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PECULIARITIES OF ARTHROPOD DISTRIBUTION IN VEGETABLE AND MELON CROPS UNDER CONDITIONS OF KARAKALPAKSTAN

Koshanova Rosa Erezhepovna
Candidate of Biological Sciences, Associate Professor, Karakalpak State University named after Berdakh
The Republic of Uzbekistan

ABSTRACT
In this paper the defeat of vegetable and melon crops by winter moth, exclamator moths and spider mite was noted, which led to a decrease in yield. And to reduce the number of pests it is advisable to carry out the developed protective measures for the region.
KEYWORDS: *Arthropods, nature, environment, soil, desert, insects, mite, pests, entomophagous, protection, plants, climate.*

INTRODUCTION

Representatives of the Arthropoda type are incomparably richer than all other animal species, which are the most numerous in terms of species and number. They are adapted to survive in the most diverse conditions, they can be found everywhere: on plants, in soil, water bodies, in the zone of eternal snow, in sultry deserts, and each biotope is characterized by specific species. Among arthropods, the dominant species are insects and spiders.

The role of insects in nature and in human life is undoubtedly diverse and occupies a special place, contributing to the process of environmental evolution. Some insects pollinate plants, contributing to their reproduction, propagation and a large group of insects are involved in soil formation. Among them, there are also pests of fields and crops that destroy crop yields every year. Numerous species of predators and parasites, called entomophages, are involved in the extermination of pests, many of which are used in biological plant protection.

The first attempts to inventory the entomofauna of Karakalpakstan were carried out by N.A. Vorontsovsky in 1934; he registered 476 species of insects.

The study of harmful and useful insects of Central Asia was expanded by the works of V. V. Yakhontov in 1960; he conducted a study on the locust fauna of the Amu Darya delta.

In 1972, A.G. Davletshina studied harmful locusts of the Amu Darya delta, which damage cotton and other agricultural crops in Uzbekistan.

In 1989, E.Sh. Toreniyazov studied the method of control against cutworms damaging melon crops in Karakalpakstan.

In 1999, N.G.Shamuratova conducted research on integrated system of alfalfa protection in conditions of Karakalpakstan.

In 2005, Z.O. Bekbergenova, as a result of her research, obtained data on the species composition of phytophages and entomophages of cotton agrobiocenosis of the Republic of Karakalpakstan.

The development of entomological research in Karakalpakstan on the study and development of new approaches harmless to humans, the environment and means of pest control continue to this day.

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MATERIALS AND METHODS

The development of arthropods is conditioned by the trophic link between animal and plant life, which actively affects their relationships. The study of their relationships in each ecosystem is a particularly important problem. This work was carried out in the farm "Ornek" on vegetable and melon crops in Nukus district of the Republic of Karakalpakstan.

The Republic of Karakalpakstan is located in extreme natural and climatic conditions. The climate is desert and sharply continental.

The region remains a zone of risky farming, but despite this the cultivation of cotton, alfalfa, corn and various types of vegetable and melon crops is practiced in the republic.

RESULTS AND DISCUSSION

According to the results of the study, it can be seen that during the growing season, for the accumulation of a complex of species composition of arthropods, the most favorable crops were vegetable crops, where insects and mites were recorded, of which 25-30 species are serious pests and 12 are active entomophages. Due to the harmfulness of these pests, annual crop losses are observed, which averages 30-40% with a sharp deterioration in product quality.

In the Republic of Karakalpakstan, melon, watermelon and pumpkin are characteristic features of crop cultivation. The fields of these crops are close to each other and most of the pests are common to them. From the beginning of seedlings germination and till the formation of leaves, several species of cutworms are serious pests of melon and watermelon. Among them, winter moth (51.2% of the total number) was dominant, where each caterpillar could destroy on average 3.0-5.1 seedlings. The second species was the exclamator moth (38.0%), its caterpillar destroyed 6.6-5.4 plant spicemens, respectively.

From the second half of vegetation, spider mites appeared on melon and pumpkin crops in mid-June and early July. In 20-25 days the number of mites on these crops sharply increased and reached 50-64%, and as a result the yield decreased by 25-30 centners per hectare.

The use of entomophages, especially trichogramma at the rate of 200-300 specimens per 1 hectare of area increased the protection of seedlings from pest moths, and in late May, treatment with microbiological and chemical preparations at field borders prevented the migration of spider mites in melon crops.

CONCLUSION

According to the results of the work it was noted that infestation of vegetable and melon crops by winter and exclamator moths and spider mites leads to poor growth and yield reduction. The fields of vegetable and melon crops appear to be the most favorable sites compared to other agricultural crops for the development of pests and mites.

Therefore, to reduce the number of pests of vegetable and melon crops it is advisable to carry out the developed protective measures against pests, application of biological method in the fields of agricultural crops of Nukus district of the Republic of Karakalpakstan.

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