

# New advice to help tomato growers eradicate Pepino Mosaic Virus

Growers can help to eradicate Pepino mosaic virus (PepMV) by following new biosecurity recommendations. PepMV is one of the most economically important diseases of tomatoes and fruit infected with multiple strains of the virus experience more severe symptoms.

As a result, steps must be taken to ensure, even where infection has already been confirmed, that no additional strains of PepMV are brought into the site.

An intensive clean-up process, thorough composting of crop debris and a review of source waters will significantly reduce the chances of the virus being viable.

In addition, the risk of PepMV transmission from small root pieces that remain in the soil after the crop has been removed appears to be very small – a finding of particular relevance to organic growers.

The new recommendations are a result of an AHDB Horticulture-funded research project, which aimed to increase understanding of PepMV symptom severity and persistence on nurseries.

Brian Moralee of APS Group and an industry representative on the project, said: “PepMV persists on our production site and we are finding economic losses from it. We are involved with this project as we wanted to understand more about the virus and why our annual clean-up was not eradicating it.

“The research has been really important to help understand the spread of the virus, particularly in the composting processes and in the soil on organic crops.”

## Key findings from the project include:

- Irrigation water can be a source of PepMV, however disinfection treatment (pasteurisation) can successfully eliminate detectable PepMV
- Clean-up year on year appears to be successful but it is possible that virus can survive in difficult to treat areas of the nursery, such as in electrical equipment.
- The risk of carryover in soil and roots from one crop to the next appears negligible, though roots left behind represent a greater risk than soil
- Thorough composting is an effective way to eliminate PepMV from crop debris

## Symptoms and financial impact

PepMV is a tomato disease that affects both fruit quality and yields and there are known to be three strands present on UK crops. Symptoms on fruit can include marbling and flaming marks, as well as split or malformed fruit.

Severe infections on crops can have significant economic impact, with one nursery estimating that the disease caused around £400,000 of crop loss in 6ha of the variety Piccolo.

Gracie Emeny, knowledge exchange manager at AHDB said, “As one of the most potentially damaging diseases of tomato production in the UK, it’s important we have good understanding of PepMV strains and the resulting symptom expression.

The molecular assays refined in this research allowed the discrimination between strains of the disease in order to increase understanding of symptom severity and further examine disease persistence, leading to important control methods for growers.”

A new factsheet ‘Pepino mosaic virus of tomato – new results on strains, symptoms and persistence’ has been published by AHDB, designed to provide growers with full information about the virus and recommended action points. The factsheet can be downloaded from [horticulture.ahdb.org.uk](http://horticulture.ahdb.org.uk).

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