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Exclusion nets for the control of fruit pests in NW Italy

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Abstract

In the last years, many chemical products disappeared from the European market, introducing new challenges for the control of crop pests. In this context, insect exclusion nets represent a promising eco-friendly alternative strategy for plant protection.

In the frame of the LIFE+ SU.SA.FRUIT project (LIFE13 ENV/HR/000580), experimental trials were carried out in NW Italy in order to assess the efficacy of different kinds of net in containing key and emerging insect pests. Three anti-hail photo-selective nets (red, yellow, pearl; mesh 2.4×4.8 mm) and a specific anti-drosophilid net (mesh 0.9×1.0 mm) were tested in an apple and in a peach orchard. In each orchard, three cages per net (containing three plants each) were set up while three sets of plants without any coverage were used as control. The cages were put up at petal fall and removed at the end of the harvest time. The population dynamics of key pests, such as *Cydia pomonella* L. and *Grapholita molesta* (Busck), as well as of new exotic pests, such as *Drosophila suzukii* Matsumura, were assessed inside and outside the cages. At harvest time, a sample of fruits inside and outside the cages were checked for damage by the moths and other pests; moreover, the quality of the production was evaluated. In this report, the preliminary results obtained during the first year of the trials are presented.

Key words: apple, peach, moths, emerging pests.