

EFFICIENT WAYS OF COMBATING AGAINST PEAR PSYLLA

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During 2013–2015 the foliage population of trees from different sides with ordinary pear psylla was studied. At the same time based on estimation the population of various parts of trees with this phytophagous has been identified. It was found out that in considerably shadow, poorly illuminated parts (north and west) of pear habitus, the population of plants with psylla has been lower than in eastern and northern parts. Therefore, in the process of undertaking chemical control is important to spray intensively the lower level of pear leaves with working solution.

Keywords: pear, ordinary psylla, harmfulness, tree habitus, population.

Introduction. A number of insects and mites damage the pear tree, of which the ordinary psylla (*Psylla pyri* L.) is the most harmful one. It is monophagous type and is widespread in America, Europe, Asia, etc. [1–5]. According to literature data, in certain countries the ordinary pear psylla is also considered to be the circulator of virus disease in “pear withers” [6–8].

In the Republic of Armenia, particularly in Ararat valley, the most widespread and dangerous is this pest [9]. It is very difficult to fight against it, since this type multiplies rapidly, in the process of feeding the pest produces sticky liquid, thus coating the pear tree and in this way it radically reduces the efficiency of insecticides.

The objective of this survey has been to study the location of this phytophagous within the context of Ararat region and the different parts of habitus, as well as on different parts of these crops.

Materials and Methods. In summer of 2013–2015 during the period of active development of pests, on “Malacha” sort of pear at least 30 leaves from different parts of 10 trees have been studied, considering their population, which has been assessed with 4 score scale. The experiment has proved thrice repetition. At the same time based on their calculation we have identified the population of trees with this phytophagous.

The level of population (X) was calculated according to the accepted methodology [10] and was based on the following formula:

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$$X = \frac{\sum abc \times 100}{n \times 3},$$

where X is the level of population, $\sum abc$ is the sum of scores for studied years, n is the total amount of calculated leaves and/or other parts, 3 is the highest score.

Results and Discussion. Through various studies was found out that nymphs of ordinary psylla pears are the most dangerous stage for pests' development and the damage caused feasting by sap deform the scions, floral buds and fruits. In Fig. 1 the average population of pears with psylla depending on the position of the foliage is presented.

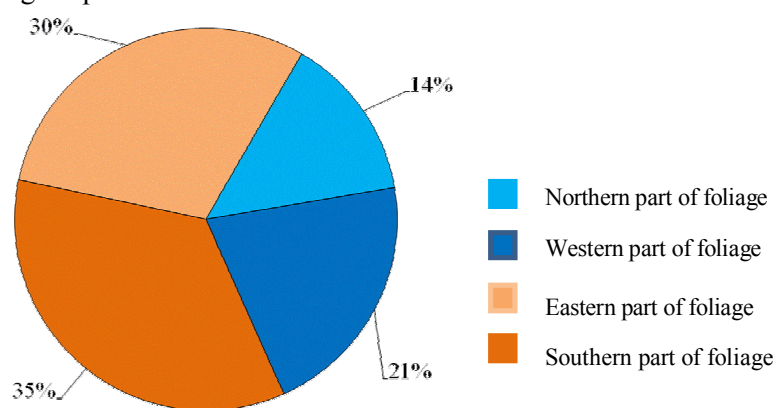


Fig. 1. Population of pear trees with psylla depending on the position of foliage (%).

As indicated in Fig. 1, in considerably shadow, lightly illuminated parts of pear habitus (northern and western) with psylla the population of plants has been lower and has been up to 14 and 21%, and in eastern and southern parts higher up to 28 and 35% accordingly.

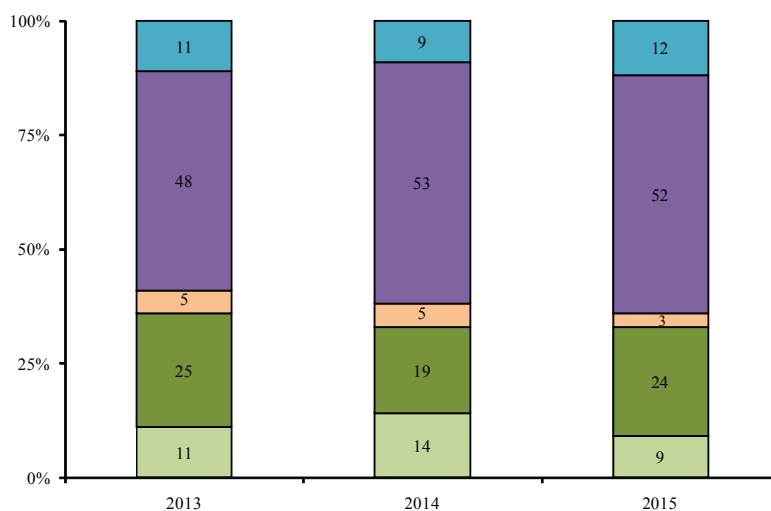


Fig. 2. The population of various parts of pear tree with psylla (%).

The need for such research lies in the pear tree plantations that farmers, as well as mechanization expert carrying out chemical control measures should be more careful and target the most populated parts of trees with psylla, thereby increasing the biological efficiency of applied preparations.

The population of different parts of pear trees with psylla is presented in Fig. 2. The analysis of received data showed that the population of lower surface of leaves has been considerably substantial, which during the years of research comprised 48–53%. In terms of population young scions are in the second place (19–25%). It is also important to note that the upper surface of leaves and foetus have also been of a particular attraction for pests, the population of which has been fluctuating correspondingly in between 9–12 and 9–14% during the years of research. With its population the pear leaf cuttings are less attractive (3–5%):

Conclusion. The ordinary pear psylla in Ararat valley makes a considerable harm to this foetus. For the purposes of efficiently combating against the pest the injections should be conducted from the northern and eastern sides of the land, where the maximum concentration of the pests are observed. It is very important to spray intensively the lower surface of pear leaves with working solution.

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