B-92: Pesticides from Sri Lankan plants for the control of coconut pests

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Studies on the insecticidal properties of selected Sri Lankan plants were carried out using coconut pests as test insects, under a collaborative research project between University of Peradeniya and Munster University (Germany).

During the project period, 64 plant extracts from 41 plants were tested for antifeedant and lethal effects on 2 of the major pests of coconut namely, the coconut caterpillar *(Opisina arenosella)* and the red weevil *(Rhynchophorus ferrugineus)*. With the coconut caterpillar, insecticidal activity was related to measurements of weight gain, frass weight and leaf area consumed by the larvae on the test leaves. With the red weevil insecticidal activity was related to weight gain and mortality of larvae feeding on an artificial diet to which the insecticide extracts were incorporated.

In these studies, the dichloromethane extracts of the fruit/flesh of *Melia dubia* recorded significant insecticidal activity. While near significant insecticidal activity was observed with the methanol extracts of *Phyllanthus debilis* (whole plant) and the dichloromethane extracts of *Swietenia mahogani* (twigs and leaves). The *M. dubia* extracts were fractionated and highly significant ($P<0.001$) antifeedant and lethal effects were recorded with an isolated fraction.