

Management of Litchi Leaf Curl Mite

The litchi (*Litchi chinensis* Sonn) is an important sub-tropical evergreen fruit crop belonging to family *Sapindaceae*, is believed to have originated in China, where it has been grown in Southern Guangdong state for thousands of years. It is highly specific to climatic requirements and probably due to this reason its cultivation is restricted to few countries in the world. In India, litchi was introduced in the 18th century through Burma, and from there, it spread to many countries. India and China account for 91 percent of the world litchi production but it is mainly marketed locally. In India, 428,900 metric tonnes of litchi is produced annually from 56,200 hectares. Litchi being exacting in climatic requirement is confined to few states. It is now an important commercial fruit crop in India due to its export potentiality. Cultivation of litchi is widely spread in northern and eastern India which provides livelihood opportunities to millions of people in the region. It is commercially grown in Bihar, Uttarakhand, West Bengal and Jharkhand.

Due to its high economic returns and ever increasing demand in the domestic markets, the crop is also gaining momentum in Punjab, Himachal Pradesh, Uttarpradesh Assam, Tripura, and Orissa. Considering the importance of this fruit crop in the region, efforts are made to provide technological support through research and promoting production, post-harvest management and marketing.

Fifty-eight pest species have been recorded on litchi trees worldwide, including lepidopterans, scales, stink bugs, fruit flies, and eriophiid mites, and these pest mainly damage the flowers and fruits. The litchi erinose mite, *Aceria litchii* (Keifer) (Acari: Eriophyidae) is a major pest of litchi. This mite is not visible to the naked eye. This is very specific to litchi, affecting new shoots on the entire tree during severe infestations and causing abnormal development and premature defoliation. Litchi plants with severe erinose symptoms in young and developing leaves causing low yield.

The incidence of litchi mite is seen during March which remains active up to June-July. The adults start multiplying from the end of March and the peak activity is noticed around July. The female adults lay eggs singly at the base of the hair on the lower surface of the leaves. The eggs hatch within 2-3 days and newly emerged nymphs feed on soft leaves. Both nymphs and adults damage the leaves, inflorescence and young developing fruits. They puncture and lacerate the tissues of the leaves with their stout rostrum and suck the cell sap. As a result of its infestation, undersurfaces of the infested leaves show abnormal growth of epidermal cells in the form of hair like velvety growth of chocolate brown colour. In some cases, the mites cause galls or wart-like swellings or depressions on the upper surface of the infested leaves. Chocolate-brown velvety growth on the ventral surface of leaves indicates the presence of this pest. The attacked leaves become thick, curl, wither and ultimately fall off. Ultimately cause drastic reduction in the yield.

Litchi mite control measures must be preventive. Once the mite is established, it is almost impossible to eradicate, but the timely pruning and application of pesticide spray can check the damage cause by this mite.

Advantages:

1. Pruning will lead to better management of litchi mite without any hazard.
2. Burning further will help in complete eradication of pest.
3. Pruning of affected twigs in June reduced the initial inoculum.
4. No residue on fruits as spraying is recommended at vegetative stage only, and not at flowering and fruiting stage.
5. Litchi growers benefited by higher yield and getting more income.