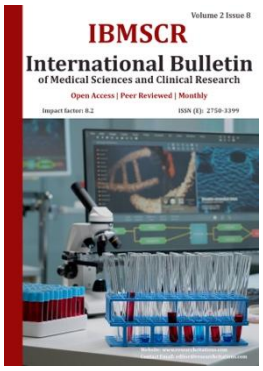

EFFECTIVE PROTECTION AGAINST WHEAT PLANT GROWTH AND DEVELOPMENT

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Аннотация

В этой статье исследуются различные сорта пшеницы, загрязненные соком пшеницы в лаборатории защиты растений. В результате была оценена долговечность различных сортов пшеницы и определены относительно устойчивые сорта.

Ключевые слова; сорго, повреждение, вредитель, устойчивое, пшеница, устойчивое, умеренно устойчивое, насекомое, урожай, зерно, борьба, качество, эффективность, относительный, урожайность, выращивание, местное, зерно, семена, тонна, гектар, исследование, улучшение.

Annotation

This article explores various types of wheat contaminated with wheat juice in a plant protection laboratory. As a result, the durability of various wheat varieties was evaluated and relatively stable varieties were determined.

Key words; sorghum, damage, pest, steady, wheat, steady, moderately resistant, insect, crop, grain, struggle, quality, efficiency, relative, productivity, growing, local, grain, seeds, ton, hectare, research, improvement.

Today, the world population's demand for wheat grain is 840 mln. is a ton. About 35% of the world's grain crops are destroyed annually, and 14% of them are caused by harmful insects. This loss is 75 billion per year. amounts to 1.5 billion dollars per year due to the use of plant protection measures against it. dollar grain yield is saved.

Also, the problem of protection against these pests based on wheat varieties resistant to the main sucking pests in the cultivation of grain crops is considered an urgent task today. Due to the fact that imported varieties are planted in the main areas of our republic, it is necessary to correctly place new local varieties in regional conditions, to create and improve effective agrotechnics, to carry out selection and seed breeding work to improve the quality indicators of grain grown under irrigated conditions, and to strengthen variety resistance to diseases and pests [2.].

According to the information of the FAO organization under the UN, the productivity of agricultural crops in the countries of the world decreased by 28% in 1967 due to the effects of harmful insects, diseases and weeds, and by 1996 this loss will be a total of 36.9%, including 35% in grain crops.

Severe damage to crops by aphids leads to twisting of leaves, retardation of growth and incomplete ripening of grains, changes in plant metabolism and changes in the anatomical structure of leaves [1; 32 p.]. Only in the grain fields of the countries of the Near East and Central

Asia, every year about 8 million hectares are covered with harmful weeds and more than 2 million hectares are treated with chemical methods [3.].

Resistant varieties are the main means of protecting agricultural crops from insects, and they also have a significant effect on the number and quantity of insects. Resistant varieties also limit the ability of insects to reproduce [4; p. 76].

More or less damage caused by grain aphids to grain crops depends on the resistance of these crops to aphids. Varieties vary in their resistance to common grain aphid damage to rice crops. [6.].

The ability of plants to fight against a harmful organism is called its resistance. Russian entomologist I. D. Shapiro says that resistance is the resistance of a plant to a harmful organism. Resistance is a very complex process, first of all unfavorable environmental conditions for the harmful organism in the plant occurs, secondly, the harmful organism has a negative physiological reaction to this plant and tends to move away from it in terms of feeding, digesting food and laying eggs [5.].

Based on the research carried out by scientists above, studies on determining the resistance of the sucking aphid, which feeds on the cell sap of the plant in grain crops, to pests.based on varieties. The relative resistance of different wheat varieties was determined by creating favorable conditions for the development of aphids in wheat plants, air temperature from 20oS to 22oS, relative humidity of 30-35, photoperiod of 14-16 hours. The resistance of wheat varieties was determined by artificial inoculation of aphid pests in laboratory conditions.

It was clear from the conducted research that after 14 days the saps poured on the plant were studied to what extent they were relatively resistant to the damage of different wheat plants.

In the researches, resistance of wheat varieties to grain saps was determined by ummentomologists I.D.Shapiro and E.E.Radchenko using a 6-point scale. According to the conducted research, when different wheat varieties are specifically infected with grain aphid pests in laboratory conditions.

The number of aphids per plant was 158 pieces in soft wheat variety Turkestan, 160 pieces in Krasnadar-99 variety, 160 pieces in Babur variety, 158 pieces in hard wheat variety Krupinka, 162 pieces in Istiklal variety. The average number of aphids in 10 plants was 185 in the Polovchanka variety, 187 in the Chillaki variety, and 187 in the Umanka variety.

