To develop and validate novel OFF-and ON-Season precision IPM strategies for *Ceratitis* *capitata* management in complex landscapes, three 15-ha areas located in La Pobla del Duc in the province of Valencia were selected as pilot sites (IPM Units).

**Pilot site characterization:**

Full characterization of both sites was conducted. Visual detailed inspection was carried out to identify the location of all relevant host plants/cultivars into the farm and orthomaps were provided.

**Population monitoring:**

A trapping system was established to define the seasonal pattern of medfly. The trapping network of Decis traps was established in July 2020 and these traps have been serviced as planned, either weekly (March to November) or biweekly (November to March). Simultaneously, photos of the fruit (when available) have been taken, as well as information related to crop practices, including those carried out by the growers (i.e., treatments, pruning, mechanical labor) or by the regional plant protection organization (RPPO, Department of Agriculture of the Valencian Government).

**Overwintering resources of medfly:**

For the larvae overwintering tests conducted in both seasons, field collected ripe or ripening mandarin fruits and persimmon without symptoms of the infestation were used (50 fruits of the ground after harvesting and 50 fruits of the tree at the same time they were harvesting). Each fruit was placed in individual plastic container of 0,5-liter size with a 3 cm deep layer of dry, fine sand at the bottom in order to facilitate pupation of mature larvae as they leave the fruit. Containers were covered to avoid infestation of saprophytic insects or other organisms. The sand in the containers was sifted weekly and pupae were collected. Number of pupae/fruit/week was recorded. The mean number of pupae/fruit was calculated by dividing the total number of collected medfly pupae by the total number of field infested fruits. Collected pupae were maintained in individual cages for each week of recording at the same overwintering site.

**Evaluation:**

During 2022-2023, the three different subplots in La Pobla del Duc, where assigned to different management options: subplot 1 (including olive, peach, persimmon, and plum orchards) and 2 (including apricot, grape, nectarine, olive, persimmon, and plum orchards) were assigned to “enhanced IPM/Magnet Med traps-host” and subplot 3 (including apricot, citrus, nectarine, peach, and plum orchards) to “current farmers’ practices” (= control). On April, 27, Magnet Med traps were set (75 traps per ha) on peach, plum, and apricot orchards in the two enhanced IPM subplots. Likewise, this type of traps was set on persimmon and clementine orchards in early September in the same two plots. The former orchards were harvested during the first half of June. Fruit was sampled for infestation in the field (tree and soil samples) and processed in the lab.

**Results:**

**Population monitoring:**

During 2020-2021: The first population peak coincides at around July. Then the population gradually decreased and disappeared by the end of the year.

During 2021-2022: Populations have been low compared to previous years. A combination of an extremely rainy spring (which probably killed most immature stages in the soil), an extremely hot summer, and the absence of suitable fruit for oviposition from late June until October both in 2021 and 2022 may be behind these results.

During 2022-2023: The population peak conducted at the end of July. Then the population gradually decreased and disappeared by the end of the year.

**Overwintering:**

During 2021, 2022: No adults obtained from the collected fruits.