

Protecting BC Potatoes: What Gardeners Can Do to Prevent the Spread of Harmful Potato Pests

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Late blight *our # 1 concern!*

What is late blight and why is it a concern?

- Late blight is caused by a fungal-like organism (*Phytophthora infestans*), which affects solanaceous crops, a plant family that includes potatoes, tomatoes, peppers, eggplants and petunias.
- It is the most destructive potato disease and can easily spread from gardens to commercial fields. When late blight is in the area, commercial potato growers are at risk of greater crop losses from disease outbreaks in the field and later when potatoes are in storage.

How does it spread and what are the sources?

- Late blight can easily spread by water, wind and wind-blown rain (for up to 20 km).
- Sources: Infected plant material such as potato tubers, tomato transplants, solanaceous plant debris in soil and other solanaceous hosts and weeds (e.g. nightshades).

When should you expect late blight?

- Late blight is favoured by cool and wet weather and, therefore, is more common during spring and fall when plants stay wet due to rain, dew or watering events.

What does late blight look like?



(From left to right) Late blight lesions on upper side of tomato leaf, underside of potato leaf, potato stem, tomato fruits and potato tubers

Leaves: small ,irregular shaped, brown or black lesions with a light green halo. White fuzzy mold around the lesions on the underside of leaves. In dry weather, the fuzzy mold won't be present.

Stems: dark brown irregular lesions with fuzzy mold if humidity is high.

Potatoes/tomatoes: reddish brown or black dry rot granular in texture.

What can you do to prevent late blight?

Prevention

- Plant disease-free tomato transplants and seed potatoes. **Always plant certified seed potatoes and never plant potatoes grown in your garden or purchased for eating.**
- Minimize humidity in your garden by: 1) growing potatoes and tomatoes in a warm, sunny and well drained area, 2) using a wide spacing between plants, 3) watering the soil (not the foliage) and, 4) growing plants in raised beds and under plastic tunnels.
- Select varieties with a short growing season to avoid weather conditions favourable to late blight.
- Preventively apply registered fungicides available to home gardeners. Read and follow label directions. Ask your local garden center for your options (conventional and organic).

Inspection

- Inspect your garden weekly, particularly in the spring and fall, for late blight symptoms on the foliage of potato and tomato plants.

Sanitation

- During the growing season, remove any infected plant materials and dispose of them securely.
- At the end of the growing season, do a thorough clean-up in your garden. Remove and dispose of all plant materials, including unwanted tomato fruits and potatoes. Dispose of diseased plant materials by burning or placing in a sealed bag to be taken to a land fill. **Do not dispose of diseased plants in your compost at home.**
- Grow potatoes and tomatoes in a different area if you had late blight the previous year.

Other diseases to be on the lookout for

Mosaic

What is mosaic?

Mosaic is caused by a virus that affects all solanaceous plants (potato, tomato, pepper and eggplant).

Why is mosaic a concern?

It causes a reduction in yield and quality of seed potatoes and can also jeopardize seed potato certification.



Mosaic symptoms



Aphids (magnified)

Symptoms include stunting of plants, leaf crinkling and leaf mottling with dark and light green.

How does it spread?

Mosaic is spread by aphids. Aphids are small (<3mm) almond-shaped insects. They can be winged or non-winged. Aphid feeding can spread virus from an infected plant to a healthy plant.

Minimize the spread of viruses by using certified seed potatoes and controlling aphids on solanaceous plants.

Potato Rot



Soft rot



Dry rot

Potato rot diseases are caused by either bacteria or fungi that can spread to commercial potato fields.

To prevent spread, avoid planting potatoes with any signs of damage, rot or decay. Avoid carrying soil around on infected plants, shoes, vehicles or garden tools.

Photos credit: ES Cropconsult Ltd.

Why should gardeners use certified seed potatoes?

Certified seed potatoes are inspected and tested to ensure that they do not carry or do not exceed the accepted levels of critical diseases, including viruses. Using certified seed potatoes is a good start for a successful disease-free garden.