

CONTROL OF THE OLIVE FRUIT FLY, *BACTROCERA OLEAE* (GMEL.), IN ORGANIC AGRICULTURE

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The olive fruit fly, *Bactrocera oleae* (Gmel), is the major pest of olives in the Mediterranean countries. Traditionally, in the Trás-os-Montes region (Northeast of Portugal) their importance was reduced, however in recent years they have caused serious losses in olive production. The aim of this work was to study the possibility of using different traps in olive fruit fly mass trapping in organic agriculture. The experiments were conducted in 2002 and 2003, in an olive grove, situated in Romeu-Mirandela (Northeast of Portugal). The production followed organic guidelines, the trees are of medium size and about 80 years old. The most important cultivars are Cobrançosa and Verdeal Transmontana. For olive fruit fly mass trapping different trap kinds were tested: in 2002, "Agrisense" and "Olive + hydrolysed protein"; and in 2003, "Agrisense", "Olive + hydrolysed protein", "Olive", "Ecotrap" and "Dacus-Stick". Different plots of the same size were constituted, and one of them was used as control. The experiments were installed in the middle of August with a ratio of one trap per tree. The mass trapping efficacy was evaluated by the adult captures number in three yellow stick traps, baited with sex pheromone, and three MacPhail traps, per experimental site, checked every week. Furthermore, fruit infestation was measured by inspecting 250 fruits, under binocular microscope, biweekly per site. The data were analyzed by ANOVA following by Tukey multiple range tests. The different mass trapping methods showed similar results in both years. The total number of flies captured in yellow stick and MacPhail traps was significantly higher in the control site than in the mass trapping ones. In all sites, the number of infested fruits was significantly lower in the mass trapping sites than in the control. In 2002, in the control site, the infested fruits reached 78.3%, and in 2003 the maximum was 33.5% of attacked fruits. The treatments with lower infestation level were "Ecotrap" with 5.2% and "Agrisense" with 6.8% in 2003. The results of these experiments suggest that the control of olive fruit fly can be achieved in organic oliviculture with mass trapping methods. The "Ecotrap" and "Agrisense" provided the best control strategy against the pest.