

Developing Conditions and Importance of Pests Which are Met in Agrobiocenose of Forests in Karakalpakstan

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1. Introduction

Condition and climate of Karakalpakstan have their specific differences, in winter the temperature is -25 -30°C and cold days continue to 30-40 days, in summer it is dry and hot, the temperature increases to $+35$ $+40^{\circ}\text{C}$. As a result it is observed that the type of plants, which adapted in this condition, grow here. It is specific characteristics that from these types of plants forest plants and trees grow and develop. Forests in this territory are connected with types of agricultural crops. Here, first biological living things are insects. Phytophagans of insects which eat plants, for example, spreading areas, development and overwintering of types of agricultural crop pests are increasing related to these forest trees and plants [1. 2. 3].

Biological peculiarity of forest plants is that it is a comfortable condition for agricultural crop pests to spreading in this place developing in vegetation period and overwintering [4].

As a result, there will be nourishment chain between plant, pest and entomocariphagans, in account of the main element defining agricultural crop pests, their developing bioecology is one of the most important problems.

2. Results of the Research

Research is done in 2016-2017, about defining rodent and sucking types of pests and their entomophagans which damage agricultural crops and forest trees. Results of the research show that from rodent pests Mole cricket and poplar bubbly parlatoria are met in agricultural crops and decorative trees and damage them.

Mole cricket: (*Gryllotalpa unispina* Sauss). Last year worms overwinter in 50-60 cm depth of soil. Development of larva end in spring and adult Mole crickets appear in May. Mole crickets mainly live in wet soil, make long, wide ways and gnaw roots on their way. They mainly eat plants, but sometimes they eat larva of insects and small insects which live in soil. Female Mole cricket lays eggs to wide place in depth 18 cm by grouping 200-500 pieces. After 1,5

week larva come out from eggs. Young larva is protected by female Mole cricket for some time, then they spread and live independently. Mole cricket lays eggs once a year.

Poplar bubbly parlatoria: (*Quadrispidriotus slavonicus* Gwen). They are met in tree growing places in Uzbekistan. Larva and female parlatoria stick to tree branches and leaves, they suck tree extract and as a result branches dry and stop growing. Especially, this pest damages young trees and grafts. Bubbly parlatoria overwinters in tree shell, in the period of larva. They start eating in early spring when extract actions start and on the second half of April, male parlatorias come out. Female parlatoria lays eggs at the end of May or at the beginning of June, one female lays average 60-130 eggs twice a year.

Osier blue flea: (*Plagioderia versicolor* Laich) overwinters in a form of adult insect. Appears when trees start producing leaves. Overwintered beetle eats a little and then lays eggs grouping on the back of osier leaf in April. Beetle if green-grey, shining, size is 4-7 mm.

Elm blue flea: (*Gallerucella luteola* Muele) spread everywhere in Central Asia. Beetles overwinter under tree shells and appear on the first half of March and lay eggs in May. The first generation appears in June, lays eggs in July and dead in August. The second generation appears at the end of August and start overwintering in September. Female beetles lay eggs on the surface of leaves grouping 40 pieces. Larva of elm blue flea eats the lower part of leaves only leaving roots, beetles makes a hole in leaf roots by gnawing. Adult larva become worm in the soil near the tree.

Urban sawyer: (*Aeolesthes sarta* Solsk) widely spread not only in Uzbekistan but also in Central Asia, India, Pakistan, Iran and Afghanistan. It is a poliphagia and damages osier, tree elm, plane tree, Greek nut and fruit trees. It is one of the main pests of trees in people living places. Larva makes wide way in tree trunk in the period of nourishment, this way enters to inner part of tree trunk, that's why the tree becomes dry and worthless in using in construction and can be broken in slow wind.

