Fact sheet

Plant Health AUSTRALIA

Mango malformation disease

What is Mango malformation?

Mango malformation disease (MMD) was first observed in India in 1891 and has since spread across the globe to become the most important floral disease of mangoes. MMD is caused by one or more fungal species of the genus *Fusarium*.

What should I look for?

Young trees in nurseries are most vulnerable to vegetative malformation, including abnormal development of vegetative shoots and inflorescences. Shoots from apical or axillary buds are misshapen and have dramatically shortened internodes with narrow brittle leaves. Galls may be produced in the leaf axils. Primary and secondary axes on inflorescences are shortened, thickened and highly branched. Shoots tend to remain compact causing a bunchy-top-like appearance.

Panicles are thickened and produce enlarged flowers, and inflorescences typically contain three times the normal number of flowers. In particular, MMD increases the number of male flowers and hermaphrodite flowers that are produced. These are either sterile, or if fertilised, eventually abort. Malformed inflorescences do not produce mature fruit.

What can it be confused with?

The symptoms on vegetative tissue look similar to the malformation caused by bud mites. However, bud mites do not cause malformation of floral tissue, and tend to impact on older trees (unlike MMD which affects younger trees).

Barry Conde, DoR, NT

Primary and secondary axes on inflorescences are shortened

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Thickened panicle caused by MMD

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Malformed inflorescences do not tend to produce fruit

How does it spread?

Mango malformation disease is spread long distance on vegetative propagating material or infected pruning equipment. Circumstantial evidence indicates that its spread from plant to plant within orchards is aided by injuries from the Mango bud mite (*Aceria mangiferae)*.

Where is it now?

It is now present in India, Brazil, Central America, Egypt, Florida, Israel, Mexico, Pakistan, South Africa, Sudan, Swaziland and Uganda, and possibly Malaysia.

How can I protect my orchard from Mango malformation disease?

Source plant material only from clean, accredited suppliers and preferably use material that is certified. Grafting or marcot material should never be taken from an infected orchard. Thorough cleaning of pruning equipment between trees reduces the spread of pests. Check your orchard frequently for the presence of new pests and unusual symptoms. Make sure you are familiar with common mango diseases so you can tell if you see something different.

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

EXOTIC PLANT PEST HOTLINE
1800 084 881

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Axes on the inflorescence become highly branched

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Inflorescences are malformed

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Inflorescences typically contain three times the normal number of flowers