



Home & Garden Pest Management Guide For British Columbia

2019 Edition

Chapter 2 Identification of Plant Problems



Identification of Plant Problems

Many plant problems are caused by living organisms. These include damage caused by fungi, bacteria, viruses, nematodes, insects and other pests. Plant problems that are caused by environmental conditions are known as abiotic problems, which are outlined in Chapter 9.

Correct identification of plant problems is necessary to make proper management decisions as many different agents cause similar looking damage.

Most pest problems can be identified through pictures and descriptions in this guide or in reference books. A 10X magnifying glass is very useful to check for small insects or fungal fruiting bodies on leaves.

If you encounter a problem you cannot identify, seek help from a local nursery, garden centre, professional landscaper or Master Gardener in your area.

Master Gardeners

Certified Master Gardeners hold regular plant clinics at retail garden centres in most areas of the province. There are six separate chapters of the Master Gardeners Association of B.C., including Okanagan, Prince George, Thompson Shuswap, Vancouver, Vancouver Island, and Victoria. Visit the [Master Gardeners website](#) for information on plant clinics in your area. You can contact a master gardener any time through the Plant Information Line. Leave a message, and a master gardener will contact you or email your question to: plantinfo@bcmastergardeners.org.

Plant Information Line: 604 257-8662

UBC Botanical Garden

The [UBC Botanical Garden](#) has a Hortline for garden questions at (604) 822-5858 or e-mail garden.hortline@ubc.ca. You can also view/join the online plant discussion forums at <http://forums.botanicalgarden.ubc.ca/>.

Plant Diagnostic Laboratories

If community resources are unable to identify the cause of a problem, a sample can be submitted to the B.C. Ministry of Agriculture, Plant Health Laboratory in Abbotsford, B.C. This is not a free service. Lab submission form and fee schedule information is available on the [Ministry of Agriculture website](#).

An accurate and timely diagnosis is a crucial first step to implementing appropriate pest management strategies. The [Plant Health Laboratory](#) provides plant disease and insect identification support to agriculture industry, the natural resource sector, municipal governments and home gardeners. The plant health staff are trained to identify problems associated with fungi, bacteria, viruses, insects and environmental issues.

The address is:
Ministry of Agriculture
Plant Health Laboratory
1767 Angus Campbell Road
Abbotsford, B.C. V3G 2M3

Hours of operation: 8:30 AM - 4:30 PM,
Monday to Friday
Toll Free: 1-800-661-9903 or 604 556-3003

Submitting Samples for Laboratory Diagnosis

A diagnosis is only as good as the sample that is received. It is very important that any specimens for identification be fresh and in good condition. If possible, an entire plant should be submitted for examination. Equally important is an accurate description of the problem and all related details.

Most insects submitted for identification can be live, dead, frozen or dried. The following are exceptions:

- Place butterflies and moths between layers of tissue paper.
- Keep caterpillars and fleshy-bodied insects with their natural food or preserved in alcohol.
- When submitting insects, include a brief description of where they were found, the extent of infestation and the damage done. Send more than one specimen.

Samples of diseased plants submitted for diagnosis should include representative samples of both diseased and healthy portions of the plants. For large specimens, a digital photo may be helpful. The following procedures should be followed:

- 1) Collect all parts of plants including roots where practical, and some of the soil around the root system. Above ground symptoms may be caused by a root or stem disease. If it is not practical to send the entire plant, include several affected parts of it.
- 2) Leaves: Press leaves flat between several sheets of paper toweling, then

place between pieces of cardboard and put into a plastic bag. Do not moisten the paper or plant.

- 3) Fruit: Send fresh fruit showing the symptoms. Do not send fruit in advanced stages of decay. Wrap each piece of fruit in a paper towel, place in a plastic bag and mail in a sturdy box.
- 4) Roots, stems or entire plant – Be sure to include roots with samples showing symptoms of dieback. Dig up plants rather than pulling them from the ground to preserve the roots. If plants are potted, send the whole pot. Enclose base of the plant, roots and pots in a plastic bag that is secured at the plant crown to prevent contamination of leaves with soil. Wrap samples in plastic to prevent drying and wilting during shipment. Mail in a cardboard box. Do not moisten plants.
- 5) Keep plants cool before shipping. Mail or courier as soon as possible after collection. Mail specimens early in the week to avoid shipping delays over weekends and holidays.

The importance of fresh, representative samples and complete, accurate information can not be overemphasized. Without this, your problem may remain unidentified. The more information you provide, the more accurate the diagnosis will be.

For additional information on how to take a sample or where to send the samples for diagnosis, visit the [Plant Health Laboratory website](#) or contact the lab at 604-556-3003 or 1-800-661-9903.

THINGS TO REMEMBER

- It is normal for garden plants to have some pest damage.
- Pest prevention is always more desirable than pest control.
- Plants growing under environmental stress sometimes exhibit more severe damage from pests than do healthy plants.
- The best decision is often to replace a plant that is poorly suited to its environment or highly susceptible to pests and diseases.
- To be effective, pest management techniques must be used at the proper time or developmental stage of the pest.
- Many insects found in the garden are important pollinators or are beneficial insects that eat plant pests and are harmless to the plants themselves.
- Check your plants regularly and monitor for early signs of a pest or problem. Keeping a garden diary or record of observations and activities can be very helpful in identifying causes of problems and solutions.
- Identify the problem correctly before trying any control methods.
- Not all plant problems are caused by pests or diseases.