Single-seed detection of an uncharacterised Betaflexiviridae virus in *Actinidia*

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A sensitive conventional RT-PCR assay has been developed for an uncharacterised virus within the family Betaflexiviridae, prompted by detection of the virus in *Actinidia* seedlings held in post-entry quarantine that had been grown from open-pollinated seed. Infection is asymptomatic and presently assessed as low-to-zero biosecurity risk. The assay targets the RNA-dependent RNA polymerase (RdRP) of the virus, primer sequences ('BetaF2' and 'BetaR2', 278bp amplicon) being based on a partial RdRP sequence for the virus. The assay detects the nine virus isolates found to date, in a range of sample types (fresh leaf, stem cambium, archived RNA). The assay, which includes a multiplexed internal control, has been accredited by International Accreditation New Zealand for *Actinidia* testing. To support management of the virus, the assay and associated RNA extraction method have been applied to testing dried *Actinidia* seed directly. They have been found sufficiently sensitive to detect the virus in individual seeds. Initial results show efficient transmission of the virus from infected pollen to the seed.

Detrimental impact of insecticide sprays on *Trichogramma chilonis* parasitism of *Crocidolomia pavonana* eggs in Samoa

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Crocidolomia pavonana F. (Lepidoptera: Crambidae) is a major pest of brassica crops in the Pacific and other tropical and sub-tropical parts of the world. In Samoa, farmers use various insecticides against *C. pavonana* for the production of Chinese cabbage. A recent study found that a local population of *Trichogramma chilonis* (Hymenoptera: Trichogrammatidae) successfully parasitises eggs of *C. pavonana*. This study determined the effects of key insecticides on *T. chilonis* parasitism in field trials. It showed that the number *C. pavonana* eggs on Chinese cabbage was significantly reduced after applications of Attack™ (p=0.004) Orthene™ (p=0.001) and Dipel™ (p=0.001) but not after Entrust™ (p=0.268). Negative effects of insecticides were observed on the parasitism rate of *T. chilonis* and *C. pavonana* egg masses, which were more likely to be only partially parasitized after an insecticide application. Attack™ and Entrust™ adversely affected *T. chilonis* parasitism rates of *C. pavonana* eggs. However, of the insecticides tested Dipel™ reduced *T. chilonis* parasitism the least. This study suggests that Dipel™ could be considered for inclusion in IPM programmes that depend on *T. chilonis* parasitism of *C. pavonana*.