

SCIENTIFIC NOTE

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Dendrothrips eremicola* Priesner, (Thysanoptera: Dendrothripidae), a New Pest Outbreak on Olive trees and its Control in the Newly Reclaimed Lands at Ismailia, Egypt*El-Kholy, M.; M. M. El-Husseini* and E. A. Agamy***

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Interference of man in the desert ecosystem through land reclamation for gaining new agro-ecosystems with monoculture characteristic has led to occurrence of new economic insect pests (El-Husseini *et al.* 1996, 2001, and 2004). The thrips species, *Dendrothrips eremicola* Priesner (1965) (Thysanoptera: Terebrantia: Dendrothripidae) was recorded recently, as a new insect pest outbreak on olive trees in some locations in Egypt. Pest's population was under natural balance on its original wild host plants in the desert ecosystem, e.g., *Ligustrum* spp. and *Syringa* spp. (Fam.: Oleaceae) by both biotic (natural enemies and limited host plants) and abiotic (water/dryness) factors.

Some of the ecological factors that might contributed to the recent pest's outbreak in some olive groves are; removing wild plants and growing conventional olive variety (*Olea europaea*) which has offered an unlimited alternative food supply for the thrips, irrigation system by watering the trees all the year around has led to formation of juicy leaves suitable for thrips feeding and egg insertion, and moreover, nitrogen fertilization which increases softness of plant tissues, favorite for thrips feeding and reproduction. The most important additional factor is intensive use of chemical insecticides for controlling insect pests in olive groves. Such chemical control was not effective against this pest due to its hidden sites on the plant and to its feeding habit using its characteristic mouth parts and on the other hand, it suppressed existing natural enemies of the thrips. Accordingly, population of the *D. eremicola* has gradually increased and has become an economic insect pest on olive, especially at Ismailia, Alexandria and Behira governorates, as a unique case found only in Egypt.

Suppressing populations of *D. eremicola* in the olive groves can be reached through a crop management policy including an IPM program focusing on the use of biological control agents (El-Husseini *et al.*, 1996). At the present time, the searches for effective and environmentally safe pesticides became an urgent need for a rapid population suppression of this thrips in olive groves, especially those under organic farming. Therefore, the bio-pesticides Romectin 1.8 % EC (Abamectin) and Tracer 44% SC (Spinosad) comparing with traditional chemical pesticides, usually applied by olive growers in the newly reclaimed lands at Ismailia governorate were tested (Table 1). Results obtained 2 days post treatment showed that the two bio-insecticides gave a 100% mortality of the thrips on treated trees, as well as the two chemical insecticides; Challenger 36% SC (Chlorfenapyr) and Admire 20% SC (Imidacloprid). Meanwhile, decreasing

Table (1): Effect of bio-insecticides and traditional chemical insecticides for controlling the thrips, *Dendrothrips eremicola* Priesner on olive trees at newly reclaimed lands in Ismailia governorate.

Trade Name	Active Ingredient	Applied Concentration	No. of Treated Trees	Control Efficacy 2 Days post Treatment	Observation after Treatment
Romectin 1.8 % EC	Abamectin	30 cm ³ /100 lit	50	High	• No alive thrips. • Dead insects on leaves.
Tracer 44% SC	Spinosad	35 cm ³ /100 lit	50		
Challenger 36% SC	Chlorfenapyr	40 cm ³ /100 lit	40		
Admire 20% SC	Imidacloprid	100 cm ³ /100 lit	40	Medium	• Few alive active thrips.
Admire 20% SC	Imidacloprid	50 cm ³ /100 lit	50		
Ortus 5% SC	Fenpyroximate	50 cm ³ /100 lit	50	Low	• Alive active thrips. • Only few dead insects.
Baicao No.1 036% W/V	Mattine (Plant Extract)	100 cm ³ /100 lit	40	Very Low	• Alive active thrips.
Macomite 10% WP	Hexythiazox	20 gm/100 lit	25	Very Low	• No dead insects.
Sanmite 20% WP	Pyridaben	50 gm/100 lit	10	Very Low	

the applied dose of Admire by 50% resulted in a less efficacy against the thrips. The other tested chemical pesticides showed also low to very low efficacies against this pest. Further studies, particularly that searching for natural enemies of *D. eremicola* on its original natural host plants (*Ligustrum* spp. and *Syringa* spp.) at its virgin desert habitats are needed.

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