

THRIPS INCIDENCE ON GRAPE FLOWERS IN NEW ZEALAND

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A survey was conducted during the spring of 2001 to determine the prevalence and species of thrips infesting grape flowers in the main wine grape regions within New Zealand. Five growers from each region, Auckland, Hawke's Bay, Marlborough and Canterbury, each contributed five bunches of Chardonnay grape flowers from the side of the vineyard exposed to the prevailing wind and five bunches from the centre of their vineyard. Numbers and species of thrips within bunches were recorded. Thrips were detected in all grape flowers from all regions and all were identified as New Zealand flower thrips (*Thrips obscuratus*) with the exception of one specimen of *Aeolothrips fasciatus*. Mean numbers of thrips per flower bunch varied significantly between regions, being 6.9, 31.5, 6.0 and 2.5 for Auckland, Canterbury, Hawke's Bay and Marlborough respectively ($P < 0.001$). The highest number of thrips per bunch, 235, was recorded from Canterbury. In each region, mean thrips numbers per bunch were significantly higher from the windward side than from the centre of vineyards ($P < 0.001$), being 10.1 and 6.0 respectively. Further studies are being carried out to determine the effects of thrips on grapes.

SAMPLING INTENSITIES REQUIRED FOR MONITORING ONION THRIPS (*THRIPS TABACI*) (THYSANOPTERA: THIRIPIDAE)

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Resistance by onion thrips (*Thrips tabaci*) to insecticides is a serious problem in the Pukekohe district. To reduce pesticide use, a pest threshold system based on crop monitoring has been proposed as part of Richard Wood and Nick Martin's Insecticide Resistance Management Strategy (IRMS). Our research assessed the efficiency and integrity of the sample units in the IRMS-recommended monitoring system, which proposes sampling 10 subsets of five consecutive onion plants (total of 50 plants sampled) per block. Two experiments were conducted: (a) compare two monitoring intensities (50 versus 100 plants per block) at three sites, using subsets of 5 plants; (b) compare two monitoring structures (10 subsets of five consecutive plants versus 50 randomly chosen individual plants) on three occasions at one site. All assessments were conducted in the Pukekohe region between November 1998 and January 1999. Numbers of larval and adult thrips per plant were recorded. Statistical analyses for significant differences were performed using T-tests. The current (IRMS) recommendation to monitor 50 plants per field was validated with no significant differences between samples of 50 versus 100 plants, or between sampling 10 groups of 5 plants versus sampling 50 randomly spaced plants.