

EFFICACY OF DIFFERENT TREATMENTS AND APPLICATION METHODS ON BLACK SCALE CONTROL (*Saissetia oleae* (Olivier)) ON AVOCADOS

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The Black Scale (*Saissetia oleae* (Olivier)), is nowadays one of the main pest affecting the Avocado orchards in Chile, because of its wide distribution, aggressiveness in the dissemination and broad diversity of hosts. Its attack causes weakening of branches, vigor reduction and decrease of the plants yields. Different alternatives of insecticides to control black scale were evaluated in year 2007, Actara 25 WG (a.i. thiametoxam), applied on leaves or irrigation, chlorpyrifos and mineral oil in a Hass avocado orchard, located in Romeral, V Region, Chile. To determine the moment to apply the insecticide, the pest population was monitored. Highly infested sectors were marked, evaluating the mortality of nymphs fixed on leaves on days 20 and 45 after the application of treatments. In addition, the number of nymphs per longitude (meter) of twig and the number of live nymphs fixed per terminal shoots were evaluated. Insecticides treatments had significantly less nymphs than the control on days 20 and 45; the best results were obtained with Actara 30 g hl⁻¹; Actara through irrigation system at 1.5 kg ha⁻¹ applied with water volumes of 22 and 100 L tree⁻¹ and chlorpyrifos 80 cc hl⁻¹; mineral oil at 1.5%v/v has a lower efficacy and was statistically different from the other treatments. On day 90 after treatment, Actara 30 g hl⁻¹ and Actara 1.5 kg ha⁻¹ applied through irrigation system with 22 L tree⁻¹ had the best efficacy in pest control in the evaluation of live nymphs fixed per longitude of twig and per terminal shoot; however, statistical differences were observed among water volumes applied. Treatments applied with contact products such as mineral oil and chlorpyrifos has shown high variability and had significantly lower Black scale control than Actara treatments applied on leaves and irrigation system.