B-93: Evaluation of the natural formulations as toxicants: based on the defensive secretions of two hemipterans

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Coridius janus (Hemiptera: Pentatomidae) and *Leptocorisa oratorius* (Hemiptera: Coridae) are 2 pests on sweet pumpkin and rice respectively in Sri Lanka.

Previous studies have shown that both pests produce defensive secretions mainly consisting of the combinations of t-2- hexenal/n-tridecane (60:40, w/w) and t-2-octenal/n-octyl acetate (80:20, w/w) respectively and that both these secretions are toxic to other insects likely to be their enemies.

The present study was undertaken to evaluate the strength of the 2 natural formulations compared to the other possible formulations of the 2 respective components. In the 2 combinations t-2-hexenel: n-tridecane and t-2-octenal: n-octyl acetate, the ratios of respective components were varied 100:00 - 00:100 and were assayed for toxicity by fumigant action against 03 test insects viz *Anoplolepis longipes, Sitotroga cerelella and Culex quinquefasciatus.*

The results revealed that of the 6 combinations (100:00, 80:20, 60:40, 40:60, 20:80 and 00:100) of t-2-hexenal: n-tridecane tested, that of 60:40 the natural combination used by *Coridius janus*, had the highest toxicity towards all 3 test insects. Similarly in the case of t-2-octenal: n-octyl acetate the combination 80:20 the natural combination used by *L.oratorius*, had the highest toxicity towards all 3 test insects.

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