PROBING BEHAVIOUR OF PASSION VINE HOPPER ON SELECTED HOST PLANTS

M. SANDANAYAKA¹ and D.P. LOGAN²

¹HortResearch, Private Bag 92169, Auckland

²HortResearch, No.1 Road, RD 2, Te Puke

Corresponding author: msandanayaka@hortresearch.co.nz

The passion vine hopper *Scolypopa australis* Walker (Homoptera: Ricaniidae) is an introduced pest of kiwifruit and feeds on a wide range of plants. The preference of fifth-instar nymphs for mahoe (*Melicytus ramiflorus*), Canadian fleabane (*Conyza canadensis*), kiwifruit (*Actinidia chinensis*) and kawakawa (*Macropiper excelsum*) was tested in cages in a shade house under choice conditions and in the laboratory using the Electrical Penetration Graph (EPG) technique. EPG measures the stylet pathway of probing insects. In this study, EPG was used to monitor the total probing time and the number of probes of the nymphs for 12 hours on each host plant. A total of 13-17 nymphs per host were monitored using a single nymph per plant. Mahoe was the most preferred and kawakawa was the least preferred host in both choice and EPG tests. Fleabane was less preferred than kiwifruit in choice tests, but there was no difference in total probing time and number of probes between kiwifruit and fleabane in EPG tests.

SUPPRESSION OF *BOTRYTIS CINEREA* SPORULATION ON STRAWBERRY LEAVES

S. CARD¹, M.V. JASPERS¹, M. WALTER², A. SZTEJNBERG³
and A. STEWART¹

¹The National Centre for Advanced Bio-Protection Technologies, P.O. Box 84,
Lincoln University, Canterbury, New Zealand

²HortResearch, PO Box 51, Lincoln, Canterbury, New Zealand

³Faculty of Agricultural, Food and Environmental Quality Sciences,
The Hebrew University of Jerusalem, Rehovot 76100, Israel

Corresponding author: cards@lincoln.ac.nz

The ability of endemic New Zealand isolates, *Trichoderma atroviride* (LU132), *Epicoccum purpurascens* (LU148) and fluorescent *Pseudomonas* spp. (LU1001, LU1002, LU1003 and LU1004), to suppress *Botrytis cinerea* sporulation on whole strawberry plants was compared to the efficacy of the commercial biocontrol product, PrestopTM, and the new botryticide, Teldor 500 SCTM. The foliage of strawberry plants (cv. Aptos) grown at 18°C, 85-95% relative humidity and 12 hour photoperiod was inoculated with spray suspensions of test isolates (10⁷ fungal spores/ml or 10⁸ bacterial cfu/ml) and challenged after 24 hours with a spray suspension of the pathogen (10⁵ conidia/ml). After a further 24 hours, leaf discs were cut from treated plants and placed on herbicide-amended agar, which promoted leaf senescence and facilitated *B. cinerea* development. Pathogen sporulation was quantified 7 days later by estimating the proportion of leaf disc covered by *B. cinerea* conidiophores. The chemical fungicide, Teldor 500 SCTM, completely inhibited *B. cinerea* development. The most successful isolate, *T. atroviride* (LU132), significantly (P<0.05) suppressed sporulation compared to the pathogen-only control by up to 80%, equal to that of the commercial biocontrol product PrestopTM. The other isolates were less effective than *T. atroviride* (LU132) with suppression of pathogen sporulation ranging from 0-46%.