

638.157.&595.42-08; 595.42A; 547.291

635/87 LUPO, A. [Control of the mite *Varroa jacobsoni* in hives in Israel by using formic acid.] *Hassadeh* (1986) 66 (10) 2117-2120 [He, en, B] Dept. Zoology, Tel Aviv Univ., Ramat Aviv, 69978 Tel Aviv, Israel.

The control method used was as follows: from 15 to 25 ml formic acid (85%) were poured on cotton wool in a plastic petri dish that was placed on top of the brood frames in the hive. Space for the dish was provided by placing a wooden frame, 5 cm high, between the top of the hive box and the cover. Eleven colonies which were weak and infested with *Varroa* were used to test the method. Before the first treatment, the hives were inspected and mites were seen infesting the bees. After 6 treatments, given 5-6 days apart, a similar examination failed to reveal any mites on the bees. All the colonies increased in strength. Meanwhile the queens in each hive were caged to prevent oviposition, and when no sealed brood was present the hives were fumigated twice with Amitraz. An average of only 47.5 dead mites per colony was found. The results indicate that formic acid is an effective means of controlling *V. jacobsoni*.

Author.

595.799.*Prosopis*; 591.9(569.4)

808L/87 WARNCKE, K. A contribution to the knowledge of the genus *Prosopis* (Hymenoptera: Apidae: Colletinae) in Israel. *Israel Journal of Entomology* (1984) 18, 53-61 [En, Bb]

638.157.&595.42; 595.42A; 638.15(569.4)

982L/87 YACOBSON, B. Varroasis — a new entity in bee diseases in Israel. *Israel Journal of Veterinary Medicine* (1986) 42 (1) 42 [En, Ba] Identified in Israel in October 1984; thought to have spread from Syria.

638.121.1; 638.121.2; 638.121.3; 591.141.G; 591.14A

503/88 LENSKY, Y.; CASSIER, P.; FINKEL, A.; TEESHBE, A.; SCHLESINGER, R.; DELORME-JOULIE, C.; LEVINSOHN, M [The tarsal glands of honeybee queens, workers and drones. II. Biological role.] Les glandes tarsales de l'abeille mellifique (*Apis mellifera* L.) reines, ouvrières et faux-bourdons (Hymenoptera, Apidae). II. Rôle biologique. *Annales des Sciences Naturelles, Zoologie*. (1984) 6, 165-175 [Fr, en, Bc] Fac. Agric., Triwaks Res. Center, Hebrew Univ. Jerusalem, 76100 Rehovot, Israel.

The tarsal gland has not yet been isolated by dissection of honeybees, but substances called tarsal secretion were collected from surfaces on which queens, workers or drones had walked (or rested). The following rates of secretion were calculated (mg/h): 6-month old queens, 1.005; 2-yr-old queens, 0.64; workers, 0.0718; drones, 0.063. Worker tarsal secretion was found to have no effect on: orientation of workers to the hive entrance, attraction of workers to a food source, survival of isolated workers, acceptance by workers of grafted larvae in queen cups. Queen tarsal secretion inhibited construction of queen cells in swarming preparations, but it had no effect on survival of isolated workers. Worker or queen or drone tarsal secretion had

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638.132.2; 638.132; 582.737.A

1219/88 EISIKOWITCH, D.; DAFNI, A. The use and abuse of introducing honey plants. *Bee World* (1988) 69 (1) 12-14 [En, B] Dept. Botany, George S. Wise Fac. Life Sciences, Tel Aviv Univ., Tel Aviv, Israel.

The introduction into new habitats of species such as *Prosopis juliflora* [see previous abstract] is discussed, and attention is drawn to some potential hazards of this practice. The introduced species may achieve such rapid growth and dispersal that it attains pest status. Introduced species may also attract native pollinators away from the native flora. It is suggested that local plants (e.g. in Kenya, *Acacia* and *Ziziphus* species) would serve most purposes equally well, but that if it is necessary to use introduced species then these must be checked for growth characteristics, genetic relationships with native species, toxicity to man and animals, and host-disease relationships.

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1277/88 LUBINEVSKI, Y.; STERN, Y.; SLABEZKI, Y.; LENSKY, Y.; BEN-YOSSEF, H.; GERSON, U. Control of *Varroa jacobsoni* and *Tropilaelaps clareae* mites using Mavrik in *A. mellifera* colonies under subtropical and tropical climates. *American Bee Journal* (1988) 128 (1) 48-52 [En, B] Beekeeping Div., Extension Service, Ministry of Agric., Hakirya, Tel Aviv, Israel.

Colonies in Israel infested with *V. jacobsoni* were treated with Mavrik (a.i. fluvalinate). A small piece of plywood which had been soaked in 20% Mavrik emulsion and then dried was hung between the combs in the centre of the brood nest. Mean number of mites per colony was reduced from 30 to 2 in 3 weeks, but in untreated controls the number rose from 24 to 182. In a second trial, high mite mortality was observed during the first 2 weeks of treatment but a low level of infestation persisted. No adverse effects on bees were observed, even when the dose of Mavrik was doubled. With one exception, no fluvalinate residues were detected in honey samples from the super above the brood nest; honey samples from the brood box contained, on average, 0.057 ppm (maximum 0.19 ppm). The Mavrik inserts were removed after 14-16 days to avoid further contamination. It is concluded that 4 Mavrik treatments per colony per year can keep *V. jacobsoni* populations to levels below the economic damage threshold; the treatment of 500 colonies takes 10-12 work-days, compared with 50 work-days for amitraz fumigation. Mavrik also reduced populations of *V. jacobsoni* and *Tropilaelaps clareae* when used to treat colonies in Thailand.

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