

## Surveillance for Blueberry Viruses in BC- 2016

Many odd symptoms observed sporadically in blueberry fields cannot be explained by either scorch or shock virus infection and, therefore, in 2016, the BC Blueberry Council will continue a surveillance program initiated in 2014 to identify and confirm whether any “unusual” symptoms observed on blueberry are associated with economically important diseases caused by viruses, particularly *Blueberry shoestring virus (BSSV)*, *Blueberry leaf mottle virus (BLMoV)*, *Tobacco ringspot virus (TRSV)* and *Tomato ringspot Virus (ToRSV)*.

If you find any blueberry plants expressing virus-like symptoms, including the ones described below or any other symptoms resembling of virus-infection that are not characteristic of or related to either *Scorch* or *Shock* symptoms, please submit samples to the Plant Diagnostic Laboratory, BC Ministry of Agriculture, in Abbotsford. Samples will be tested for viruses for **free-of-charge** and the **results will be kept confidential**.

### When submitting samples please include the following:

1. Label samples as “Virus Surveillance Program – 2016”,
2. Field name and address or location,
3. Crop age and name of cultivar, description of symptoms, and
4. Knowledge of recent application of herbicides or insecticides

### Blueberry shoestring virus (BSSV)

It is a widespread disease of blueberry in Michigan and New Jersey and has also been detected in Washington, Oregon and New Brunswick.

**Symptoms:** Elongated reddish streaks (3 to 20 mm long) appear on green stems, especially on the side exposed to the sun. Infected leaves are red or purplish, elongated and strap-like. Leaves may become cupped if one side of the leaf fails to develop. Flowers may be reddish and fruit may be reddish purple instead of blue at ripening. There is a 2-to-4 year latent period in the field before an infected bush shows symptoms. **BSSV is spread by the blueberry aphid (*Illinoia pepperi*)** which is common in the eastern United States but not appeared to be present in the Pacific Northwest.



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### Blueberry leaf mottle virus (BLMoV)

Leaf mottle is caused by *Blueberry leaf mottle virus (BLMV)*. It has been reported only in Michigan and New Brunswick.

**Symptoms:** Leaves are malformed and mottled. If a leaf is held up to the light, translucent spots will show up. Leaves on infected bushes are smaller than normal and are a pale yellow-green in colour. Crop yields are reduced. **BLMV infects blueberries via infected pollen and spread by honeybees.**

For further information:

<http://www.fruit.cornell.edu/berrytool/blueberry/viruses/BBviruses.htm>



## Tobacco Ringspot Virus (TRSV)

It occurs sporadically in the northern United States, Canada and Chile.

**Symptoms:** Leaves are misshapen and crumpled with small necrotic spots (2 to 3 mm in diameter) that may cause small holes. Some cultivars show rosetting of leaves or stem dieback. A slow, steady decline in growth and productivity occurs in all cultivars. Infected bushes occur in a roughly circular pattern in the field; some may die. **TRSV is transmitted by the dagger nematode (*Xiphinema americanum*).** The virus is acquired by the nematode within 24 hours and is transmitted by both adult and larval stages of the nematode.

For further information:

<http://www.fruit.cornell.edu/berrytool/blueberry/viruses/BBviruses.htm>



## Tomato Ringspot Virus (ToRSV)

It is a problem in the Northwestern blueberry-growing regions of the United States and has also been found in Michigan, New York, Canada and Chile.

**Symptoms:** Infected leaves are cupped and malformed with circular spots 2 to 5 mm in diameter. Necrotic spots can also occur on canes. Young leaves may be strap-like and mottled. Symptoms are variable within the same plant. Infected plants may be defoliated by mid-harvest and eventually die, often after a severe winter. The disease spreads slowly in the field. Roughly oval-shaped patches of weak or dying plants develop over several years. **ToRSV is transmitted by dagger nematode (*Xiphinema americanum*),** which lives in the soil and feeds on blueberry roots.

For further information:

<http://www.fruit.cornell.edu/berrytool/blueberry/viruses/BBviruses.htm>

