

## Abstract

Tea growers in Kenya are faced with a number of challenges; the major one being mite attack. It is therefore necessary to continuously breed and screen tea varieties that are not only high yielding but tolerant to mite attack. A five year study was conducted at two ecological sites namely: Kipkebe Tea Estate farm at Sotik, West of Rift Valley and Tea Research Foundation of Kenya (TRFK), Kangaita Sub-station, near Mount Kenya. These studies were done with the aim of screening some Kenyan tea clones for their resistance or tolerance to the Red Crevice Mites (RCM) prevalent in the East of Rift Valley and Red Spider Mites (RSM) prevalent at the west of Rift Valley. Mite sampling was done on an on-going clonal Field Trial which was laid out in a completely randomised block design (CRBD) and replicated three times in each of the two regions. Mite population was estimated every month by sampling 10 mature leaves and taken to the laboratory where the mites were counted under a dissecting microscope after extracting them using a mite brushing machine. The mite data collected were transformed and subjected to analysis of variance using MSTAT statistical package. Annual mite population varied significantly ( $P \leq 0.05$ ) in the different clones. This study showed that a number of tea clones that were tolerant to mite attack at Kipebe, Sotik and TRFKs Kangaitasub-station. Based on the results of the 36 Clones, clone AHPCG28U864 was a unique clone. It had low resistance to both RCM and RSM. On the other hand, clone EPK C/12 had high resistance to both species of mites. It was found that the Red Crevice Mite (RCM) species is the most prevalent in the Mt. Kenya region while the Red Spider Mite (RSM) species was prevalent in Kipkebe Sotik area. In both areas mite numbers were observed to be low during the rainy season and high during the dry period. This explained the fact that moisture-stressed plants are more susceptible to mite attack.