Date: 8/2018

Observation no. 223

**Commercial observation: The effectiveness of the Bio T Plus preparation in controlling Anarsia in almond, Yizrael, July 2018**

**By: David Sarid, Eran Shiloh—BioYome Company**

**Aim:**

To test the effectiveness of the Bio T Plus preparation in controlling Anarsia in almond.

**Methods and materials:**

**The crop:** The commercial observation was conducted in an organic orchard of the Umm el-Fahm almond variety, planted in Yizrael in 2013.

Drip irrigation. Heavy soil.

**Phenological stage**: fruit (after the hull split)

**Application method and spraying volume:** Spraying was carried out using a commercial air blast twin fan sprayer. Spray volume: Spray volume: 100 L/dunam (1000m2)

**Evaluation method:** Counting of live larvae, approximately 200 fruit/ treatment.

Monitoring traps for adults (one trap/treatment).

**Treatments dates:** 10/7/2018, 26/7/2018

**Date of hanging the monitoring traps:** 2/7/2018

**Fruit sampling dates:** 8/7/2018, 17/7/2018, 26/7/2018, 21/8/2018

**Preparations:**

* Bio T Plus, SC containing Bacillus thuringiensis subsp. Kurstaki at 16,000 international units (ITU)/mg per litre
* Talstar, EC containing 100 gr/L Bifenthrin

**Treatments:**

|  |  |  |
| --- | --- | --- |
| **No.** | **Treatment** | **Concentration %** |
| 1 | Bio T Plus | 0.4% |
| 2 | Talstar | 0.075% |
| 3 | Control |  |

**Results:**

Two applications of Bio T Plus reduced Anarsia infestation compared with controls.

No signs of phytotoxicity were observed with any of the treatments.

**Table 1 Anarsia infestation (%)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Treatments | Concentration % | Larvae infestation in almond (%) | | | |
| 10/7/2018 | 17/7/2018 | 26/7/2018 | 21/8/2018 |
| Bio T Plus | 0.4% | 7.0% | 1.5% | 1% | 1.5% |
| Talstar | 0.075% | 5.0% | 2.0% | 0.5% | 1.0% |
| control |  | 6.5% | 7.5% | 11.0% | 10.0% |

**Table 2. Monitoring male Anarsia in pheromone traps (Delta BioYome)**

|  |  |  |
| --- | --- | --- |
| **Treatment** | **10/7/2018** | **26/7/2018** |
| Bio T Plus | 23 | 8 |
| Talstar | 21 | 5 |
| control | 43 | 14 |

**Discussion and conclusions:**

Bio T Plus (0.4%) effectively eliminates Anarsia larvae in almond and reduces fruit infestation.

No phytotoxicity was observed in the crop. No effects on foliage were observed during crop growth.

**Acknowledgements:**

We thank Nadav for allocating the plot and assisting in the observation.

We thank Shahar Sela for conducting the observation.