



DISTRIBUTION OF WHEAT PESTS AND CONTROL OF WIDESPREAD PESTS IN KHOREZM REGION

Raximova Nodira Odilbek qizi,

Urganch State University 2-year master's degree in Faculty of Agronomy, Urganch, Uzbekistan - raximovanodira97@gmail.com

Abdullayev O'Imasbek Ravshanovich,

Associate Professor of Biology Department of Urganch State University, Doctor of Philosophy in Biological Sciences (PhD) - ulmasbekabdullayev2@gmail.com

Bekchanov Muzaffar Xudaybergenovich,

Doctor of Philosophy in Biological Sciences, Head of the Department of Soil Science and Agronomy, Urganch, Uzbekistan - muzaffarbak1986@gmail.com

Article history:	Abstract:
<p>Received: 6th October 2022</p> <p>Accepted: 6th November 2022</p> <p>Published: 11th December 2022</p>	<p>This article presents the biological effectiveness of chemical preparations against aphids, a common pest in wheat fields in Khorezm region of Uzbekistan. The results of monitoring the spread of harmful insects in wheat fields are presented.</p>

Keywords: monitoring, insecticide, aphids, wheat, GPS, coordinates, control

In the conditions of Khorezm oasis, the species composition of sucking and rodent insects that cause great damage to winter wheat, one of the agricultural crops, and the effectiveness of chemical preparations were studied. In this case, determining the amount of pests in the field was determined according to the methods developed by ITI (Scientific Research Institute) of Plant Protection of Uzbekistan. (Methodological guidelines for the testing of insecticides, acaricidal biologically active substances and fungicides, 2007).

Conducting experiments and statistical analysis of data Sh.S. Mukhammadaliyev, B.A. Sulaymanov, M.I. Rashidov's methodological manual "Prediction of the development and spread of harmful organisms of crops" and (2002y), (Khamraev A.Sh., Khasanov, B.O., Sulaymanov B.A., Kozhevnikova A.G., Kholmurodov E.A. 2013) conducted according to

Testing of pesticides was carried out on the basis of Sh.T. Khojaev's book "Methods and conditions of using pesticides in agriculture and conducting research" (2020).

Ab-Ba

C=-----x100

Ab

Here S is biological efficiency.

A is the number of pests before spraying.

a - the number of pests after spraying.

V - the initial number of pests in the control field.

v- the number of pests after treatment in the control field.

Monitoring of the species composition and distribution of sucking and rodent insects, which are common in winter wheat fields in the conditions of Khorezm region, was carried out on the "Asr" variety of winter wheat of 4 hectares of "Sarvar Jumanyoz" farm and "Davron" farm in Khanka district. GPS 12 (CHANEL 12) device was used to obtain the coordinates of the monitored areas. GPS coordinates of the monitored areas are presented in Table 1.

Table 1

GPS coordinates of the monitored areas.				
Nº	District, city	Farming	Crop type	GPS coordinates number
1	Khanka district	"Sarvar Jumaniyaz" f/x	winter wheat	N 041,49656 E 060,70118
2	Khanka district	"Davron" f/x	winter wheat	N 041,48730 E 060,72080
3	Khiva district	"Khiva Cluster" LLC	winter wheat	N 041,38540 E 060,44625
4	Koshkopir district	"Khonabad golden thread" f/x	winter wheat	N 041,52677 E 060,38691

5	Koshkopir village	"Temur Polat" f/x	winter wheat	N 041,51466 E 060,45811
---	-------------------	-------------------	--------------	----------------------------

A total of 100 plants from 5 out of 20 points of winter wheat fields of "Sarvar Jumanyoz" and "Davron" farms were examined in the study carried out in the conditions of Khorezm region, using the established methods for identifying pests in winter wheat in March-June. These observations are conducted every 7-10 days. Aphids began to appear on winter wheat from 29.03.2022. From 11.04.2022, the borer fly appeared, from 19.04.2022, the grain stem borer, and thrips from 27.04.2022. As a result of the conducted research, when examining the stems, leaves, and ears of winter wheat, the average number of grain aphids was 40 per leaf, the number of thrips was 2.5 per ear, the number of grain stem borers was 1, and the number of borer flies was 0.25. status is presented in Table 2.

Table 2
Distribution of sucking and roden pests in winter wheat in Khorezm region.

