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Recommended pesticides persistence for integrated citrus production on ectoparasitoid *Tamarixia radiata* (Waterston, 1922) (Hymenoptera: Eulophidae)

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Tamarixia radiata (Waterston, 1922) is the main biological control agent of the psyllid *Diaphorina citr*i Kuwayama, vector of bacteria associated with Huanglongbing in citrus. However, indiscriminate use of chemicals affects its control rate. Thus, this study assessed the biological persistence of 22 insecticides, two oils and 16 acaricides recommended for the control of citrus pests, on the parasitoid *T. radiata*. For this, the parasitoid adults were exposed to waste products sprayed on citrus seedlings of the variety Valencia. After 3, 7, 10, 17, 24 and 31 days after spraying, leaves were removed and in the laboratory, leaf discs of 4.0 cm diameter were obtained with the aid of a metallic punch , and were placed in Petri dishes (4.5 cm diameter) on a gelled mixture of water-agar to 2.5%. Thereafter, 10 parasitoid adults of 48 hours of age were placed on each plate and, then, placed in a climate clamber (25 ± 1 ºC, 70 ± 10%, 14L10D). Each treatment had five replicates. Insect mortality was evaluated 24 hours after exposure to residues. Insecticides Saurus, Turbo, Mimic 200 SC and Azamax; mineral oil Argenfrut; vegetable oil Nortox and acaricides Vertimec 18 EC, Envidor, Sanmite, Torque 500 SC, Cascade 100, Borneo, Dicofol, Micromite 240 SC and Savey WP were classified as short lived, and insecticides Tracer and Dicarzol and acaricide Marshall Star were classified as persistent. Therefore, it is essential to use selective products in integrated pest management to preserve the parasitoid.

References

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