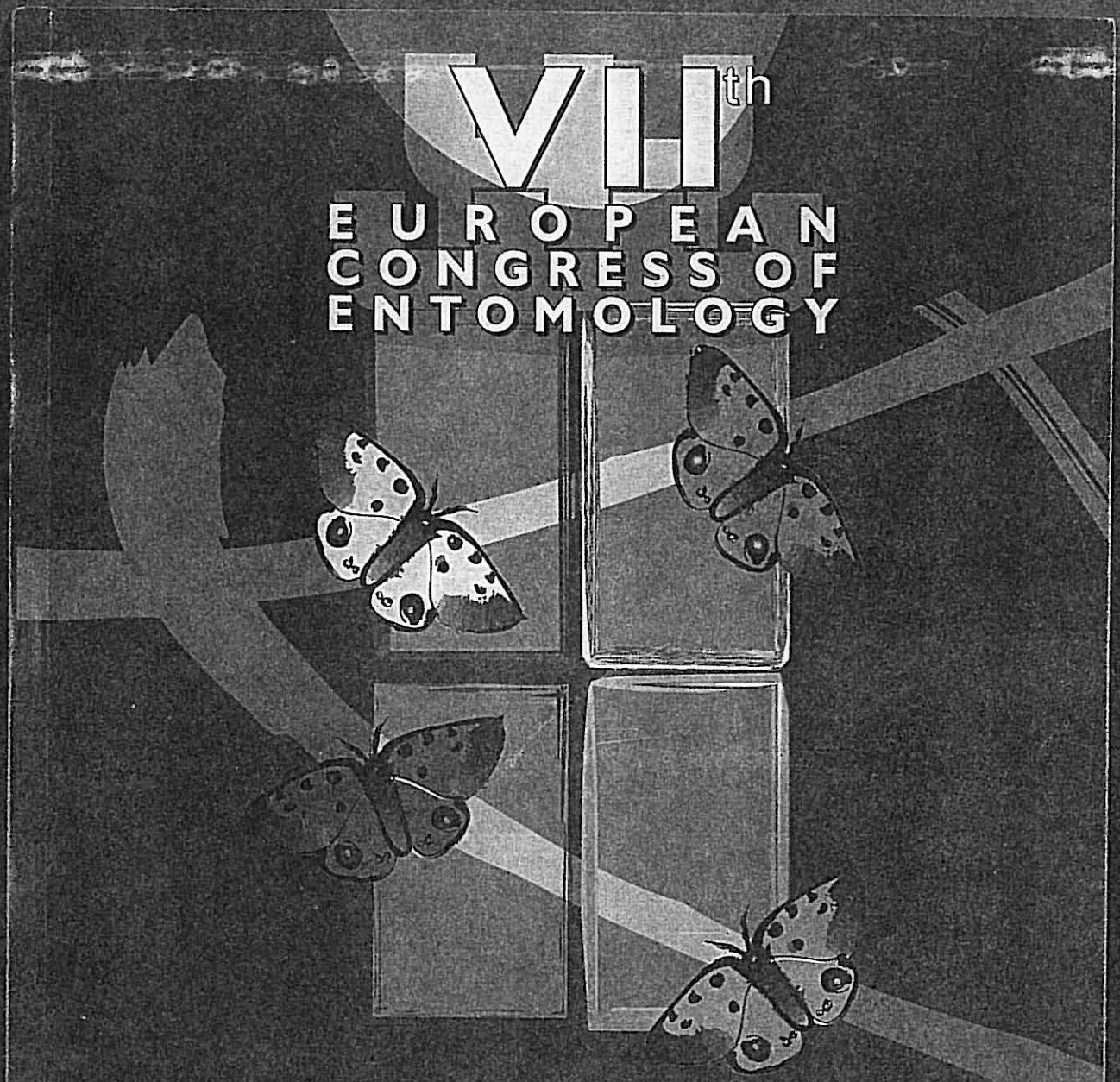
VIIth EUROPEAN CONGRESS OF ENTOMOLOGY



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CONGRESS ABSTRACTS

077

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Experiments to control the olive fly, Bactrocera oleae (gmel.) in north-eastern Portugal

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Experiments were carried out in north-eastern Portugal, in 1998 and 1999, to test the effectiveness of strategies to control the olive fly, Bactroera oleae (Gmel.). In 1998 the attract and kill method was compared with an untreated control in one olive grove, located near Vila Flor, and the first method was compared with bait sprays in an grove near Barca d'Alva. In 1999 the attract and kill method was again compared with an unsprayed control in the same orchard at Barca d'Alva. Groves, with a surface of about 2,5 to 3,0 ha, were partially isolated from the rest of the olive growing area. Target devices produced in Greece (Vioryl) were used at a rate of one per tree in the grove of Vila Flor and one per each two trees in the grove of Barca d'Alva. The devices were installed just before olives became susceptible to olive fly infestation, i.e. middle to end of July. In the bait spray experiment a mixture was used that consisted of dimethoate (75 ml/hl a.i.) added to a proteinous hydrolized bait (500 ml/hl a.i.), with an intervention threshold established by the presence of 3.5% of infested fruits. For each treatment 200 litres per hectare of the mix were distribute. Only the south side of the trees and one in either three rows were sprayed. To evaluate the methods, adult density of the insect was measured through a network of five sticky yellow traps baited with a sex pheromone dispenser per experimental block, checked every week. Furthermore, fruit infestation was measured three to five times during the experimental period. At each sampling date 20 fruits per tree were collected from each of four neighbouring trees in five points randomly chosen per experimental block. Total number of flies captured in sticky traps were significantly lower in the attract and kill block than in either the sprayed or the control blocks at Barca d'Alva, but were significantly higher in the attract and kill block than in the control at Vila Flor, suggesting that different conditions have influenced the catches. No significant differences in fruit infestation levels were observed between the attract and kill and the sprayed block until late October, when this level was significantly higher in the first block. Fruit infestation levels were significantly lower in the attract and kill blocks than in the control, from the end of September to the beginning of November. However none of the control strategies tested kept the level of infestation within acceptable limits. This was probably due in part, to either the reduced area of the groves, allowing immigration of insects from surrounding areas, or high pest densities, as in the untreated blocks fruit infestation level reached 87.0% in late October.

Index terms: olive groves, attract and kill, bait sprays.

078

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Experimental essay of the non toxic alternative technology "elkofon-entomela 55s" for fighting Bactrocera (Dacus) oleae and Ceratitis capitata.

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The potential active ingredients of insect attractant ENTOMELA 55S are synthetic natural products of protein degradation with protein equivalent of 55%. The formula also contains assistant substances of eatable vegetable oils and water. The shape of ELKOFON-traps are adapted for mass-trapping and made from glass and plastic with a capacity of 450-750ml of trapping liquid. Field tests were made to compare the system ELKOFON-ENTOMELA with other attractants and traps (tables1,2) and to compare insect-catches in transparent traps, yellow colored and colorless (table 3,4). Four experimental tables give: a) the trapping ability of the system in olive groves treated with bait sprays (table 5) b) the trapping ability of the system with the initial supply of traps with only 150 ml of ENTOMELA and 300 ml of water (table 6), c) the simultaneous trapping of Ceratitis capitata and Bactrocera oleae in the same traps (table 4) d) the contribution of the system to reduce the population of Bactrocera oleae after the end of treatments with bait-sprays, which surely acts upon the next year infestation (table 7).

Index terms: Bactrocera oleae, Ceratitis capitata, trapping ability, ELKOFON, ENTOMELA.