International Research Journal of Human Resource and Social Sciences
ISSN(O): (2349-4085) ISSN(P): (2394-4218)
Impact Factor 5.414 Volume 7, Issue 06, June 2020
Website- www.aarf.asia, **Email** : editoraarf@gmail.com

CICADASOF CEREAL CROPS OF FERGANA VALLEY

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Annotation: In the article materials on the study of cicadas of cereal crops inFergana Valley, their morphological and biological features, a systematic position, determination of the wintering phase, harmfulness, nutritional relationships and diagnostic features were given.

Key words*: cicadas, studies, cereal crops, reproduction, species composition, Macrosteles laevis* Rib., *Psammotettix striatus* L., *Laodelphax striatellus*Fall., *Cicadula divaricata* Rib., *Oligophage, wintering, generation, harmfulness.*

Introduction: Recently, the negative effect of cicadas on agricultural plants has been particularly affected. These insects are distinguished by wide diversity in terms of species composition and in the number of individual species. Some of them can multiply in mass quantity. We can mention some literary sources, in which materials of a special study of cicadas as pests of cereal crops were given.

The first information about cicadas that do harm to field cultivation, gardening, technical and medicinal plants in Central Asia was published in the work of V.N.Kuznetsov [1]. Some faunistic materials on this issue are contained in the works of V.V. Yakhontov [2], V.N. Polevschikova [3].

A great role in the study of cicadas in Central Asia belongs to G.K. Dubovsky [4]. Information on cicadas that damage cereal crops is presented in the works of several authors [5,6,7].

Object and research methods: The material for this work was a 10-year study of cicadas of cereal crops in the conditions ofFergana Valley of Uzbekistan. Generally accepted in entomology and special techniques were used.

The results of the research: The territory ofFergana Valley is characterized by a large amount of heat (sunshine days) and a significant duration of vegetation in summer period, providing the cultivation of cereal crops.

In Fergana Valley all the variety of natural conditions inherent to Central Asia are presented. The territory of Fergana Valley in its administrative division belongs to three states. Uzbekistan includes the central flat part of the valley, a small part of the southern slope ofKuramin ridge between the rivers Gavasay and Charvaksay. As well as a narrow strip of the northern slope ofAlai Range, in the lower stream ofSokh River [4].

Cicadas belong to the class of insects -Insecta,order – Homoptera, series - Auchenorrhyncha. The harm from cicadas manifests itself mainly in the following directions: they suck out juices from plants, inflict wounds on the vegetative parts of the plant by the ovipositor, and some species transmit viral diseases of cereal crops. In addition to obvious signs, weakened plants are susceptible to damage by various diseases. The study of cicadas of cereal crops ofFergana Valley showed that their species composition is diverse and includes 30 species.

The following species were registered on wheat crops, in various areas of their cultivation:

Philaenus spumarius L	*Psammotettix striatus* L
Hephatus unicolor H.-S	*P. dubovskyi* Vilb
Cicadella viridis L.	*Kelisiapannonica* Mats
*Zyginidiasohrab*Zachv	*Laodelphax striatellus* Fall
*Circuliferopacipennis*Leth	*Muirodelpha xaubei* Perr
Balclutha rhenana Wgn	*Dicranotropisbeckeri* Fieb
B. mitjajevi Dlab	*Toyapropinqua* Fib
Macrosteles laevis Rib	*Javesellapellucida* F
M. quadripunctulatus Kbm	*Dictyopharaeuropaea* L
M. razvjazkinae Dub	*Pentastiridiusleporinus* L
M. fieberi Edw	*P. pallens* Germ
M. forficulus Rib	*Reptalusrufocarinatus*Kusn
Aconurellaprolixa Leth	*Hyalesthes obsoletus* Sign
*Stenometopiellus sigillatus*Hpt	*Scorlupasterasiaticus* Leth
Cicadula divaricata Rib	

Psammotettix striatus L., *Laodelphax striatellus* Fall., *Cicadula divaricata* Rib., *Hyalesthes obsoletus* Sign., *Philaenus spumarius* L., *Stenometopiellus sigillatus* Hpt. prevailed on cereal crops in oasis and foothill zones ofFergana Valley. It has been repeatedly observed that cicadas on cereal crops can multiply in bulk in some years. They suck the juice from the plants. As a result, the plants fade and dry.

Until recently, alfalfa fields were the cicadae's reserves in the fall. Currently, grain crops are expanding, and winter crops attract a large number of cicadas. *Psammotettix striatus* L., *Macrosteles laevis* Rib., *Cicadula divaricata* Rib., *Laodelphax striatellus* Fall species are especially dangerous in the conditions of Fergana Valley. *Cicadula divaricata* Rib. a new cereal crops pest for the studying region. *Cicada Cicadula divaricata* Rib. first described by the French cicadologistRibaut H. in 1952 in France [8].

According to our information, it turned out that in Uzbekistan this species is widespread. *Cicadula divaricata* Rib is usually found on irrigated lands. In some years, propagated in mass quantities. It was defined that C. divaricate causes harm to cereals, in other cultures no harm from it was noted. From this it follows that it, apparently, is an

oligophage of cereal crops. During the study, the biology of *Cicadula divaricata* Rib. was studied.

In the conditions of Uzbekistan, *Cicadula divaricata* Rib. winters in the adult phase. For a year it develops in three or four generations. Oviposition of the first generation begins in late March or early April. By the end of May or early June, larvae of the first generation complete their development and turn into imagoes. In the middle or at the end of June, females lay their eggs, and by the end of August, the second generation of cicadas ends their development. The third generation develops in September and in early November, an adult insect stays for wintering. In the southern regions of Uzbekistan, it produces four generations per year.

Conclusions: The study of cicadas is of great theoretical and practical importance, since many of them are pests of agricultural crops. Some species carry dangerous viral plant diseases. Studies have shown that in the farms ofFergana Valley we have registered 30 species of cicadas on cereal crops. Twenty-nine species are registered on wheat. Of these, the species Cicadula divaricata Rib. - a new pest of cereals. As a result of research, the species composition of cicadas that damage cereal crops inFergana Valley was defined. The prevailing and most harmful species were identified, with sufficient completeness, necessary for the practical activities of farms.

References:

1. Kuznetsov V.N. List of harmful insects of Central Asia and neighboring countries // Tr. plant protection. Entomology. - Vol. 5. - L.: - 1932. - p. 42-43.
2. Yakhontov V.V. Pests of agricultural plants and products of Central Asia and their control. - State Publishing House. - Tashkent: - 1953. – p. 286.
3. Polevschikova V.N. Herb pests and control measures. - Tashkent: - 1962. - p. 12-13.
4. Dubovsky G.K. Cicadas (Auchenor rhyncha) of Fergana Valley. - Fan. - Tashkent: - 1966. - p. 215.
5. Sulaymanov H.A. Cicadas of Karshi steppe // S. Ecology and biology of animals of Uzbekistan. - Tashkent: - 1972. - p. 45.
6. Kozhevnikova A.G. Cicadas (Auchenorr hyncha) - pests of agricultural crops in Uzbekistan. Monograph. - Publishing house “Fan va texnologiyalar”. - Tashkent: - 2019. - p. 108-110.

7. Kozhevnikova A.G. Cicadas of cereal crops of Uzbekistan and control measures. // Actual problems of modern science,№6 (109), ISSN 1680-2721. – Publishing House “Sputnik+”. – Moscow: - 2019. – p. 180.

8. Ribaut H. Faune de France. Homopteres //Insecta. - № 6. – 1952. – p.45-56.

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