

IS MATING DISRUPTION A FEASIBLE METHOD TO CONTROL BACTROCERA OLEAE?



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INTRODUCTION

Previous studies demonstrated that the attraction of *B. oleae* males to the sex pheromone, 1,7-dioxaspiro[5.5]undecane (olean) source was reduced by releasing olean over a certain level (~1.28 mg/day)¹, suggesting that olive fruit flies are not able to find the source of olean when its concentration was over this level, which could be a basis for mating disruption.



OBJECTIVE

The aim of this work was to study which pheromone concentration is required to be released, and the most efficient way to deliver it to reach control of the olive fruit fly by mating disruption.

MATERIALS AND METHODS

- Two pheromone release systems providing two different release rates



Aerosol (left) and passive (right) pheromone dispensers

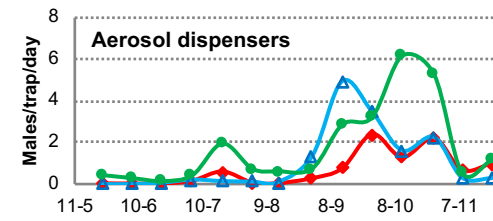
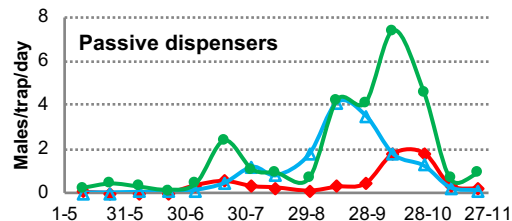
- Efficacy assessment: population monitoring and olive damage



Male (left) and female (right) monitoring traps

- Each treatment was applied in plots from 3 to 5 ha

RESULTS



-- 0.3 g olean/ha/day

-- 2 g olean/ha/day

-- Untreated

% olive damage	Passive dispensers	Aerosol dispensers
0.3 g olean/ha/day	15.67 ± 9.05 ^a	47.34 ± 15.36 ^b
2 g olean/ha/day	25.00 ± 14.43 ^a	24.30 ± 3.43 ^a
Untreated plot	15.33 ± 8.85 ^a	36.02 ± 7.52 ^{ab}

CONCLUSIONS

Male catch disruption was obtained with a pheromone release rate of 2 g per ha and day. However, fruit damage at harvest was over acceptable levels for commercial olive production in all cases. Probably, the long lifespan of the males of this species, together with its high dispersal and search capacity, make this pest not a suitable candidate for applying the mating disruption technique.