

POTATO MOP-TOP VIRUS

Potato mop-top virus detected

Potato mop-top virus (PMTV) was found in New Zealand in September 2018. Biosecurity New Zealand (part of the Ministry for Primary Industries) is working in partnership with Potatoes New Zealand to help manage the virus.

What is potato mop-top virus?

Potato mop-top virus is a plant virus that largely affects potatoes and it's a notifiable and unwanted organism in New Zealand under the Biosecurity Act. It is not a food safety issue and people can trust potatoes to eat.

The virus is transmitted by the soil-borne fungus which causes Powdery scab (*Spongospora subterranea*), and can only survive long-term in the potato plant or in the fungus.

Once established in fields, the virus can survive in the fungus for up to 20 years in soil in the absence of a potato crop. The infection of the potato plant can be either directly from the infected mother tuber or through a current season transmission via a powdery scab infection of the roots.

If established in New Zealand, PMTV is a manageable disease. The disease is established in North America and Europe where it is generally managed effectively without causing major production losses. However, where it is poorly managed, it can create a production problems for potato growers.

How is potato mop top virus identified?

Affected potatoes can display both foliar and tuber symptoms of varying severity depending on the sensitivity of the variety and the source of infection, including:

- distortions to the skin
- deep cracking, and rust-coloured arcs, streaks or flecks in the tuber flesh.
- yellow colouration on the foliar (mother tuber infections only).

While some varieties may show symptoms on the skin – PMTV may not be detected until the tuber is cut open. Some potatoes, while infected, may not show any symptoms at all.



What you need to do:

Report

You have an important role to play in protecting your farm, your region and the potato industry from biosecurity threats. If you suspect you have found PMTV on your property, contact the Biosecurity New Zealand Pests and Diseases hotline: **0800 80 99 66**.

Help control the spread of potato mop-top virus

PMTV can be spread on seed tubers, in soil associated with boots, in machinery, and in waste from potatoes, so on-farm hygiene practices and developing a robust farm biosecurity plan are vital to try to minimise the spread.

STOPPING THE SPREAD OF POTATO MOP-TOP VIRUS

Good on-farm biosecurity management

Keep it clean

Workers, visitors, vehicles and particularly equipment can spread pests onto and throughout your property. Making sure workers on your property are aware of hygiene practices for staff, equipment and vehicles raises the awareness of biosecurity. This can easily be included as part of staff inductions.

Signage can be put up to ensure visitors are aware of any specific hygiene or biosecurity requirements you may have. Use signage to direct visitor's vehicles where to park.

When possible, use your own vehicles to transport visitors around your property.

Stay on established tracks. Encourage visitors to access your property via 1 or 2 routes only. Limit access to production sites to restricted personnel.

Don't assume people know where to go or what to do when they arrive at your property. Make sure that on arrival, visitors (including contractors) are aware of where they can (or can't go) and any other requirements such as hygiene, clothing requirements etc. Provide hand washing facilities, foot baths, disposable overboots or overalls (if necessary) for visitors.

Potato planting and harvesting equipment can collect soil and plant debris which can carry plant pests. Cleaning equipment will prevent any pests spreading around your property or to other regions. Clean and/or disinfect equipment between crops and properties. Disinfect borrowed equipment before and after use.

Soil movement

The movement of soil is a common way of spreading PMTV – even a small amount of soil is enough to spread PMTV, so movement must be restricted as much possible.

Machinery, bins and containers, or anything else which is used in the field, can easily pick up soil which can be dislodged the next time the machinery is used. If the soil is infested with PMTV, then this will lead to a new area becoming contaminated. High pressure washing is the best way to remove soil, and avoid spread.

High pressure washing to prevent soil movement

It is essential to clean equipment and bins when moved between farms because it is often difficult to be certain whether the other farm's soil is clear of pests and diseases. If a bin has been sourced from another property such as for carrying seed, or piece of machinery has been used on another farm it should ideally be cleaned at that site before being transported to another location. When moving equipment between fields within a farm it is good practice to clean the equipment. This is particularly important if new land is being used to grow potatoes for the first time.

Clean machinery, vehicles, and bins

All farms or blocks of land used for potato growing should have a specific area which is used for the washing down of machinery. This area should be large enough for vehicles to turn, the ground should be paved, gravel, or well grassed, and the water from washing should not run off into fields. If possible, cleaning should be done when the area isn't wet or muddy. A short checklist is a helpful way of identifying what needs to be cleaned on each piece of machinery. Tires, wheel wells, and any parts of the machinery which are in contact with the ground are the most important and obvious areas, but the checklist should also include any out of the way or hidden areas. It may be difficult to access some parts of a piece of machinery which will make it difficult to clean effectively or regularly.

Limit the movement of contractor vehicles around paddocks

Contractors (and other visitors) may visit a number of farms in quick succession so their vehicles can easily spread infested soil. When the same tools and machinery are used at a number of farms this can pose a significant risk. It is important to make sure that contractors are aware of the risks they pose and that they appreciate that good farm hygiene is essential to maintain productivity.