e-GRO Alert

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Alternanthera Mosaic Virus (AltMV)

Samples of portulaca showing distorted leaf edges and chlorotic spots were diagnosed with Alternanthera mosaic virus (AltMV).

Alternanthera mosaic virus (AltMV) infects a broad host range, with hosts from at least 30 taxonomic families including many commonly grown greenhouse and herbaceous ornamentals. This season AltMV has been diagnosed on portulaca with symptoms of distorted leaves and chlorotic flecking and spots.

AltMV symptoms on portulaca
(Photo courtesy of Elise Lobdell)

AltMV symptoms on portulaca
(Photo courtesy of Margery Daughtrey)

AltMV symptoms on celosia
(Photo courtesy of Margery Daughtrey)

The following plants have been reported as natural hosts of AltMV:

Aguga
Alternanthera
Angelonia
Snapdragon
Bacopa
Browallia
Calibrachoa
Carex
Catnip
Celosia
Chrysocephalum
Cineraria
Cleome
Coleus
Coreopsis
Crossandra
Diascia
Gaillardia
Helichrysum
Hylotelephium
Impatiens
Ipomoea
Jacobinia, Justicia
Kalanchoe
Lamiastrum/Lamium
Lavandula/Lavender
Lobelia
Lychnis
Mazus
Melissa, bee balm
Mentha, mint
Nandina
Nemesia
Oenothera
Osteospermum
Patchouli
Pelargonium
Penstemon
Petunia
Phlox
Physostegia
Plectranthus
Pogostemon
Portulaca
Salvia
Scaevola
Scoparia
Scutellaria
Sedum
Pericallis hybrids (Senetti)
Sinningia
Stachytarpheta
Streptocarpella
Sutera, bacopa
Thunbergia
Thyme
Torenia
Verbena
Achyranthes

This list is not exhaustive; numerous other ornamental plants and vegetable plants have been infected in experimental trials and it is likely that additional hosts will be discovered.

Reference: Hammond J, Kim IH, Lim HS. 2017. Alternanthera mosaic virus - an alternative 'model' potexvirus of broad relevance. Korean Journal of Agricultural Science 44:145-180

AltMV most often causes a chlorotic spotting or flecking, mosaic or mottle (light-colored or yellowed irregular patterns or patches on the leaf), or leaf distortion, but can also cause necrotic spots and lesions. Symptoms observed and symptom severity can vary depending on the host plant and the virus strain present. Often symptoms are subtle difficult to discern. Enlist the assistance of a diagnostic lab, or a virus test kit such as those available from Agdia.

This virus can be spread mechanically, meaning that it can spread from infected to healthy plants via handling by workers and tools. This virus is not known to be spread by insects or mites.

Management practices for AltMV include maintaining good sanitation practices to avoid spreading the disease: discarding infected plants, keeping areas weed free, avoiding handling healthy plants after infected plants, and disinfesting tools and any materials that may have been contaminated with viral particles with an appropriate product.

Symptoms of AltMV on portulaca (Photo courtesy of Elise Lobdell)

Symptoms of AltMV on portulaca (Photo Nora Catlin)

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