



EASTERN FERGANA AGROTSENOSES DATA ON THE DEVELOPMENT OF ACORN TUNLAM (NOCTUIDAE: HELICOVERPA ARMIGERA)

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Annotation: this article will talk about the representative of the Hawthorn tunlam of the tunlam butterfly family of the tangachanotli genus. Acorn tuna (*Helicoverpa armigera*) is considered one of the most economically dangerous lepidopteran pests globally, and has been found to infest 15-20% of crops such as maize, tomatoes, acorns, pumpkins.

Keywords: insect fauna, cockroaches, tunlam butterflies, Hawthorn Nightingale, pest.

Insects make up a large part of the fauna and are common in all regions of the globe. The composition of the species is 2 million. with more than, its role in natural ecosystems is unparalleled. The insect fauna is diverse with species distributed in Central Asia, including Uzbekistan, and is characterized by its unique endemic species.

In the Fergana Valley agroecosystems, 161 species and 1 youngest species occur in 119 generations in 26 families of the order tangachanotic insects (Lepidoptera) [15]. In the agroecosystems of the southern God Fergana, 50 species of the family tunlam butterflies (Noctuidae) are found in 28 generations [9].

Acorn tuna (*Helicoverpa armigera*) is considered one of the most economically dangerous lepidopteran pests on a global scale [10]. Acorn tuna (*Helicoverpa armigera*) is distributed in countries such as Spain, Israel, Germany, Australia, Portugal, New Zealand, the Netherlands, France, India, Hungary, Greece, Bulgaria, Slovakia, Ukraine, Russia, Gibraltar, Georgia, Czech Republic, Italy, Korea, Romania, Croatia, Switzerland, Norway, United Kingdom, Denmark, Armenia, Lithuania, Luxembourg, Finland, Swedia, Cyprus, Uzbekistan, Thailand.

Hawthorn nightshade (*Helicoverpa armigera*) is a polyphagous pest, and more than 180 plants have been found to infest species [10]. This pest has been found to feed on more than 250 species of plants from Central Asian States, South Kazakhstan, Kavkazorti, South and Far East of Ukraine in a wide range, and around the world in desert ephemera belonging to various systematic groups to citrus crops [1;8].

The polyphagy of the tunlam has also been found in areas that are not very large. In Azerbaijan, for example, more than 100 species are known to have caused harm to the plant [7]. It has been recorded that it occurs in 65 species of plants in the Vakhsh Valley alone from the southern regions of Tajikistan [2].

The Acorn tunlam is characterized by a high degree of flexibility. This leads to a large increase in the number and adaptation of this species to changing conditions. However, from the research of most researchers, it turns out that the Hawthorn tunlam is not always a co-owner. It is found that it is almost always found in peas and some crops: corn, tomatoes, Acorns, large-fruited pumpkin, zucchini, citrus as well. Peas infested with Tunlam were also found in nature at times when Acorn tunlam was very rare. In Uzbekistan, the harm of this tunlam in vegetable fields is on average 15-20%, and in some years-50-60% [14].

The Acorn nightshade belongs to the family of non-flying nightshades (Noctuidae), the order of butterflies (Lepidoptera). When the morphological characteristics of the butterfly body were studied, it was observed that in our observations there is a body length of 12-20 mm, when writing the wings it is 35-40 mm wide, the body is yellowish-red, bluish-gray in color, one round in the middle of the front pair of wings, and one noticeable above-the presence of an inconspicuous

The larva is light green, the head is shiny-pink, later it quickly darkens, the body becomes more dark. The body of the worm is covered with small hard hairs and bulbs, 17-21 mm long. At the end of the abdomen there is a pair of parallel-lying scales.

After 6 successive larval stages, the body of the worms changes from gray-black, green blue to yellow-light yellow, depending on the nutrient plant consumed. The caterpillars of the Acorn tuna growl after feeding. To do this, the Acorn tunlam fell to the ground and dug a corridor up to 6-16 CM, where it passed the "humbakoldi" period, and then turned into a humbuck[4;12;13].

