

New Attract and Kill Devices Against *Bactrocera Oleae* (Gmelin, 1790) in Organic Olive Orchards: Efficacy and environmental impact

Iannotta, N.¹, Belfiore, T.¹, Noce, M.E.¹, Scalercio, S.¹ & Vizzarri, V.¹

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Abstract

In organic production, the reduction of pesticide spraying in ecosystems is a key point. The use of attract and kill devices significantly reduce the quantities of utilized insecticide, minimizing the impact of full cover spraying strategies. Recently, many efforts have been devoted to enhancing the selectivity of attractants, to prolong their efficacy, to reduce costs of devices, and to facilitate field application. New attract and kill devices, cheaper and easier to install, were recently developed. We tested the efficacy and the environmental impact of an experimental device compared with a commercial one. The study was carried out in Calabria, South Italy, from July to November 2007. Four experimental theses were randomly chosen, two with experimental, and two with commercial devices. A couple of device (one baited and one not baited) was placed on twelve trees per thesis. A sticky strip was positioned on each device. Sticky strips were collected at the end of the season, and the abundance of target and non-target insects was evaluated. Insignificant differences have been detected between devices, but experimental devices have been somewhat more efficacious against the target insect, and have a demonstrated slightly greater impact on non-target insects than commercial ones. The influence of device color should be further investigated in order to maximize efficacy and minimize environmental impact.

¹ CRA Centro di Ricerca per l'Olivicoltura e l'Industria Olearia, c.da Li Rocchi-Vermicelli, 87036 Rende, Cosenza, Italy, E-Mail nino.iannotta@entecra.it