

Forecasting and Management of Broad Mite or Yellow Mite in Mulberry Ecosystem

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Various species of mites attack on mulberry plant like *Tetranychus ludani*, *Aceria mori* and *Polyphagotarsonemus latus* respectively. The red spider mite and yellow mites were recorded in the mulberry gardens at Satellite Silkworm Breeding Station at Coonoor, Tamil Nadu. It was a minor pest earlier in the beginning and currently they have become a major pest causing severe damage to mulberry crops and the pest is spreading at a faster from one plant and other plants. It has a huge infestation on mulberry garden mostly from Mysore and Mandiya districts of Karnataka. Currently, Tamil Nadu is also incidence reported in few district commonly in Krishnagiri area. A yellow mite is highly polyphagous and attack diverse crops and covering more than 250 species of plants.

Damage and symptoms

Yellow mites is infesting on young, growing tips of mulberry. The infested portions growth is arrested, leaves can be turn brown and curl upwards or downwards condition. Severe infestation of leaf and shoot growth are damaged and by the way curling of leaf margin, necrosis of growing points are inhibition. Exorbitant infested mulberry garden may be individual leaves contains 1000 to 4000 mites population. ETL of one separate leaf contains on 5 mites. Further, there is no evidence that yellow mite transmits plant virus.

Biology of *Polyphagotarsonemus latus*

The yellow mite is completes a generation about 4-7 days under favorable climatic conditions. Life stages of mites viz., egg, larva, pupa and adult. A female mite lay approximately 40- 50 eggs and besides sex ratio is 1:4 (male and female). Female mites lay eggs on ventral surface of young mulberry leaf and eggs are oval and elongated. Severe infested mulberry leaves portions having white speckled with spots. The larva has three pairs of legs and four pairs of legs in adults. After moulting, third stage of larva to be stay in their cuticle for one or two days and after emerge as adults is called as quiescent nymph. The adult male uses their fourth pair of legs to carry around young pharate females that are larval cuticle. Mating take place immediately it emerges from the larval cuticle. The emerging adult mite is roughly 0.2 mm long, oval, broad and pale yellow or yellow – green in colour, based on the type of food materials.





Leaves curl upwards



Severe infestation in mulberry garden

Spreading

Male carry on pharate female and also spread from wind and human can also spread the mites passively.

Management

- Collection and destruction of infested portion from mulberry garden or better
- It is burn for further spreading from one area to others area.
- Water spray on underside might reduce the population.

Botanical

Spray on vidigreenpath: 2ml/lit with adproshootin 0.3 ml/lit of water. Conduct on 2 sprays @ weekly interval.

Chemical

- Spray wettable sulphur 80% WDG @ 3G/lit of water. (Safe period: 5 days)
- Cyenopyrafen 30% SC (Commerical name KUNOICHI) 0.5 ml/lit of water (Safe period: 15 days)
- Fenazaquin 10% EC (Magister) 1.5 ml/lit of water (Safe period: 20 days)

Biological

- Effective biocontrol agents release on *Blaptostethus pallescens* (Anthocorid) @ 1000 nymphs or adults per acre at weekly interval.

Reference

1. Mahiba Helen S., Harshitha C., Narendra Kumar J B and Babulal, 2022. Broad mite infesting mulberry and its management, Technical Bulletin No. 52. Central Sericultural Research and Training Institute, Mysore, Karnataka.