E2-07: Activity enhancement of ferruginol by pentanol, an attractant baited trap for the coconut pest, *Rhynchophorus ferrugineus* F. (Coleoptera: Curculionidae) in Sri Lanka

N E Gunawardena, H M W K B Herath
(*Dept of Chemistry, Univ of Kelaniya*)

Activity enhancement of the aggregation pheromones by green leaf volatiles has been reported for Curculionids. 4-methyl-5-nonanol (ferruginol), a component of the aggregation pheromone of *Rhynchophorus ferrugineus* F. (Coleoptera: Curculionidae). It has been shown to lure *R. ferrugineus* over a long range. The activity enhancement of ferruginol by visual/ chemical factors such as light, alcohols, host attractants was investigated in the present study.

A laboratory behavioural bioassay was carried out first. None of the combinations, ferruginol + pentanol (1:1, v/v); ferruginol + propanol (1:1, v/v); ferruginol + 4-hydroxy-3-methoxystyrene + *y*-nonanoic lactone (1:1:1, v/v/v) enhanced the activity of ferruginol in the laboratory assay.

In the subsequent field assay (in Kurunegala and Gampaha districts), the above combinations were asessed by the procedure described previously. In addition, a ferruginol incorporated trap was kept in the vicinity of a light source. The results revealed that the 1:1 mixture of ferruginol and pentanol baited trap had a mean trap catch (n = 6) of 0.40 weevils/trap/day compared to that of ferruginol which caught 0.23 weevils/trap/day. The other compounds did not enhance the attractant property of the ferruginol. The presence of a light source however showed some enhancement in the ferrruginol baited traps by attracting weevils at the rate of 0.27/day.

Thus the ferruginol:pentanol (1:1, v/v) baited trap offers an economical, simple, efficient means of controlling adult red weevil population in Sri Lanka, compared to the other methods.

NARESA Grant (RG/92/C/2) is acknowledged.