Laboratory screening of pesticides against *Lecanoideus floccissimus*

Martin et al.

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Abstract: *Lecanoideus floccissimus* Martin et al. is a major pest in commercial banana greenhouses of the Canary Islands. Infestations on banana could be extremely heavy all year around, causing enormous damage to the plants and fruits. The most representative damage of this whitefly species is the development of black sooty mould fungi on plants due to the copious white flocculent wax secreted by nymphs, as well as the abundant excretion of whitefly honeydew. Although, chemical control against *L. floccissimus* is not practicable for long term and stable management of this pest, information on effective pesticides is important for commercial banana growers before a Classical Biological Control Programme could be implemented. We present the effects of eighteen foliar applied pesticides on *L. floccissimus* eggs and nymphal stages. Detached leaf-disc bioassays were conducted under controlled chamber conditions (25±2ºC, 60±5% r.h., 16L:8D) in laboratory. In the study we evaluate only active ingredients authorized for Integrated and Organic banana production in the Canary Islands, i.e.: insecticidal soaps, horticultural mineral and vegetable oils, neem products containing azadirachtin, Malathion and Chlorpyrifos. Results indicated that there was significant difference (P<0.05) in the effectiveness of the different products evaluated dependant on the whitefly instar sprayed. *L. floccissimus* eggs were much less affected for any of the products used than nymphal stages. Among the eighteen products evaluated, Malathion 50% p/v and Chlorpyrifos 48% gave the best egg control, however insecticidal soaps (made of the potassium salts of fatty acids) were more effective for nymphs and, a maximum of 100% mortality was observed with treatments on first nymphal instar. The highest fourth nymphal instar mortalities were recorded with vegetable oil, insecticidal soaps and Pyrethrum extract treatments.

Key words: Spiralling whitefly, Lecanoideus floccissimus, pesticides efficacy.