dieback symptoms*
~ *Photo by: P.R. Bristow*



~ *Caption: Blueberry shock virus leaf spot symptom*
~ *Photo by: MSU slide library*



~ *Caption: Blueberry scorch virus blighting of blossoms and leaves*
~ *Photo by: R.S. Byther*



~ *Caption: Blueberry scorch virus severe blossom blighting*
~ *Photo by: P.R. Bristow*



~ *Caption: Blueberry scorch virus oak-leaf pattern symptom in fall*
~ *Photo by: P.R. Bristow*



~ *Caption: Blueberry scorch virus chlorotic leaf margin symptom*
~ *Photo by: R.R. Martin*