



BOOK OF ABSTRACTS



ECE 2023
CRETE
European Congress of Entomology

XII European Congress of Entomology

16-20.10.2023

Cultural Conference Center of Heraklion
Crete, Greece

www.ece2023.com

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plots there was no intervention, whereas in cherries in the treatment plots SPLAT+ Spinosad was applied and in control plots only SPLAT. The population of *D. suzukii* in all experimental plots was monitored with simple traps bearing apple cider until harvest. In both trials both *Drosophila* spp and *D. suzukii* catches in traps of the treatment experimental blocks were significantly reduced. The efficacy of the method and its adoption in IPM programs is discussed.

Keywords: *Drosophila suzukii*, lure, SPLAT, Spinosad, Integrated Pest Management

P253. Distribution of the olive fruit fly off, *Bactrocera oleae*

A. Elbitar¹, M. Afram¹, A. Chehadé¹, E. Choueiri¹, I. Joumaa¹, A. Youssef¹, G. Arafat³, S. El Romeh³, K. Ghraizi¹, L. Kfoury*²

¹Lebanese Agricultural Research Institute, Tal Amara, Lebanon

²Lebanese University, Faculty of Agricultural Sciences, Beirut, Lebanon

³Private sector, Lebanon

*Corresponding Author: kfourylinda@gmail.com

Within the framework of FruitFlyNet-ii project “Commercialization of an Automated Monitoring and Control System against the Olive and Med Fruit Flies of the Mediterranean Region”, a study was carried out to evaluate the distribution of the olive fruit fly (OFF), on yellow sticky traps. This experiment followed From 22 August to 21 November 2022, in 2Ha (142m×142m) of non-irrigated olives groves cultivar, in Hassbaya in South Lebanon, on yellow sticky traps with or without ammonium bicarbonate (8 with salt, T⁺, and 37 without salt, T), installed at a distance of 20m between traps without salt (T), and 30m between T⁺ and T. The observations were made weekly for the adult captures, and biweekly for the rate of the fruit infestation, RFI (25 fruits/ tree-Trap), in relation with the fruit phenological stage (BBCH), and the climatic data. Results showed that from 15 September, the fruits turned to the purple colour (BBCH: 80-81%) and became 90% from 10 October, the beginning of the fruit harvesting. The total number of the adults was inversely proportional to the temperatures. T⁺ were more attractive for the fly adults than the T traps. The mean adults captured were on 21 November, 12.9 and 100 by trap, respectively. Male density was higher than that female at the beginning. Thereafter, female increased progressively to reach equal densities, on 31 October. The RFI was in the T⁺ zones trap less than that registered in T zones trap: 0 to 0.5% and 0.3 to 5.3%, respectively.

Keywords: olive fruit fly, yellow sticky trap, diammonium bicarbonate, bbch, rate of the Fruit Infestation

P254. Sterile Insect Technique to control pentatomid pest species: irradiation screening on *Halyomorpha halys* and *Bagrada hilaris*

C. E. Mainardi^{1,2}, C. Peccerillo^{1,3,4}, G. Roselli^{1,3,5}, G. Anfora^{3,4}, V. Mazzoni⁴, C. Ioriatti⁴, A. Paolini¹, A. Cemmi⁶, M. Grodowitz⁷, S. Musmeci⁶, R.F.H. Sforza⁷, M.V. Rossi Stacconi⁴, D.M. Suckling^{8,9}, L. Menegotti¹⁰, V. Vanoni¹⁰, M. Cristofaro¹

¹Biotechnology and Biological Control Agency (BBCA onlus), Rome, Italy

²University of Rome "La Sapienza", Rome, Italy

³Center Agriculture, Food and Environment (C3A), University of Trento, 38098 San Michele all'Adige, Italy

⁴Research and Innovation Center, Fondazione Edmund Mach, San Michele all'Adige, Italy

⁵Technology Transfer Centre, Fondazione Edmund Mach, 38098 San Michele all'Adige, Italy

⁶Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Rome, Italy

⁷USDA-ARS, European Biological Control Laboratory, Montferrier-sur-Lez, France

⁸Formerly The New Zealand Institute for Plant and Food Research Ltd., PB 4704 Christchurch, New Zealand

⁹Formerly School of Biological Sciences, University of Auckland, 1072 Auckland, New Zealand

¹⁰Azienda Provinciale per i Servizi Sanitari, 38122 Trento, Italy

*Corresponding authors: chiaraelvira.mainardi@uniroma1.it; chiara.peccerillo@unitn.it; gerardo.roselli@unitn.it

The painted bug, *Bagrada hilaris* (Burmeister) and the brown marmorated stink bug, *Halyomorpha halys* (Stål) (Hemiptera: Pentatomidae) are two extremely polyphagous invasive species. The feeding activities of these two species cause severe damage to many economically important crops worldwide. *Bagrada hilaris* is native to Africa and Asia, but it has extended its distribution to the southern part of the United States, Chile, Central Asia, Africa and two European islands. *Halyomorpha halys* is currently considered amongst the most harmful agricultural pests in Europe, United States and Chile.

Among the various control methods, the possibility of using the Sterile Insect Technique (SIT) in combination with classical biological control was tested. Indeed, this technique could be used to control *Bagrada hilaris* on the island of Pantelleria, where the geographical-ecological conditions are favourable. On the other hand, sterile *Halyomorpha halys* are being evaluated for eradication programmes in New Zealand or other jurisdictions, as well as possible application in integrated pest management strategies.

The main objective of this work was to perform an irradiation screening to evaluate the suitability of a SIT program in the two species. Two different methods were used for irradiation: *Bagrada hilaris* individuals were irradiated with gamma rays, while *Halyomorpha halys* males were irradiated with high-energy X-rays. For both protocols, insects were irradiated at different doses, and then physiological and behavioural bioassays were performed. Parameters such as longevity, fecundity and fertility were evaluated.

The results obtained are encouraging for the feasibility of the SIT to manage these two pentatomid pest species.

Keywords: sterile insect technique, irradiation, sterility, biological control, insect pest, pentatomids

P256. Side-effects of two strobilurin fungicides on *Orius laevigatus* (Hemiptera: Anthocoridae), predator of the western flower thrips *Frankliniella occidentalis* (Thysanoptera: Thripidae)

M. Aragón-Sánchez¹, L.R. Román-Fernández^{2,3}, E. Martínez-Villar², A. Aragón-García¹, V.S. Marco-Mancebón*², I. Pérez- Moreno²

¹Centro de Agroecología, Instituto de Ciencias, BUAP, México

²Departamento de Agricultura y Alimentación, Universidad de La Rioja, Spain

³Insectaria. Control Biológico, Spain

*Corresponding author: vicente.marco@unirioja.es