



Building biosecurity capacity and resilience in the NSW vegetable industry

Plant Disease and Insect Pest Sampling Kit

Until December 2024, you can submit insect pests or diseased vegetable samples to the Plant Health Diagnostic Laboratory at NSW DPI for complimentary diagnosis¹. This kit contains these guidelines and items to help you collect and submit your samples.

- Guidelines on how and what to sample
- Paper bags
- Plastic resealable bags
- Sealable plastic jars for insects
- Permanent marker
- Pen
- Submission forms
- Express pre-paid envelope

You may also need secateurs, trowel/shovel, disinfectant spray.

How to collect and submit plant samples for disease diagnostics in NSW

It is important to collect the appropriate insects or plant parts and package them, so they arrive at the laboratory in good condition. Providing additional information in the submission sheet about the what the affected plants look like and how widespread the symptoms are can also assist in diagnosing the cause.

General Considerations

- Collect fresh samples, keep them cool and out of direct sunlight.
- Label sample bags or containers with a marker. If the bag is likely to get wet, write a label on a separate sheet of paper and put it in a plastic bag placed inside the bag containing the sample.
- Packing samples in padding or boxes can help to prevent crushing.
- Complete the relevant submission form, either the '*Plant Health Diagnostics Service Specimen Advice Form*' or the '*Insect Identification Request*'. Let us know if you need more copies.
- Where possible, mail samples early in the week (before Wednesday) so that they arrive during the same week.

Reports

You will receive an automated email acknowledging that the sample has been received. Once clinical observations and initial testing are completed, the laboratory will email an update in advance of the formal final report. The results will be sent via email to the submitter and to AUSVEG. Multiple email addresses can be provided on the submission form if more than one person wishes to receive the report. Personal information will be not shared.

Sampling checklist

- Diseased plant or insect sample collected and packaged in paper, plastic bag or container.
- Samples labelled.
- Submission form completed and placed into a zip lock plastic bag.
- Sample and submission form placed in express post envelope.
- Envelope addressed and ready to post to

¹ Funding is available to support submission by NSW vegetable growers and agronomists of plant insect pest and disease samples for diagnostics until December 2024 through the *Building Biosecurity Capacity and Resilience within the NSW Vegetable Industry* Project funded by the NSW Government's Storm and Flood Industry Recovery Program with support from AUSVEG.

Suggestions for collecting specific types of plant disease and insect pest samples

Please write on the submission form if you saw insects on the plants so the laboratory is aware and can contain them in the laboratory.

Leaf spots: Collect at least 6 to 12 leaves representing all stages of infection. For plants with small leaves, cut off a branch with leaves intact. Place in paper then snap-lock plastic bag or cardboard box. Label.



Stem lesions, diebacks, cankers, and galls:

Select plant parts with young lesions or galls. Include the affected area and a healthy portion on the plant, if possible. Completely dead plant samples are generally not ideal for diagnosis. Pre-wrap in paper if appropriate. Place in plastic bag or cardboard box. Label.

Fruit or other fleshy tissues: Choose fruit with early stages of infection or damage. Avoid packing fruit or fleshy leaves with advanced rot. Wipe off excess moisture and wrap fruit individually in dry paper and place in a paper bag or box. These samples are highly perishable so express post is recommended. Place in plastic bag or cardboard box. Label.



Plants showing wilting, yellowing, and general decline: Submit entire plants – roots and above ground parts, if possible. For plants grown in containers, submit several affected plants, if possible. If field grown, carefully dig plants up and place roots with soil in one plastic bag, tie at the stem base, and secure another bag over the top of the plant. Where plants are large, submit above ground parts showing symptoms wrapped in paper and a plastic bag. In a separate bag place fine feeder roots, plus a few larger ones, with a cup of soil. Make sure that the roots are from the diseased plant, not weeds or other plants growing nearby.

Viral symptoms: Mosaic patterns, chlorotic ring spots, and distorted new growth are common symptoms of diseases caused by viruses. Collect new growth – the newest fully developed leaves or shoots in a plastic bag.



Nematodes: Collect root ball with soil from the affected plant in a plastic bag. Remove surface debris before collecting. Place samples from different areas in separate bags if separate results are required. Label bags.



Guidelines for Plant Pest Samples (send dead samples where possible)



Hard bodied insects and moths (e.g. Beetles, moths): place (dead where possible) insects in a container cushioned with paper.

Soft bodied insects (e.g. Aphids, caterpillars): place in sealed plastic container.



Don't forget to label your samples and complete the submission form, including the sample details, before posting.

For more information contact:

Marguerite White
Project Coordinator

Phone: 0447 500 415
Email: mwhite@icdprojectservices.com.au



The Building Biosecurity Capacity and Resilience within the NSW Vegetable Industry Project is funded by the Australian and NSW Government's Storm and Flood Industry Recovery Program with support from AUSVEG and Local Land Services. All images sourced from Pacific Pests, Pathogens & Weeds, bugwood.org, lucidcentral.org.