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Mass trapping or matting disruption: are they alternative tactics for the management of citrus flower moth?

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Abstract

The citrus flower moth (CFM), *Prays citri*, is a key-pest of lemon orchards in the Oeste region of Portugal. The management of CFM is actually dependent on chemical control. Up to 12 insecticide treatments may be carried out against CFM each year. Phosphamidon is the only active ingredient registered in Portugal to control this pest and it shall be withdrawn by 25 July 2003. Other insecticides have been under evaluation, e.g., lufenuron, *Bacillus thuringiensis*. The dependence on chemical control constitutes a major constrain to the development of IPM strategies, namely because of resistance problems, disruptive effects on natural control of secondary pests and pesticide residues on fruits. Therefore, matting disruption and mass trapping constitute interesting alternative tactics for changing the pest status of CFM, in a compatible way with IPM strategies. However, the use of CFM pheromone is actually limited to population monitoring, based on pheromone traps. Different monitoring systems are commercially available from the industry, e.g., Canada, Germany, Italy, Israel, Netherlands, Portugal, Spain, USA. Despite promising results have been reported in preliminary field trials using mass trapping or matting disruption to manage CFM (Nucifora & Calabretta 1985, Capizzi et al. 1987, Sternlicht et al. 1990), there is still no commercialised product to be used for that purpose.

The project PO AGRO DE&D n° 30 (2002-2004) aims to evaluate the feasibility of mass-trapping or matting disruption as alternative tactics to manage CFM in IPM lemon orchards from Oeste region. Accordingly, biological data has been collected during the first year of the project, namely, by monitoring the male flight activity of CFM, using pheromone traps, and the dynamics of injury, by flower and fruitlet sampling, in 13 lemon orchards. Preliminary results will be presented and discussed.

Capizzi A, Tonini C & Spinelli P (1987) Male disorientation trials with a particular formulation. Bull OILB srop 3: 68-70

Nucifora A & Calabretta C (1985) the technique of mass-trapping and its results against the citrus flower moth (*Prays citri* Mill.)- third contribution. In: Atti XIV Congr Naz Ital Entomol, Palermo, 1985, pp 861-865

Sternlicht M, Barzakay I & Tamim M (1990) Management of *Prays citri* in lemon orchards by mass trapping of males. Entomol Exp Appl 55:59-67