Nº	The name of insects	Insects detected %
1	Grain aphid (<i>apitidae</i>)	91%
2	Thrips	5.7%
3	<i>Trachelus spp.</i>	2.7%
4	<i>Agromyza</i>	0.6%

In the conducted studies in the conditions of Khorezm region, aphids, thrips aphids 91% in the field, thrips 5.7%, grain stem borer 2.7% in the field, and thrips 91% in the field of winter wheat of 4 hectares of winter wheat of "Sarvar Jumanyoz" farm and "Davron" farm in Khorezm region. fly hit 0.6%.

In this case, when determining the reasons for the large spread of aphids, using the data from <https://world-weather.ru/pogoda/uzbekistan/khanka/>, we compared the climate conditions of March and April 2021 and 2022. In March 2021 and 2022, there are the same cloudy days, i.e. 17. It was studied that there were 13 cloudy days and 13 sunny days in April, and 8 cloudy days and 22 sunny days in 2021, and 17 cloudy days and 13 sunny days in 2022. So, in April, the abundance of aphids increased the humidity due to the presence of more cloud deposits. In our region, we have learned that wet weather and one sunny day and one cloudy day are favorable conditions for the growth of grain pests.

In 2022, experiments were conducted in the winter wheat fields of the farm "Davron", Khanka district, Khorezm region, in order to study the effectiveness of chemical preparations against the main insect and rodent pests encountered in the winter wheat crop. In experiments, modern promising chemical preparations with insecticidal properties, mospilan 20% n.kuk (active ingredient acetamiprid), - B-58 40% em.k (active ingredient dimethoate) 15 grams and gaucho 70% n, 15 and 20 g of kuk (active ingredient imidoclapiride) were taken and mixed with 10 l of water and used. 40 liters of working fluid was prepared in 1000m² plots of 100m²x10m² in 4 options for spraying drugs using motorized sprayers. As a protective zone, 3 m between the fields was left, and preparations against identified winter wheat pests were applied. In the study of the biological effectiveness of chemical preparations against pests, it was carried out according to "Methodological guidelines for testing insecticides, acaricides, biologically active substances and fungicides".

Insect counts are carried out before spraying and 3, 7 and 14 days after spraying. The biological effectiveness of chemical preparations is presented in Table 3. Mospilan 20% k.e., gaucho, B-58 40% e, on the 3rd day of observation when the preparations are used from 15 g, average Mospilan 20% n.kuk -85%, gaucho 70% n,kuk -87%, B-58 40% em.k made -84%. After 7 days Mospilan made 20% n.cuk -88%, Gaucho 70% n,cuk -91%, B-58 40% em.k -90%. After 14 days, acetapmerid -86%, gaucho -89%, B-58 40% em.k -86%.

Table 3
Biological effectiveness of chemical preparations against aphids.

Nº	A research option	The rate of consumption of the drug is gr.l/ha	Water consumption rate l/ha	Average number of aphids on 1 infected leaf			Biological efficiency % (in days)			
				Before processing	After treatment (in days)			3	7	14
					3	7	14			
1	Mospilan 20% n. kuk 200gr/kg	150g/ha	150-200 l	42	6,3	5	5,9	85	88	86
2	Gaucho 70% n, kuk 700gr/kg	150g/ha	200-400 l	40	5,2	3,6	4,4	87	91	89
	Gaucho 70% n, kuk 700gr/kg	200g/ha	200-400 l	40	4,4	2,4	4	89	94	90

3	B-58 em.k	40%	1.5l/ha	200-400 l	41	6,6	4.1	5.7	84	90	86
4	Control (drug-free)			200-400 l	40	52	56	48			

Also, in the experiments, the biological efficiency after processing in the variants using gauchho 70% n, kuk drug 20 g was 89% after 3 days, 94% after 7 days, and 90% after 14 days. Summary. Therefore, if the preparations containing imidaclopyrid are used against aphids in winter wheat in the above consumption amounts (taking into account the effect of the preparations on other pests at the same time), a high expected result will be achieved.

LIST OF USED LITERATURE.

1. Khamraev A.Sh., Khasanov, B.O., Sulaymanov B.A., Kozhevnikova A.G. "Means of biological protection of plants". Tashkent 2012.
2. Khamraev A.Sh., Khasanov, B.O., Sulaymanov B.A., Kozhevnikova A.G., Kholmurodov E.A. "Biological protection of plants". Tashkent 2013.
3. Khojaev Sh.T. "Methods and conditions of pesticide use and research in agriculture" Tashkent 2020.