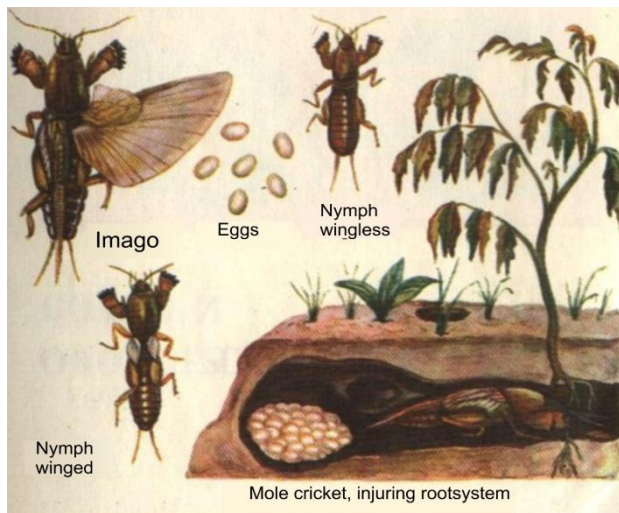


Figure 1: Mole cricket. Morphology and lifecycle

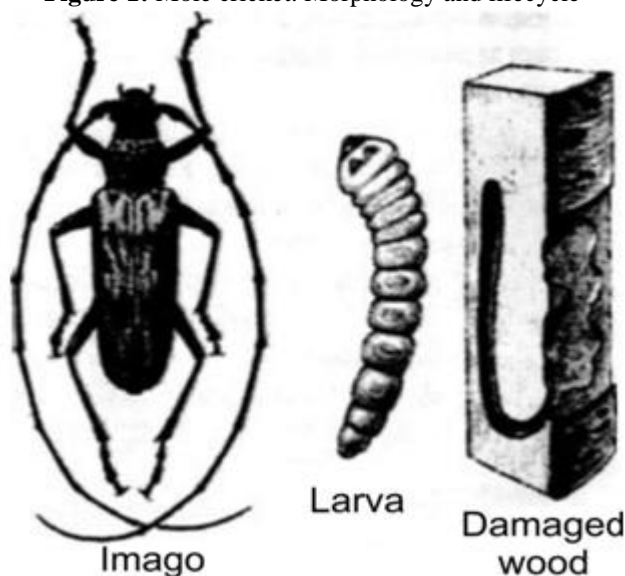


Figure 2: Aeolesthes sarta

This beetle is pink-brown or brown. The surface is covered with thick wisps and it hides the real colour of the body. Wings and wisps make silver-velvet shining. Moustache of the male is longer than its body to 1,5-2 times. Body length of the beetle is different and it can reach 28 mm to 47 mm. Beetles lay 1-3 eggs into tree depth. Larva eat sieve tissue in lower part of tree shell. In autumn, they start gnawing tree and overwinter there.

3. Conclusion and Suggestions

Trees and plants which grow in forests of Karakalpakstan are the following: oleaster, bird oleaster, elm; in deserts: saxaul, tamarisk bush, rabbit bone. From pests which are met in forest trees agrobiocenose: urban sawyer, osier blue flea, elm blue flea damages all kinds of trees especially their vegetative and generative organs, as a result the damaged tree stops growing and developing, becomes not bearable for overwintering and starts growing late in spring. Therefore, it is recommended to use spraying pesticides which are permitted using in agriculture to manage gnawing and sucking pests.

Among the wild entomophagans ladybird is a dominant type comparing with all natural pests. Ladybird, goldeyes, sirfid flies and wild trips are important in decreasing number of sucking pests.

When using chemical preparations from 25-30 m distance, influence of pesticides on environment and natural entomophagans is a little and economical effectiveness for agriculture is high. In these kind of fields damage of gnawing and sucking pests decrease, prevented from their widely spread, useful insects are saved and effectiveness of the used biological preparations increases. Also, expenses for protection are decreased to 2-3 times.

The result of the research show that it gives an expected result if we use entomophagans on time, balance and repeatedly for controlling pests.

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