

EFFECTS OF DIFFERENT ATTRACTANTS USED IN OLIVE TRAPS FOR OLIVE FLY MASS-TRAPPING ON BENEFICIAL ARTHROPODS

J.A. Pereira¹, F. Pavão², A. Bento¹

¹ CIMO/Escola Superior Agrária, Instituto Politécnico de Bragança, Campus Sta Apolónia, Apt. 1172, 5301-855 Bragança, Portugal. jpereira@ipb.pt

² Associação de Olivicultores de Trás-os-Montes e Alto Douro, Rua Centro Transmontano de S. Paulo, 75. 5370-381 Mirandela. Portugal

The olive fruit fly, *Bactrocera oleae* Gmel. is the most serious olive's pest in Mediterranean countries. Generally, its control requires the application of insecticides presenting limited efficacy, high environmental impacts and residue accumulation in olive products. Olive traps with different attractants have been developed and used in organic farming as an alternative method to chemical insecticides. The aim of the present work was to study the effect of different attractants used in Olive traps for olive fly mass-trapping on beneficial arthropods. The experimental work was carried out during 2005 and 2006, in an organic olive grove located in Trás-os-Montes region (Northeast of Portugal). Four plots of about 2 ha of surface were constituted and in each plot, Olive traps with different attractants [biammonium phosphate 4% (BaP), ammonium phosphate 5% (AP), endomosyl 5% (End.) and urea 5% (Ur.)] were installed at middle August. Monthly, in 2005, and biweekly, in 2006, 15 traps were changed per attractant and the number of individuals of the Orders Aranea, Coleoptera, Heteroptera and Hymenoptera, and Families Chrysopidae, Formicidae and Coccinelidae were registered.

Considering all individuals, a total of 17 378 (41.6% in BaP, 0.9% in AP, 47.7% in End. and 9.7% in Ur.), were recovered in 2005 and 8 174 (16.5% in BaP, 1.4% in AP, 76.7% in End. and 5.4% in Ur.) in 2006. The individuals of Formicidae were the most captured. In both years, if ants were excluded, the captures in Olive traps with Urea represents 52.6% and 49.6% of the total recovered for 2005 and 2006, respectively. Urea attracts significantly more Aranea, Hymenoptera, Dermaptera and Neuroptera, in 2005, and Neuroptera, in 2006, than the other attractants. In the both years of study significantly higher captures of Formicidae and total arthropods were registered in End.. Attractant Ur. was especially armful for Neuroptera, with cumulative number of captures of 12.7 ± 1.37 and 12.7 ± 0.96 in 2005 and 2006, respectively (approximately three fold higher than the other attractants).

Key words: olive fruit fly, OLIVE traps, attractants, beneficial arthropods.