

Supporting area-wide integrated pest control of native and exotic flies in the Middle East

The challenge...

In the Middle East region, farming activities have been threatened by the presence of both native and exotic fly species. The occurrence of medfly and olive fruit fly has led to significant harvest losses, because the crops affected by these pests are commonly staple foods or export goods. On the other hand, the introduction of invasive pests can affect both regional food security and the economic prospects of local farmers.

Traditionally, synthetic pesticides have been used against fruit flies. By applying the insecticide directly to the trees, farmers can protect their produce from hatching larvae. Unfortunately, these pesticides are not only very expensive, but their residues adversely affect the taste and value of the product.

Through surveys, long-term studies and fly trappings, early national projects facilitated the collection of vital information about both medfly and olive fruit fly. IAEA support was requested to effectively and safely manage fruit fly populations using the Sterile Insect Technique (SIT), a nuclear method to sterilize and consequently suppress insect populations.

The project...

Following a request by Israel, Jordan and the Palestinian Authority, the IAEA launched a technical cooperation project to support area-wide integrated pest control (AW-IPM) of both medfly and olive fruit fly using SIT.

Under this project, training courses and expert visits were arranged to clarify and demonstrate the implementation of the Sterile Insect Technique. Israel and Jordan both have facilities to handle and release sterile insects—established in an earlier TC project—and under this project the IAEA procured monitoring and quality control equipment. Finally, local staff received training in the theory and practice of AW-IPM, to ensure that the required capacities will be in place after the project concludes.

The impact...

Equipped with release centres and a rearing facility, the participating Member States and the Palestinian Authority are now in a position to protect their most valuable crops from pest infestation. Due to the IAEA's capacity-building efforts, personnel are now available to monitor, sterilize and release fruit flies, to control their population.

Above all, farmers, consumers, importers and exporters of fresh fruit products are more assured that the threat from either native or invasive fruit flies is reduced.



A Jordanian technician releasing thousands of sterile medfly males in a citrus orchard in the Jordan Valley.