

Biosecurity Advice

Pest

Impatiens necrotic spot virus (INSV)

Date

Mar 2018

Location

Southern Sydney

Current Situation

- *Impatiens necrotic spot virus* is a serious exotic plant pest which can infect more than 648 plant species, including vegetable crops.
- The virus has been detected in lettuce on a farm near Camden in the Sydney basin. This region is an intensive horticultural production area.
- The virus was observed in 'Batavia' lettuce and in two varieties of Cos lettuce. Symptoms included leaf discolouration and spotting in at least one percent of the mature lettuce crop.
- Samples were collected from the farm on 18 January 2018 and sent to Elizabeth Macarthur Agricultural Institute for diagnosis. A confirmatory test for impatiens necrotic spot virus will be conducted by Crop Health Services Victoria. Secondary, confirmatory diagnosis is a standard procedure for when new pests or diseases are detected.
- This virus is not seed borne but can be spread by the western flower thrips which is present in most Australian states and territories.
- Impatiens necrotic spot virus is not entirely new to Australia. It was discovered in a production nursery on the New South Wales (NSW) central coast in 2010. However, at that time the NSW Department of Primary Industries (DPI) successfully eradicated the virus from that property.
- The Consultative Committee on Emergency Plant Pests will recommend to the National Management Group that the virus is not technically feasible to eradicate. This is because of open pathways through which it could be introduced to Australia, and because the virus can exist without showing symptoms.
- We do not know how the virus has been introduced to the vegetable farm near Camden, however, it is possible that the lettuce crop has been infected by thrips feeding on other infected plants nearby, and then transmitting this to the lettuce crop.
- The NSW DPI has implemented measures on the infected farm to limit the spread of the virus, including western flower thrips and weed control programs. The department is also inspecting and taking samples from crops on nearby farms that may have a link to the infested property, possibly through the movement of equipment.

- Seedlings grown on the infested property are used on-farm and not sold to other growers.
- The response to the new detection is being managed by NSW DPI, but is not under the provisions of the Emergency Plant Pest Response Deed.
- Government and industry will be working together to develop management plans for this virus.
- If you require more information about this virus, contact NSW DPI or visit their website dpi.nsw.gov.au.

Biosecurity and reporting

- This is a timely reminder for growers to put in place on-farm biosecurity measures. More information is available at farmbiosecurity.com.au.
- If you think your crop may be infected with Impatiens necrotic spot virus, phone the **Exotic Plant Pest Hotline** on **1800 084 881**. This will put you in touch with your department of primary industries or agriculture.

About the virus

- Impatiens necrotic spot virus infects more than 600 plant species, including tomatoes, lettuce, fuchsia, orchids and other genera including:
 - Impatiens (New Guinea hybrids)
 - Aconitum
 - Astroemeria
 - Anemone
 - Antirrhinum
 - Begonia
 - Bouvardia
 - Callistephus
 - Columnea
 - Cyclamen persicum
 - Dahlia
 - Dendranthema x grandiflorum
 - Eustoma grandiflorum
 - Exacum affine
 - Fatsia japonica
 - Gerbera
 - Gladiolus
 - Limonium

- Lobelia
 - Pittosporum
 - Primula
 - Ranunculus
 - Senecio cruentus
 - Sinningia speciose
 - Zantedeschia aethiopica.
- The biology of the virus is very similar to *Tomato spotted wilt virus* which is widespread in Australia.
 - Western flower thrips are the primary vector. A vector is an insect that can spread the virus. These thrips are found in most Australian states and territories.
 - The thrips larvae acquire the virus by feeding on infected host plants. Adults can transmit the virus to healthy plants after 5-30 minutes of feeding.
 - Other thrips have not yet been recorded as vectors.

Symptoms

- Infected plants usually show symptoms including:
 - stunted growth
 - ringspots
 - brown-to-purple spots on the leaves or stems
 - stem browning which are cankers
 - flower breaking, and
 - plant death.
- Symptoms may vary between host plants species and the age of the infected plant.
- The disease can be both symptomatic and asymptomatic.

Response arrangements

- The Consultative Committee on Emergency Plant Pests provides technical and scientific advice in response to exotic plant pest and disease outbreaks. The Committee is chaired by Australia's Chief Plant Protection Officer and comprises the Chief Plant Health Managers from each state and territory, other specialists from government, Plant Health Australia, and representatives from affected industries including NGIA.
- The National Management Group (NMG) consists of Chief Executive Officers from government agencies responsible for agriculture and affected industry organisations including NGIA. It is chaired by the Secretary of the Australian Government Department of Agriculture and Water Resources. Plant Health Australia is a non-voting member.

- NMG makes decisions on whether to support national eradication programs for pest or disease outbreaks under the Emergency Plant Pest Response Deed. NMG considers recommendations provided by the consultative committee before making decisions on whether a pest or disease is technically feasible to eradicate.
- The Emergency Plant Pest Response Deed is a formal legally binding agreement between Plant Health Australia, the Australian, state and territory governments, and national plant industry bodies representing specific cropping sectors. The Deed covers the management and funding of nationally agreed responses to emergency plant pests