
OP-14

The status of medfly and IPM practices based on case studies in Italy

Marco Colacci¹, Maria B. Forleo¹, Slawomir A. Lux², Andrea Sciarretta¹

¹University of Molise, via De Sanctis, snc, 86100 Campobasso (CB), Italy

²UL. Kornela Ujeskiego 7, Konstancin-Jeziorna, Poland

Mediterranean fruit fly (medfly), *Ceratitis capitata*, is considered one of the world's most destructive pest. Its economic importance is increasing due to its invasion of new geographical areas. It has high dispersive ability, large host range and tolerance of natural and cultivated habitats over a comparatively wide temperature range. In recent years, medfly is expanding its distribution in temperate areas. Global warming expects the expansion of medfly geographical distribution to higher latitudes will continue and its pest status in the areas currently with low population levels will change. Indeed, in recent years in Italy, medfly began to appear as stable populations of high densities in areas where it was not previously considered a major pest. In this contribution, the status of medfly and IPM (Integrated Pest Management) practices were investigated in two areas of central Italy; one in Molise region near Adriatic and one in Latium region. Within each site, three farms were selected. A detailed characterization of the farms and their immediate surroundings, with the identification of all fruit species and cultivars, was carried out. The following aspects were studied in 2020 and 2021: host fruit phenology; identification of medfly overwintering resources and assessment of their capacity; determining annual patterns of medfly immature stages and adults; collecting socio-economic background information. The investigation allowed to define the spatio-temporal dynamic of medfly in each farm and the key host species for overwintering; to evaluate the pest status for various fruit species and cultivars; to establish the range of pesticides and other means used for medfly control, and calculate the costs related to the implemented IPM practices, i.e., trap monitoring, mass trapping, insecticide spray application, sanitation. The information gathered under these case studies will be of broader relevance to other Mediterranean regions and useful in improving the application of IPM against medfly