

Supporting fruit fly pest prevention in the Balkans and the Eastern Mediterranean

The challenge...

In parts of the Balkans and the eastern Mediterranean, the Mediterranean fruit fly (*Ceratitis capitata*) causes major damage to fruit and vegetable production. The pest reduces fruit production and increases insecticide use, and has a direct impact on the production costs associated with agricultural commodities.

Moreover, the recent emergence of exotic fruit fly species in North Africa and the Middle East poses a major threat to fruit and vegetable production in the Balkans and Eastern Mediterranean, since this region is put at risk by the invasive fruit fly species.

The project...

A regional European project was designed to increase awareness, cooperation and technical capabilities to prevent, detect and suppress established and exotic tephritid pest outbreaks.

The sterile insect technique (SIT) facilitates the suppression of fruit fly populations by mass-rearing large numbers of males which, after being exposed to a short burst of radiation, are rendered sterile.

When released into the wild, these sterilized males breed with females who, in turn, produce eggs that do not hatch. To overcome the fruit fly problem, the SIT is applied as part of an area-wide integrated pest management (AW-IPM) approach, integrated with other control methods.

Supported by the IAEA Peaceful Uses Initiative (PUI) and the Croatian Ministry of Agriculture, fruit flies, which emerged from about 700 million sterile pupae—were released in the Neretva Valley pilot SIT area. In addition, traps and attractants were procured for all participating Member States. Following a kick-off regional workshop in Greece, specialists from the region were trained in Austria, Belgium, Croatia, Israel, Spain and Turkey.

The impact...

This regional project has facilitated the creation of a critical workforce of specialists familiar with the application of area-wide integrated pest management, including the integration of biologically-based tactics such as the SIT, to suppress the Mediterranean fruit fly, as well as prevent, detect and address invasive exotic fruit fly outbreaks.

Detection networks for exotic fruit fly species are now installed under a harmonized protocol and are in operation at the ports of entry of all 12 participating Member States.

Insecticide use and fruit infestation levels have been significantly reduced in the Neretva Valley pilot area. The number of Mediterranean fruit fly larvae per kilo of mandarins from the SIT pilot area was reduced by 97.8%, while infestation in mandarin export shipments fell from 4.1% in 2011 to 0.2% in 2013; mandarins from the Neretva Valley also received the prestigious 'Controlled designation of origin' label awarded by the European Union.



Mediterranean fruit flies in mandarin fruit.