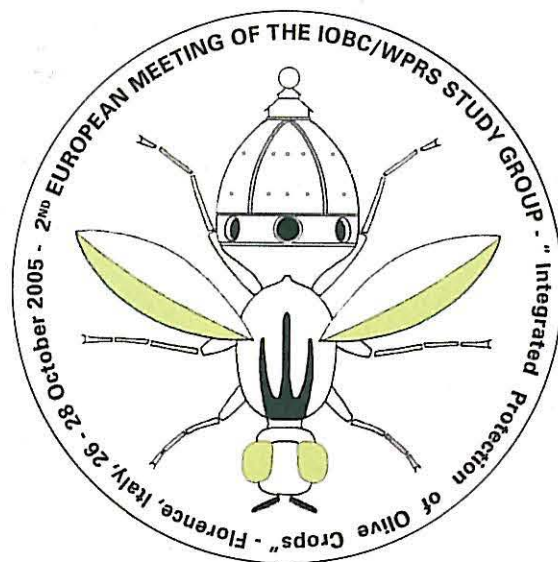


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MATING DISRUPTION TRIALS FOR THE OLIVE MOTH, *PRAYS OLEAE* (BERN.), (LEP.:YPONOMEUTIDAE) IN TRÁS-OS-MONTES OLIVE GROVES (NORTHEAST OF PORTUGAL)

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The olive moth, *Prays oleae* (Bern), is one of the most serious olive pests in the Mediterranean basin. The objective of the present study was to integrate environmentally safe methods for the control of the pest. Trials were carried out for three consecutive years (2002-2004) in an olive grove about 20 ha, in the ecological production region at Romeu (North of Mirandela). The trees were of medium size, about 60 years old and mainly of the Cobrançosa and Verdeal Transmontana cultivars. In the flower generation when 10% of the flowers were open, the entire grove was sprayed with *Bacillus thuringiensis*, (*var. kurstaki*) to reduce the larvae population. Within the grove, two 7 ha plots, one treated with pheromone during the fruit generation (MD-plot) and the other used as control, untreated (CO-plot), were selected. The distance between the two plots was approx. 300 m. Pheromone dispensers were installed at the onset of the fruit generation (3 June 2002, 5 June 2003 and 8 June 2004) in the MD-plot, and the dose of pheromone applied was 40 g/ha. Results were evaluated by fruit injury and by capture of male *P. oleae* in Delta traps baited with polyethylene vials, loaded with 1 mg of synthetic pheromone. The *P. oleae* pheromone is a single component the Z-7 tetradecenal; in mating disruption treatments the pheromone was formulated in β -cyclodextrin and dispensed from polyethylene vials.

During the flower generation, either male captures in pheromone traps or flower infestation were similar in both plots. However, during the fruit generation, male catches were higher at the CO-plot, with a maximum of 497.0 ± 97.20 and 259.2 ± 81.16 individuals per trap and per week, respectively in 2003 and 2004, than on the MD-plot (18.8 ± 4.60 and 4.4 ± 3.17). The rate of male disorientation was between 73.77 - 97.04% in 2003 and 96.21 - 97.42%, in 2004. Fruit infestation was significantly different between plots, with a maximum of 82.9% - 54.7% and 20.7 ± 12.7 - 16.7 ± 8.81 of infested fruits in the CO and MD plots, respectively for 2003 and 2004. The overall crop yield was similar in both plots. The results obtained suggest that the mating disruption method applied against the fruit generation of *P. oleae* has the potential to reduce the moth population and to minimize losses due to the pest.

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