

## ABSTRACT

*Aceria guerreronis* Keifer is the only species of eriophyid mites considered to be a serious pest of coconut. It was first reported in Sri Lanka in December 1997 in Kalpitiya area. In 1999, it developed to an outbreak in nearly 15,000 ac. In the Puttalam district (NWP). No successful method has been developed to control the pest. The Coconut Research Institute has commenced research to develop a successful control strategy. In all the studies, the basic parameter that needs to be considered is the population size of a single nut, the sampling unit. Since the direct counting of mites is difficult, this study was conducted to develop a reliable and efficient method to estimate the total population of mites in a single nut. The study revealed that washing the bracts in a 30 ml detergent solution and shaking the wash for 5s makes the mites uniformly distributed in the wash. Counting number of mites in 1 ml of the wash is a reliable estimation of the total population. The population estimated by the new technique had a highly linear relation with the actual count. Therefore, the estimated count could be further corrected using the index:

$$\text{Actual count} = 48.54 + .93 (\text{estimated count})$$

It was proved that the new technique is reliable and efficient compared to other methods practiced at present.