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Mites of Horticultural Crops in the Northern Territory

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Introduction

Mites are arachnids and belong to the subclass Acari which is composed of several orders. The Acariformes is one of the orders, which contains over 40 thousand described species. Within this order, the suborder Prostigmata is the most important group of mites which cause the most economic damage. This factsheet will introduce the major group of mites in this suborder, which include the mite pests of horticultural crops in the Northern Territory. These groups of mites include the spider mites (family Tetranychidae), thread-footed mites (family Tarsonemidae) and rust mites (family Eriophyidae).

Spider mites, Family Tetranychidae



Two-spotted mite



Oriental red mite



Spider mite damage to eggplant leaves



Oriental red mite damage to Kaffir lime leaves

This group of mites are virulent plant pests causing extensive chlorosis, necrosis, defoliation and, often, death of the hosts. Generation times are short in the tropics (about one week) and populations rapidly reach damaging levels. Spider mites migrate on the wind and readily colonise new plants.

The two-spotted mite, *Tetranychus urticae*, is one of the most economically important species. In the Darwin area it is often a serious pest in the dry season, and has been recorded on vegetables such as snake beans, eggplant and fruit such as watermelon, carambola, pawpaw and ornamentals such as palms, heliconias, gerberas as well as many other native and horticultural plants.

Oriental red mite, *Eutetranychus orientalis*, is one of major pest of *Citrus* spp. in Northern Territory. This mite is usually found on the upper-side of leaves on host plants. The infested leaves may develop a chlorotic appearance and then become weak and finally drop off.

Broad mites, Family Tarsonemidae



Broad mites



Broad mite eggs



Broad mite damage to chilli leaves



Broad mite damage to silverbeet

The family Tarsonemidae is composed of small terrestrial mites. They have a greater variety of feeding habits than other mite groups. Some of them feed on fungi, algae or other mites, and some feed on green plants, such as the broad mite, *Polyphagotarsonemus latus* which has a large range of hosts. Broad mite is a major horticultural pest, and has been recorded as a pest of chillies, capsicum, tomato, eggplant, silverbeet, mango and gerbera in the Northern Territory.

Rust mites, Family Eriophyidae



Tomato russet mites



Mango bud mites



Mango bud mites cause mango bud distortion



Litchi erinose mite cause erinea on litchi leaf

Rust mites are a large group of highly specialised plant-feeders. They are also known as gall, blister, bud or erinose mites. They are different to the other mites as rust mites only have two pairs of legs and are minute in size. There are over 3030 species described world-wide, however, 15 pest species have been recorded in the Northern Territory from hosts such as tomato, litchi, mango, citrus, *Hibiscus* and *Acacia*.

This group of mites not only causes damage to plant tissue directly, but they are also important vectors (disease transmitters) of plant pathogens. For example, mango bud mite, *Aceria mangiferae*, not only causes mango distortion in leaf buds they also transmit a pathogenic, *Fusarium* sp., which is the pathogen associated with the Mango Malformation Disease.

References

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For further information on this leaflet contact Entomology at insectinfo.dpifm@nt.gov.au. Agnotes or factsheets on other pests are available from www.entomology.nt.gov.au or www.primaryindustry.nt.gov.au

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