To scheme surveillance strategies for the invading species *Bactrocera zonata*, the area of North of Israel (limiting with Lebanon) was selected. This area is an important fruit producing area (deciduous crops), where *B. zonata* interceptions have been reported in the recent past. During the first two years of the project, the characterization of the pilot sites was conducted. Orthophotos of each site were obtained from the Plant Protection and Inspection Services of the Ministry of Agriculture and Rural Development of Israel (PPIS). The site was divided into polygons. For each polygon, the land use, crop and susceptibility to *B. zonata* (level and time) were described. Characterization of the trapping patterns of *B. zonata* males were done using the current trapping system deployed by the PPIS of Israel in the region of the study [Stinner traps lured with Methyl Eugenol (ME)].

During 2022 three guided detection trapping strategies: risk-guided, effort-guided and space-guided were tested. Algorithms were developed within the project GIS that follow the three tactics requirements and provide geographic coordinates of the location of traps in the landscape for each tactic. The risk-guided tactic (a) takes into consideration the risk characterization of the landscape and deploys the predetermined number of traps following landscape-risk score from highest to lowest. This type of deployment usually results in the aggregation of deployed traps within areas of high-risk in the landscape. The effort-guided tactic (b) divides the landscape into several equal quadrats that is determined by the predetermined number of traps, which is based on the ability of the stakeholder to manage them and service. In this case, a single trap will be placed per quadrat. The location within the quadrat will follow the highest risk weight in the quadrat. In this case, deployment of traps in the landscape follows a more uniform distribution. The space-guided tactic (c) follows the principles of the risk-guided (a) tactic but included a “minimal distance” parameter between deployed traps.

During 2023, the evaluation started in the Spring, but was stopped in the early autumn 2023 due to the regional military conflict that affected the evaluation region.

Results:

6 *B. zonata* flies were captured in 2020.

During 2022: All captures of male flies in sampling stations in the grid were of a single fly, except the most Northern trap, which captured 2 flies. Within the grid, seven flies were in total intercepted (the two are not included in the grid and serve only as a reference). Captures concentrated during the month of October-November. Flies were detected both, in E-traps and conventional traps.

During 2023, surveillance of traps (same grid as in 2022) initiated in May 2023. No interceptions were conducted until mid-September when the study stopped.

The results obtained in the surveillance of B. zonata in Israel point at no differences in the early-warning abilities between tactics.