

Melon necrotic spot virus

What is Melon necrotic spot virus?

Melon necrotic spot virus (MNSV) is a member of the *Carmovirus* genus, which can result in severe yield losses in melon and cucumber crops. MNSV affects plant leaves and stems as well as causing deterioration in fruit quality.

What should I look for?

Symptoms can appear like fungal wilt diseases including local brown necrotic spots or large necrotic lesions on leaves and rot near the crown of the plant. Leaves can become curled and wilted and whole plants may suddenly wilt and lose vigor when fruit is ripening.

Infected fruit has yellow brown necrotic dots and rind necrosis, there can also be discoloration, and malformation both externally and internally. Fruit pulp can become watery and hollow with browning within the rind.

How does it spread?

MNSV is both seed borne, soil borne, and can be mechanically transmitted by contact between plants through grafting or by tools used for pruning. It can readily be distributed through melon-growing areas as virus particles will remain viable in the soil for several years. The virus can also persist for a long period in association with its soilborne fungal vector *Ospidium bornovanus* which is established in Australia. Once a plant is infected with MNSV the infection persists for the life of the plant.

Where is it now?

MNSV has been reported in the Americas, Europe, Asia and parts of Africa and the Caribbean. Melon necrotic spot virus (MNSV) is considered exotic to Australia yet symptoms detected during 2012 within NSW were consistent with that of MNSV. Diagnostic work is ongoing to determine the status of MNSV in Australia.



Leaf spots caused by MNSV

Len Tesoriero, NSW DPI



Lesions on vines caused by MNSV

Len Tesoriero, NSW DPI



MNSV lesions on the skin of a watermelon

Len Tesoriero, NSW DPI





How can I protect my farm from Melon necrotic spot virus?

Grafting on resistant rootstocks is the most effective means to prevent the disease. Seed and grafted seedlings should be virus tested and sourced from reliable suppliers. With the status of MNSV virus within Australia unknown proactive biosecurity measures are important.

Check your vineyard frequently for the presence of new pests and investigate any sick plants for unusual symptoms and ensure that all staff and visitors adhere to on farm biosecurity and hygiene practices. Use clean propagation material, disinfect tools and equipment used on your farm and remove old plant material and fruit from the production area.

If you see anything unusual, call the Exotic Plant Pest Hotline

**EXOTIC PLANT PEST HOTLINE
1800 084 881**



Rind necrosis and deformation in fruit caused by MNSV

Len Tescriero, NSW DPI

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