BIOECOLOGICAL FEATURES OF DISTRIBUTION OF TUNLAM BUTTERFLIES

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https://doi.org/10.5281/zenodo.10559915

Annatation: This article describes the bioecological characteristics of the distribution of Tunlam butterflies

Key words: Lepidoptera, moth, Pieris brassicae, Nymphalidae, Aparia erataegi, Bombyci mori, Helionis obsolete, Tineidae

Tunlam butterflies (Agrotis segetum Schiff.), blue worm Tunlam - a pest butterfly belonging to the Tunlam family. A dangerous pest that damages the lawns of spring crops, cotton, sugar beet, sunflower, corn and other (150 types of plants).

Widespread in Africa, Eurasia, including Central Asia. In Central Asia, it causes great damage to cotton (up to 35%), corn lawns (12-18%), alfalfa, sunflower, weeds, ivy, etc. Wingspan 34–45 mm. forewings light brown to dark. The egg is milky white; After 2-3 days, reddish circles appear on them, and the eggs darken before hatching. Worms hibernate 10-25 cm deep in the soil. It gives 3-4 generations per year. The moths of the dead generation emerge when the effective temperature sum is 550° (the temperature must not be less than 10° for the development of the cocoon). The most flights of butterflies and the laying of a large number of eggs are observed when the air temperature is 12-20°. It lays its eggs scattered on the back of a plant leaf. They hatch after 4-15 days, they hide in the soil during the day, come out at night, gnaw the trunk, shoots, and niches of grass and young seedlings, and tear off the leaves.

Control measures: elimination of weeds; eye plow; Trichogram is distributed in the fields where the beginning of butterfly flight is indicated, pheromone traps are placed, if 15-20 butterflies fall on 1 pheromone trap in one night, Zolon - 2.5-3 l/ha, detsis - 0.7 l/ha and other insecticide solutions are sprayed.

Tunlam's omnivorousness was also found in small areas. For example, it is known that more than 100 species have damaged plants in Azerbaijan [12]. 65

species of plants have been recorded in the Vakhsh Valley from the southern regions of Tajikistan [13]. Cotton wool is characterized by high flexibility. This leads to the adaptation of this species to changing conditions and a large increase in its number. However, it is known from the researches of many researchers that the cotton weevil is not always omnivorous. It was found that it is almost always found in peas and some crops: corn, tomatoes, cotton, large-fruited pumpkins, pumpkins, and citrus fruits. Peas infected with tunlam have been found in nature even in times when cotton tunlam was very rare. In Uzbekistan, the damage of this fungus in vegetable fields is on average 15-20%, and in some years it is 50-60% [3].

The results of the research of many scientists on the Gaza tunnel in various directions are being announced. Based on the spread of the species, the fact that it is a strong phytophage and invasiveness, it is permissible to dwell on the main and important works specific to the research area. In particular, there is scientific information on the encounter, biology, reproduction, damage properties of the cotton bollworm (H. armigera) and the fight against it. Also, the criterion of economic damage of cotton tundra in vegetable crops has been developed

I. Zakirov's research on the phytophages of vegetable crops explains the effect of cotton tunnel on the agrocenoses of vegetables and crops in the region of Mrakazi Fergana. The author included this species in the category of harmful pests for vegetables and fruits due to the nature of causing damage [3, 4]. In the conditions of the Fergana Valley, the spread of the cotton bollworm (Helicoverpa armigera (Hüb.)) in various agrocenoses and its larvae damage tomato fruit up to 50-70% and reduce its quality. aimed at the development of control methods [6, 16]. Also, the biological basis of the use of gabracon in the fight against this pest and the processes of mass reproduction were analyzed. According to the data, if 300-100 pieces of gabracon are used per hectare in tomatoes, 72, Up to 6% are affected by medium and old bollworms. In 1997, A. Jabborov studied the ecology of the main pests of cabbage and tomato agrocenoses and their predators and scavengers in the conditions of the Fergana Valley. According to the author, Farg In the tomato fields of Mother Valley, the cotton bollworm (Helicoverpa armigera) is a pest. Research was conducted based on generally accepted entomological and ecological methods [14]. In our constant observations and various experiments, the common and seriously damaging cotton weevil was chosen as the main object. Tunlam observations were carried out every 7-10 days during the entire growing season at permanent observation

sites, and 2-3 times a month on routes. Taking into account the quantitative dynamics of nightshade eggs and larvae in different crops Larchenko K.I. It was done according to the method of [10]. Insect abundance, population density and dominance were determined by the method of K.K.Fasulati [14]. In general, special studies on the trophic relationships of phytophages distributed in the Fergana Valley with food plants have been launched, and the scope of their results is expanding [1, 2, 5, 8, 9, 17].

RESULTS AND DISCUSSION According to field observations, this pest causes serious damage to cotton, tomato, corn, peas, soybeans in regional conditions. During the years of observation, a mass increase of tunlam was noted in sunflower, soybean, and peas.

As a result of observations made in different hilly areas, the level of damage of peas was from 40.66% to 82.66%, and in irrigated areas it was 91%. These indicators indicate that a large number of cotton bollworms mature in dry pea fields, and the second-generation butterflies that fly from them migrate to irrigated fields, cotton and other cultural crops.

During the observations, it was noted that the first generation of the tunlam laid eggs on foreign (yarrow) and wild grasses (spinach, turnip) or tomorrow's crops (peas) (28.IV). The butterfly lays its eggs singly at the growth point of plants. After a week, the larvae hatch from the eggs, and they feed on the leaves of the plants for 20-25 days, and then cause damage. Young worms feed on the leaves, and adult worms enter the pods and gnaw the grains. Then it enters the soil, turns into a cocoon in the cradle and turns into a mature butterfly as a result of its development for 14-45 days. The first generation lasted until June 12-13. That is, development for this generation was 47-48 days (2017). Second generation butterflies lay eggs on agricultural crops such as corn, sunflower, cotton, tomato, eggplant. In field studies, pest eggs were recorded in soybean and pea leaves, sunflower leaves, baskets, and corn stalks.

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