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COMPOSITION OF BLIND BED BUGS SPECIES IN COTTON

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ABSTRACT

In this article, a study of the composition of the plant-eating bed bugs species, distribution, density, and damage in the Surkhandarya region was observed during the season in April and September 2018. Our researchs show that the region has the highest incidence in Muzrabad district, and that the cotton candy - Creontiades pallidus Rambur 1839 - predominated among the species.

All of our researchs made by district during the season are given in Tables 1, 2, 3, and 4, as well as the species of cotton bed bugs, the development dynamics, the most common areas, and the occurrence rate of bed bugs in replanted crops.

Introduction

In the Surkhandarya region, a study of the composition of the plant-eating bed bugs species, distribution, density, and damage in the Surkhandarya region was observed during the season in April and September 2017. In the region, there are 3 species of bed bugs that feed on cultivated plants. These include the known in advance alfalfa bed bug (*Adelphacoris lineolatus*), field bed bug (*Lygus pratensis*), cotton bed bug - *Creontiades pallidus*. During the season, we found only these types of herbivores in the region and collected data on them. During the season, we found only these species of herbivore bed bugs in the region, and we collected data on them.

Object and methods of research

In addition to causing serious damage to agricultural crops, these species are also carriers of the varicose veins virus. It has been studied to spread potato leaf rot, alfalfa virus diseases, cotton bollworm, bean bacteriosis, and tobacco mosaic disease. [1, 2]. All three bed bugs appeared at different times in the plants, with varying degrees of damage and varying degrees of damage.

Species density. The actual densities of all three types of bed bugs in 4 district farms in the northern and southern regions of the region are given in Table 1, and 92-96% of every 100 bed bugs are cotton bed bugs. In the fields, we observed that the main distribution was cotton bed bug, which was 93-98% of the basic percentage.

The cotton bed bug is a new type of bed bug found in Surkhandarya, which has not yet been found anywhere else in the country, and according to foreign literature and Internet reports, it is distinguished by its sharply different levels of harmfulness.

He is thought to have flown in from the southern part of the province. We do not yet have complete information about its biological properties. It is unknown at this time what form it will spend the winter, but we have set out to find out.

Research results

We obtained the following data from the 2017 season by studying the inter-district distribution of cotton bed bug through special route researchs. Our researchs show that Muzrabad district is the area where the first cotton bed bug appeared and the highest density.

The next places are Denau, Kizirik, Kumkurgon districts.

Table 1

The rate of occurrence of bed bug species in cotton (southern and in the northern regions)

№	Districts	Returns	Number of bed bugs in return, pcs	Number of species, %		
				cotton bed bug	alfalfa bed bug	field bed bug
1.	Angor	I	100	98,0	1,0	1,0
		II	100	99,0	1,0	0
		III	100	99,0	0	1,0
		middle	100	98,6	0,7	0,7
2.	Muzrabad	I	100	99,0	0	1,0
		II	100	99,0	1,0	0
		III	100	100	0	0
		middle	100	99,4	0,3	0,3
3.	Denau	I	100	94,0	2,0	4,0
		II	100	96,0	0	4,0
		III	100	94,0	1,0	5,0
		middle	100	94,7	1,0	4,3

4.	Uzun	I	100	92,0	0	8,0
		II	100	94,0	1	5,0
		III	100	93,0	0	7,0
		middle	100	93,0	0,3	6,7

Although the cotton bollworm is mainly a cotton-adapted insect, it is also found in other crops. For example, a study of the number of alfalfa, a favorite food for bed bugs, in Termez and Muzrabad districts revealed the following (Table 2).

Table 2

Dynamics of development of cotton bed bug in cotton in the southern and northern districts of Surkhandarya region

Districts	The average number of bed bug per 100 plants, pcs																				
	April			May			June			July			August			September			October		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Muzrabad	0	0	0	0	19,6	31,7	102,7	143,7	149,0	151,0	146,3	119,7	100,6	81,3	78,3	68,0	34,7	–	–	–	–
Kizirik	0	0	0	0	0	0	15,1	39,7	48,2	104,0	122,6	131,7	99,7	68,3	67,8	60,1	21,2	–	–	–	–
Kumkurgon	0	0	0	0	0	0	0	9,4	24,5	30,7	31,2	30,4	19,8	19,0	9,1	8,7	7,9	–	–	–	–
Denau	0	0	0	0	0	0	19,2	28,7	41,3	42,0	44,5	68,4	71,5	76,8	50,1	29,6	18,9	–	–	–	–

Cotton bed bug appeared on plants later than alfalfa bed bug. This delay was 40-50 days.

