Israel, European Union collaborating to reduce poison spray on your fruit

Ruth Schuster

The use of pesticide blitzes to eradicate the dread Dacus ciliates could be greatly reduced, using smart traps with Internet cameras being developed in Israel as part of an international anti-fly drive funded by the European Union.

Dacus, more familiarly known as the lesser pumpkin fly or Ethiopian fruit fly, is a great pest in the Middle East.

Much like us, it likes to eat squashes of all types, melons, cucumber, and watermelons. Much like locusts, the fly can obliterate an entire season's crop in no time. One solution is to spray the insect to oblivion. But the downsides of rampant, constant prophylactic pesticide use are clear, from environmental to health haz-

ards. What if the spraying could be confined to time of acute need, in other words – when swarms of the fly start to descend?

"The ultimate purpose of the program is to deal with invasive species," Rami Sade, chief agronomist of the Ein Yahav farmers' co-operative society, explained to Haaretz. "In this international collaboration, each participating country is dealing with a different fly. For us, the Dacus is invasive."

That said, we don't know where exactly it is invading us from. Apparently

the flies periodically arrive from Egypt, possibly flying over the Sinai, or through the Gaza Strip. Or some may be coming from Jordan, he said. Thinking of the vast,

dry desert scapes, Haaretz raised an eyebrow, but Sade clarifies: fruit flies may be tiny and look frail, but they can fly a very long way. Adding to the Dacus' mystique, science has no clue where the things hang out between growing seasons.

"We do not understand how it survives in the desert valley or where it is when its host isn't growing," Sade says.

All right: what can be said is that arrive it does. The Agriculture Ministry has a vast monitoring system in place: read, traps to catch the pests as they descend on Israel's fields. And so far, farmers have dealt with the pest by heavy spraying.

"Until now we have had to spray every two weeks, from the time the fruit starts to ripen until the season's end, be-

cause we couldn't tell whether or when the fly might visit. If we waited to notice the pest before spraying, it would be too late. The damage is done," explains Sade.

The project to obviate prophylactic poison blitzes of the sort is being carried out at Ein Yahav, using sophisticated traps being developed with EU funding by Dr. David Nestel, an expert in entomology and plant protection at the Volcani Center agricultural research organization. Sade notes out that the moshav of Ein Yahav has worked with Volcani before on testing various agriculture advances.

So: Traps are placed in the fields. Near them – 30 centimeters away – is an Internet camera, closely watching what gets caught in the traps. Currently the science team is developing

The greenhouse in Ein Yahav where scientists are experimenting with the system. Inset: the lesser pumpkin fly. *Rami Sade*

software that can distinguish the Dacus from all other insects, from multiple angles at that, rather than have scientists check the web feed all the time.

The system is being defined to react – and solicit spraying – when the volume of lesser pumpkin fruit flies caught in a certain period of time reaches a certain threshold, Sade explains. The scientists can then direct the farmers when and where to spray, thereby obviating the need for prophylactic application.

The experiment at Ein Yahav is part of a wider project financed by the European Union – through its ENPI CBC Med Programme - in a number of Mediterranean countries – Spain, Greece, Italy, Jordan and Israel. Each country is testing the camera technology against a different pest, through Internet monitoring. In Greece for example the system is being tested on Bactrocera oleae, the olive fruit fly, which has been wreaking havoc in Greek olive orchards.

Yes, there are dozens of species of fruit flies, and Israel features several of them. But maybe we won't have to coat our fruit with toxins just so we can have some too.