Under various environmental conditions, Acorns alternately damage crops. F.M. Poloskina shows that the pest develops in Azerbaijan by giving four generations in a year: the first generation lives in peas, corn, tomatoes and tobacco; the second - in corn, acorns and tomatoes; the third - in Acorns, tobacco and corn; the fourth-in corn and acorns. It is significant that the transfer of pest development in different crops from generation to generation increases its survival over the year than its development in the same crops [6].

The change in the source of feed for the gooseberry tunlam is also characteristic of the conditions of Uzbekistan and neighboring Republics. In early spring, when the first generation of the pest is developing, it is forced to feed on the leaves of a number of wild and early-growing crops (weeds, alfalfa, peas, corn, etc.), with poor survival and low quantity, in later generations its viability increases steadily as a result of damaging crop fruits, reaching a high level by autumn.

All crops damaged by Acorns are also significantly damaged, and the number of pests, generation by generation, grows. Squash, chickpeas, peanuts, etc., which occupy small areas, are a source of pest attraction.

The beginning of the development of the Acorn tunnel in spring occurs when butterflies fly out of the humbags that overwinter y'a - the temperature of the Earth's upper layer exceeds 16° and the average 10-day air temperature exceeds 11°. Such a time falls on April-may, and the Flying period of Butterflies is 32-40 days [5].

The first generation of the Acorn nightshade usually lives in early-growing weeds and crops. This generation of tunlam is therefore also referred to as the "weed Generation" [3].

Usually the viability of the Hawthorn nightshade is not very high in the first generation, 20-30% of it is scraped off during development. Therefore, it will be difficult to determine the number of pests during this period. But in some years and in some fields, the early spring generation of the tunlam can also be significantly higher.

The worms fall into the soil in late may and turn into a hump, from which butterflies begin to fly from the first 10 days of June. This - the second generation of the pest begins to harm them by laying eggs in the corn that the Goza and Sultan have released, which began to be shonalay.

The Acorn tunlam lays its eggs singly, usually on young leaves, stalks, petals, and twigs in close proximity to plant fruits (stem, Poplar, shona, rose). Each female breed of tunlam has

been found to lay 260 to 547 eggs in different generations and different populations. In so many laboratory studies, it was found that 30-50% of the eggs laid by the Acorn tunnel were pounded and nothing came out of it [11].

In typical field Acorn tunlam populations, the index of tunlam butterflies, that is, the ratio of male and female breeds, will be 60-65% by 35-40% (females are more). Before the start of each generation, female butterflies, and then 3-5 days later - male breeds fly out.

Depending on the heat and humidity of the weather, after four to six days, the first worm emerges from the egg and tries to enter the saliva and feed. The rest of the life of the worm passes almost indoors.

Over time, the worms will grow up and grow inside the socket, or fall to the ground where they will grow into a hump. In nature, the Hawthorn nightshade is observed giving 3 to 5 offspring per season [5].

Phenological map of seasonal development of the Acorn tunlam (*Helicoverpa armigera*) (F. On Yuldashev. 2015-2017) on the example of Andijan region, Khojaabad district.

Yanvar			Fevral			Mart			Aprel			May			Iyun			Iyul			Avgust			Sentyabr			Oktyabr			Noyabr			Dekabr		
I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III			
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Note: * butterfly, - egg, 0 hump, = worm, + wintering worm

In late August and early September, with an average daily temperature drop of 25° degrees Celsius, the scabworm begins to prepare for wintering. It overwinters in the form of a hump on a 5-10 cm surface of the soil. Before humming, the worm butterfly leaves a passage to fly out. 3-4% of the pest can overwinter elsewhere [5].

Morphological features of the Acorn tunlam (*Helicoverpa armigera*), information regarding development, have been studied and analyzed in the literature. According to this, this pest is a polyphagous insect, and the damage it causes to plants has been observed to be high today.

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