



Citrus mites and their management

Anjitha George and C. N. Rao

Division of Entomology, ICAR-Central Citrus Research Institute, Nagpur (M.S.) India

(Email : anjithakitty@gmail.com)

Introduction: Mites (Acari) are arthropods, a group that includes insects, spiders and among them, different mite species cause considerable damage in citrus. There are major four mite families relevant to citrus *viz.*, Tetranychidae, Tenuipalpidae, Tarsonemidae and Eriophyidae. It is a serious pest of citrus in Vidarbha region, especially during Ambia (February-March) and Hasta (October-November) seasons. Citrus mites are more active on new growth of citrus plants, especially in the late spring and early fall. Populations will also be higher during summer due to the higher temperatures and humidity.

Nature of damage: Citrus brown / oriental red mite, *Eutetranychus orientalis* Klein affected leaves turn chlorotic and upper surface of the severely infested leaves attracts fine dust particles. Flat mite, *Brevipalpus rugulosus* damages the epidermal region of infested fruits results in brown to blackish irregular corky skin known as rind disorder on Kinnow orange. Broad mite *Polyphagotarsonemus latus* (Banks), feed on lower surface of leaves causing the leaves to become rigid and curled, results in reduction of total leaf area and leaf water content. Rust mite, *Phyllocoptruta oleivora* (Ashmead) infestation produces a multitude of brown-reddish black



Eutetranychus orientalis (Citrus brown mite)



Brevipalpus rugulosus (Flat mite)



Phyllocoptruta oleivora (Citrus rust mite)



spots on the fruit surface. The rust mite attacks the berries and the grown up fruits inflicting undesirable brown irregular patches on them, known as Mangu disorder” on Sathgudi fruits in Andhra Pradesh and ‘Rusting” on Grapefruit and “*lalya*” on Nagpur mandarin(Rao *et al.*, 2012), that fetches low marker price to the fruits.

Seasonal occurrence: The mite activity starts from the month of February to May and during October to December in Vidarbha region.

Management practices:

Economic threshold level (ETL): In general, ETL for different mites is 2 per cent on leaves and 10 per cent on fruits.

Cultural method: Citrus trees should be well irrigated, particularly during the stress in late summer as water stress often aggravates mite problem.

Botanical: Different neem formulations containing

azadirachtin depending upon the strength of botanical *viz.*, 1% @ 2.0 ml and 5% @ 0.5 ml/l can be sprayed.

Chemical: Effective management of mites relies primarily on the use of acaricides and time of application. First application should be made on the appearance of mites on reaching ETL.

– Foliar application with wettable sulphur 80WP @ 3g/l, dicofol 18.5 EC@ 1.5ml/l, propargite 57EC@1.5ml/l, ethion 50EC@ 1ml/l, petroleum spray oil 2.0% twice at 15 days interval during peak activity of mites (brown and broad mite) reduces the mite infestation levels.

– Foliar application of spiromesifen 240 SC @ 0.3ml/l followed by fenazaquin10 EC @ 1ml/l at 15 days interval at berry stage of the fruit during Ambia and Mrig season reduces rust mite infestation.

Received : 26.07.2019

Revised : 19.10.2019

Accepted : 21.11.2019

SUBSCRIPTION FEE		HIND AGRICULTURAL RESEARCH AND TRAINING INSTITUTE 418/4, SOUTH CIVIL LINES (NUMAISH CAMP), MUZAFFARNAGAR-251001 (U.P.)			
		JOURNAL		Annual Subscription Fee	
		Individual	Institution	Individual	Institution
International Journal of Plant Sciences		1500/-	2000/-	10000/-	20000/-
International Journal of Agricultural Sciences		1500/-	2000/-	10000/-	20000/-
Agriculture Update (Journal of Extension)		1500/-	2000/-	10000/-	20000/-
The Asian Journal of Horticulture		1500/-	2000/-	10000/-	20000/-
An Asian Journal of Soil Science		1500/-	2000/-	10000/-	20000/-
International Journal of Agricultural Engineering		1500/-	2000/-	10000/-	20000/-
International Journal of Plant Protection		1500/-	2000/-	10000/-	20000/-
Veterinary Science Research Journal		1500/-	2000/-	10000/-	20000/-
International Journal of Processing and Post Harvest Technology		1500/-	2000/-	10000/-	20000/-
International Journal of Forestry and Crop Improvement		1500/-	2000/-	10000/-	20000/-
Advance Research Journal of Crop Improvement		1500/-	2000/-	10000/-	20000/-
Research Journal of Animal Husbandry and Dairy Science		1500/-	2000/-	10000/-	20000/-
International Research Journal of Agricultural Economics and Statistics		1500/-	2000/-	10000/-	20000/-
Rashtriya Krishi (English Magazine)		500/-	1000/-	5000/-	10000/-
राष्ट्रीय कृषि (हिन्दी पत्रिका)		500/-	1000/-	5000/-	10000/-

Draft should be made in the name of the **Hind Agricultural Research and Training Institute** from any NATIONALIZED BANK PAYABLE AT MUZAFFARNAGAR -251001 (U.P.), INDIA.