

Coconut destiny after the invasion of *Aceria guerreronis* (Acari: Eriophyidae) in India*

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Abstract

The coconut mite, *Aceria guerreronis* Keifer, has emerged as a common menace to most of the coconut plantations in India. After its first upsurge in Kerala at the end of the 1990's, the mite has spread to many states in southern and northern India, causing considerable damage. Coconut provides one third of the agricultural income in the regions in which it is grown and more than 10 million people are dependent on this cash crop directly or indirectly through coconut-based industries like coir, copra, oil, honey, furniture, handicrafts, beverages, bakery products and so on. The economic instability of the coconut farming community and the people employed in coconut-based industries rank the highest order. A critical assessment of the various problems created by *A. guerreronis* in the agricultural economy of India is presented in order to supplement data on crop loss through nut malformation, nut fall, loss in fibre and copra. Varietal differences in susceptibility of the plant and future strategies in terms of management practices for an early control of the mite are discussed, and suggestions for future activities to alleviate mite damage are presented.

Key words: Coconut, damage, Eriophyidae, invasive pest.

Importance of coconut in India

Coconut, *Cocos nucifera* L. (Arecaceae), is considered the most useful of all tropical palms. It is very common in the Indian subcontinent, being widely cultivated in the southern states of Kerala, Tamil Nadu, Karnataka and Andhra Pradesh, and in the Union Territory of Lakshadweep Islands. Essentially all plant parts are commercially used for different purposes.

Kerala, the southernmost state of India, is well known for its high yielding coconut plantations (Nair *et al.*, 2002) and it is not surprising that the state has earned the name as 'land of coconut gardens'. In ancient Vedas (the old sacred writings of Hinduism), coconut was mentioned as 'Kalpa Vriksha', which means the tree that provides life's essential needs. It represents one of the most widely cultivated and high ranking strategic cash crops, acting as the backbone of Kerala's economy. It contributes one third of the agricultural income, providing livelihood to 10 million people (Rethinam, 2003).

Whole tender coconuts are commonly used as decorative pieces in diverse popular gatherings, including religious ceremonies. In addition, a diversity of products can be obtained from the different stages of development of the kernels, including a popular soft drink, edible oil, coconut milk, bakery products, copra (dried kernel), handicrafts, etc. Husk from mature coconuts supports coir factories, and can still be used for the production of plant growing substrates. The sap of coconut plants is commonly used for the production of drinks or coconut honey. Other parts of coconut palms can be used for roofing, handicrafts, furniture, firewood, mosquito repellents and so on. The so called 'coconut lagoons' of Kerala are centres of tourist attraction fetching good income.