

## **Collecting and Sending Plant Samples for Disease Diagnosis**

Successful disease diagnosis begins with the submission of a good quality sample accompanied by accurate information. A useful general procedure when collecting samples for disease diagnosis would be to divide the area into a grid. The compartments of the grid are then sampled at random. Sub samples are taken randomly within each and every compartment and bulked to form one sample per compartment because such a sample is more representative of the compartment than one sample of the same volume. Alternatively, in isolated cases where disease is not widespread, then purposive sampling may be done where the diseased plant is targeted.

### **Guidelines for submitting samples for plant disease diagnosis**

(a) Collect whole plants when possible. From root to stem. Samples that include whole plants are more likely to provide the information needed to make a proper diagnosis. Be sure to dig up the plant as opposed to pulling it out of the ground. Pulling plants from the soil may shear diseased tissue or pathogens away, making diagnosis more difficult.

(b) If possible collect more than one plant. Diagnosis of a plant disease often involves performing several tests on a sample. It will be wise to collect plants that show a range of symptoms. Providing a sample of plants showing a range of symptoms may speed the diagnosis process.

(c) It is very important to keep foliage from becoming contaminated with soil. Soil contains many microorganisms that can readily colonize dead or dying diseased tissue and possibly compromise disease diagnosis. Therefore, keep the roots and soil separate from aboveground parts by placing them in separate plastic bag and sealing. Do not wash the roots.

(d) When submitting a sample please provide as much information as possible. Where possible, identify the plant material, symptoms including unusual plant size, color or shape, and severity of the disease and cropping history of the area where the sample was collected.

(e) Keep collected plants as fresh as possible. Diseases on fresh plants are easier to diagnose. If there must be a delay between time of sampling and submission keep the sample cool.

The diagnosis you receive is only as good as the sample you send.