

(36)

**Economics and loss of by-products of coconut due to eriophyid mite,
Aceria guerreronis (Keifer) damage**

P. Pretheep Kumar*¹ and K. Ramaraju²

¹Department of Wildlife Biology, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam – 641 301, Tamil Nadu, India.

²Department of Agricultural Entomology, Tamil Nadu Agricultural University, Coimbatore – 641 003, Tamil Nadu, India.

* pretheepkumar_phd@yahoo.co.in

Abstract

Coconut fiber is obtained from the fibrous husk (mesocarp) of the coconut (*Cocos nucifera*) and the coir industry depends on this versatile natural fiber. Efforts were made in this study to evaluate the effect of eriophyid mite, *Aceria guerreronis* (Keifer) damage on the out-turn and quality of coconut fiber. An out-turn of 100.5, 89.7, 81.0, 68.6 and 60.1 kg of white fiber was obtained from 1,000 nuts infested by eriophyid mite belonging to grade 1, 2, 3, 4 and 5, respectively. A reduction in the out-turn of fiber could be a consequence of nut malformation or cracks formed on the husk surface due to desapping by *A. guerreronis* at the young button stage of the nuts. A significant negative correlation was observed between the quantity of rope made out of the extracted fibers and the nut damage grade. A quantity of 90.8 and 49.7 kg of rope were obtained by using white fibers extracted from 1,000 nuts of grade 1 and 5, respectively. Fibers extracted from nuts belonging to grade 1 and 5 had a tensile strength of 52.1 and 15.7 kg, respectively. A fiber length of 10.8 cm and a fiber diameter of 0.4 mm were noticed in the fibers extracted from severely infested nuts (grade 5).

Key words: Coconut, Eriophyid mite, *Aceria guerreronis*, fiber out-turn, tensile strength