The observed density of alfalfa in alfalfa was generally low, increasing from spring to late July, then decreasing. The density of cotton candy, on the other hand, increased from late May to even September, and then a natural decrease was observed. (4).

Among the 4 district farms listed in the table, cotton bed bug was found in the second decade of May in Muzrabad district.

Here, from mid-May, cotton bed bug began to be detected in cotton seedlings. It developed more than other regions, averaging 145-150 seeds per 100 bushes in mid and late June. In Kizirik district, the figure was even higher. However, in Kumkurgan and Denau districts, pests appeared later and the number of encounters was lower.

This did not happen evenly on all farms in the districts where cotton candy was most prevalent. Some farms stood out in this area. For example, in Muzrabot district such farms include R. Buriev and A. Nabiev's farms are particularly rich in cotton candy, with 300-400 species per 100 plants in June-August (Table 3). Although the pest is less in the farms of Kizirik, Angor and Uzun districts, in July-August its density is 200-250 per 100 plants. was at the level of damage to the crop. (Table 3).

Table 3

Cotton bed bug are the most common areas in the area

Field research experience, Surkhandarya region 2018

Districts	Regions name	The average number of cotton bed bug per 100 plants, pcs					
		April	May	June	July	August	September
Muzrabad	R. Buriyev SIU	–	40–50	250–300	350–400	250–300	100–150
	A. Nabiyev SIU	–	30–40	250–300	350–400	250–300	100–150
Kizirik	Buyuk Surxonobod SIU	–	–	70–80	200–250	150–200	70–80
Angor	Xomkon SIU	–	–	70–80	200–250	150–200	70–80
Uzun	Telpakchinor SIU	–	–	70–80	100–150	150–200	50–60

In 6 district farms of Surkhandarya, we studied how cotton bed bug is damaged

in secondary crops. (Table 4). Studies have shown the following. Cotton bed bug are equally detrimental to medium (G.*hirsutum*) and fine (G.*barbadense*) varieties of cotton. [5, 6, 7].

Table 4

Occurrence rate of cotton bed bug (C. *pallidus*) in replanting crops

№	Districts	The average number of bed bug in 10 pairs of movements of the entomological sac, pcs									
		23 – 25 september									
		Cotton (fine fiber)	Cotton (medium fiber)	Pea	Bean	Alfalfa	Corn	Peanuts	Millet	Sesame	Around the field
1	Angor	–	7,0		58,0		–	30,0	–	–	0,8
2	Denau	–	–	–	–	–	–	–	–	–	–
3	Jarkurgan	–	–	–	–	–	–	–	–	–	–
4	Kizirik	–	3,0	142	–	–	62,0	–	–	–	1,5
5	Kumkurgon	–	–	–	–	–	–	–	–	–	–
6	Muzrabad	21,0	13,0	87,6	–	18,5	24,3	21,4	15,6	18,4	2,0
7	Oltinsoy	–	12,9	49,0	–	–	7,5	24,0	4,0	–	0,5
8	Sariosiyo	–	–	–	–	–	–	–	–	–	
9	Termez	16,5	7,5	39,5	25,0	11,5	4,5	7,5	–	–	1,5
10	Uzun	–	–	–	–	–	–	–	–	–	–
11	Sherobod	–	14,0	90,7	–	34,0	60,0	56,0	16,1	–	1,0
12	Shurchi	–	–	–	–	–	–	–	–	–	–

We also found it in the following plants, which we managed to control, and found that it has a much higher density (especially in Muzrabad and Sherobod districts): it is

noted that it is found in mea, beans, alfalfa, corn and peanuts.

Conclusion

Studies on the species composition, distribution, and density of herbivore bed bugs in the region have been conducted throughout the season. To do this, first of all, methods for calculating bed bugs were developed. In this case, the rule of using entomological sac is perfectly developed. It was found that an average of 21.9 breeds were detected when the field was moved 10 times (5 + 5). The difference from the average of the returns was ± 5 units.

According to the researchs, mainly 3 types of bed bugs were identified as dominant (significant damage). These are the well-known alfalfa bed bug (*Adelphocoris lineolatus*) and the field bed bug (*Lygus protensis*), as well as a new species of cotton bed bug (*Creontiades pallidus*).

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