In terms of aphid development and damage, the number of aphids in the Sanzar-6 variety of soft wheat is 210, the number of aphids in the Vostorg variety is 215, and the number of aphids in the Moskvich variety is up to 218.

It was found that the number of aphids per plant increased by 57 pieces in the Vostorg variety compared to the Turkistan variety, which is resistant to grain aphids, and by 58 pieces in the Moskvich variety compared to the Krasnadar-99 variety, and in these resistant varieties, aphids multiply and develop well (Fig. 1).

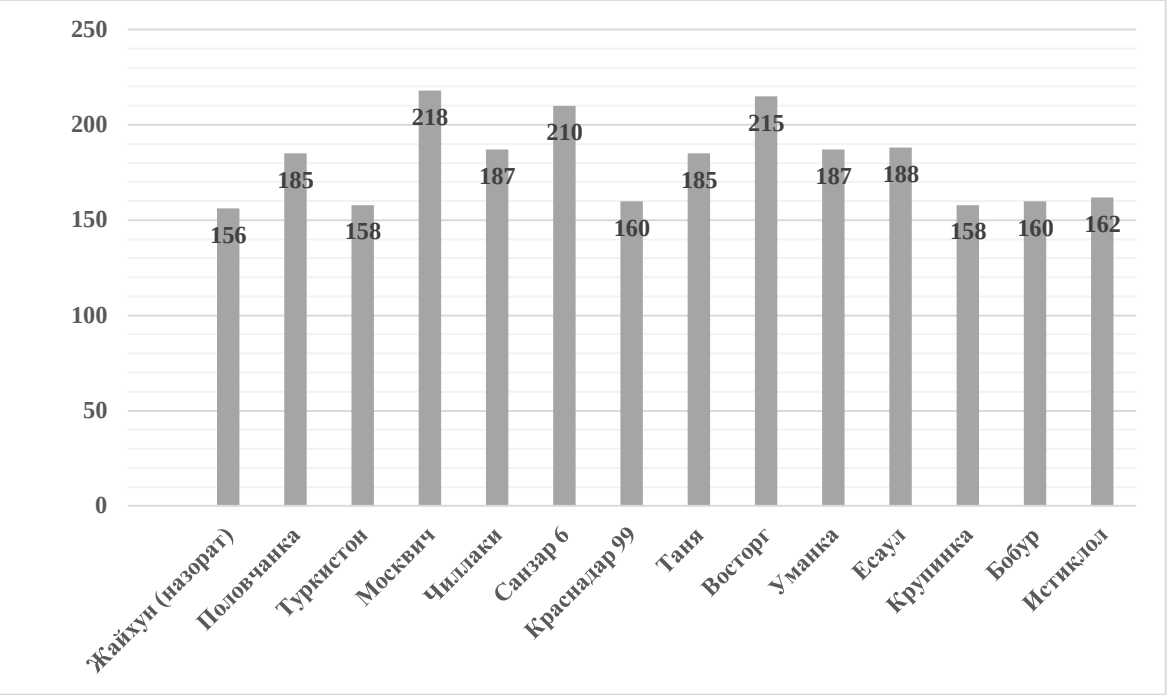

Figure-1. From the 14th day of increased growth in wheat varieties then the average number of saps

In conclusion, it should be said that according to the analysis results of laboratory studies conducted on the basis of different wheat varieties, Turkistan, Krasnadar-99 soft wheat, Krupinka and Istiqlol varieties of durum wheat were more resistant to grain aphid pest than other varieties.

In the course of research, it was recommended to create new varieties that are resistant to pests in the selection of wheat varieties that have properties of resistance to sucking pests of wheat.

List of used literature:

1. Belolipetsky A.V. Tlya orangerynaya tabachnaya – Myzodes persicae // J. Zashchita is a plant. - Moscow, 1992. - No. 10. - S. 32.
2. Khalikov B. Achievements in agricultural science and tasks in the future // Agricultural journal of Uzbekistan. - Tashkent, 2015. - #9. - B. 18-19.
3. Sunn pests and their control in the Near East // FAO plant production and protection paper (138). - Rome: FAO, 2006, - P.165.
4. Sheraliev A.Sh., Rakhimov U.Kh. Plant immunity. - Tashkent, 2007. - B. 76.
5. Kimsanboev Kh.Kh., Yoldoshev A.Y., Zohidov M.M., Khalilov K.Kh., Siddikov I.R., Kasimov T.A. Chemical protection of plants. - Tashkent: "Teacher", 1997. - B. 11.
6. Myrzin A.S. Obyknovennaya zlakovaya tlya na rise // J. Zashchita is a plant. - Moscow, 1975. - No. 6. - S. 17.