



DEPENDENCE OF STEM LODGING RESISTANCE OF WINTER WHEAT ON WEED CONTROL

Sullieva Suluv Khurramovna

Candidate of Agricultural Sciences, Associate Professor of Botany

Department, Termez State University, Uzbekistan.

<https://doi.org/10.5281/zenodo.12606266>

Abstract: this article discusses the dependence of the resistance of winter wheat stalks to weeding on weed control.

Key words: weeds, selection, herbicide, winter wheat, growth, classical research.

When winter wheat develops under unfavorable conditions, the tendency to lodging increases as a result of the violation of the correlation between height and body when there is a lack of water and nutrients. Dormancy tolerance of winter wheat depends on the length, thickness, mechanical texture of the first and second joints, and the thickness of the stems.

N.S. Petinov carried out classical research on plant dormancy and combating it, and determined the main directions of in-depth study of the causes of plant dormancy and combating it.

T.Khodjakulov emphasizes the need to create varieties that are resistant to dormancy by selection, taking into account the great damage caused by dormancy.

N. Khalilov proposed to optimize planting standards in order to increase the resistance of wheat to dormancy.

Scientific analyzes show that there are few studies on the negative effects of weeds on wheat lodging in cereal fields and their control. Among the works performed in this field, the works performed by Z.A.Ibragimov in the conditions of the Kashkadarya region and Sh.Kh.Rizaev in the conditions of the Samarkand region can be mentioned.

According to Z.A. Ibragimov, in the conditions of the region of irrigated light gray soils of Kashkadarya region, the tolerance to lodging increased when Granstar herbicide was used against dicotyledonous weeds in the winter wheat field, and the lodging of wheat increased in the control option where this herbicide was not used. In addition, it was observed that the height of winter wheat "Sanzar-4" variety was 15.1-15.9 cm higher when dicotyledonous weeds were eliminated by means of Granstar herbicide compared to the control option without this herbicide.

Table 1

Winter wheat height and lodging resistance when herbicides were applied against weeds (when herbicides were applied on March 20)

№	Experience options	Height, cm	Lying down, score
		The wax is in the ripening phase X±Sx	The wax is in the ripening phase X±Sx
2015			
1	Control option without herbicide application (con)	90,8 -	4,0 -

2	Puma super 1.0 l/ha	92,3 ± 1,5	4,5 ± 0,5
3	Granstar 15 g/ha	91,8 ± 1,0	4,5 ± 0,5
4	Puma super 1.0 l/ha Granstar 15 g/ha	95,3 ± 4,5	5 ± 1,0
2016			
1	Control option without herbicide application (con)	91,0 -	4,0 -
2	Puma super 1.0 l/ha	92,8 ± 1,8	4,5 ± 0,5
3	Granstar 15 g/ha	92,0 ± 1,0	4,5 ± 0,5
4	Puma super 1.0 l/ha Granstar 15 g/ha	96,1 ± 5,1	5 ± 1,0
2017			
1	Control option without herbicide application (con)	90,2 -	4,0 -
2	Puma super 1.0 l/ha	92,5 ± 2,5	4,5 ± 0,5
3	Granstar 15 g/ha	91,5 ± 1,3	4,5 ± 0,5
4	Puma super 1.0 l/ha Granstar 15 g/ha	95,8 ± 5,6	5 ± 1,0
Average indicator for 2005-2007			
1	Control option without herbicide application (con)	90,7 -	4,0 -
2	Puma super 1.0 l/ha	92,5 ± 1,8	4,5 ± 0,5
3	Granstar 15 g/ha	91,8 ± 1,1	4,5 ± 0,5
4	Puma super 1.0 l/ha Granstar 15 g/ha	95,7 ± 5,0	5 ± 1,0

According to the results of our experiments, Puma super (1 l/ha) and Granstar (15 g/ha) herbicides, which were used to eliminate widespread spike and dicotyledonous weeds in the fields where winter wheat variety Kroshka is grown in the conditions of the irrigated grassy barren soil region of Surkhandarya region, showed that height and dormancy tolerance increased depending on the types of herbicides and application methods and periods when applied separately and together on March 20 and April 10.

Maximum growth and lodging of winter wheat is more likely to occur during its wax ripening phase. For this reason, one-time monitoring of growth and lodging was conducted in experimental options where herbicides were used and in the control option where herbicides were not used, and the results are presented in Tables 4.2.3.14 and 4.2.3.15. During this period, height and lodging performance of winter wheat shifted in favor of the experimental

variants with herbicide application, and maximum performance was observed in terms of height and lodging.

When the height of winter wheat was analyzed according to the tabular data, the height of the Kroshka variety at the wax ripening stage when herbicides were applied on March 20 was 90.8 cm in the control option without herbicide application, 1.5 cm in the option with Puma super (1 l/ha), Granstar (15 g/ha) was observed to be 1.0 cm high, and 4.5 cm high when Puma super and Granstar were used together at the prescribed rates.

The same situation was repeated in 2016-2017 when herbicides were mixed together and applied, compared to the variants where herbicides were applied separately and when herbicides were not applied, the height of the plant was 5.1-5.6 cm higher.

It was observed that when herbicides were applied on March 20, compared to the untreated control, wheat was taller and more prone to lodging. Therefore, it was observed that when herbicides were applied individually on March 20, 2015, it was 4.5 points, and the lodging in the control option without herbicides was 4 points. When herbicides were used together, it was observed that the incidence of dormancy was 5 points without being observed at all. The same results were repeated in 2016-2017, and Puma super (1 l/ha) and Granstar (15 g/ha) herbicides were mixed together, and one application on March 20 ensured a complete improvement in wheat dormancy tolerance as well as a steady growth.

Therefore, when Puma super (1 l/ha) and Granstar (15 g/ha) herbicides are used together against spike and dicotyledonous weeds in winter wheat field, in return for the control of such weeds, the wheat is stable and vigorous growth and development as well as dormancy tolerance. is radically improved.

When herbicides were applied on April 10, when the weeds had fully germinated, in all the years of the experiment, the height and lodging tolerance of winter wheat when herbicides were applied on March 20 were repeated.

References:

1. Sullieva, S., & Zokirov, K. (2019). Biology of weeds. Scientific and Technical Journal of Namangan Institute of Engineering and Technology, 1(2), 120-124.
2. Boboeva, N. T., & Nazarov, S. U. The fight against avena fatua in the middle of a wheat field. International Journal on Integrated Education, 3(2), 62-64.
3. Суллиева, С. Х., & Зокиров, К. Г. (2020). Структура урожайности озимой пшеницы при применении гербицидов против сорняков. Экономика и социум, (9 (76)), 323-326.
4. Xurramovna, S. S., & Tuhtamishovna, B. N. Use Atlantis Herbicide for Avena Fatua in the Middle of a Wheat Field. International Journal on Integrated Education, 3(1), 45-47.
5. Суллиева, С. Х., & Зокиров, К. Г. (2020). Вредные свойства и классификация сорняков. Экономика и социум, (9 (76)), 319-322.
6. Sullieva, S. X., & G'Zokirov, Q. The Structure of the Yield of Winter Wheat When Using Herbicides Against Weeds. International Journal on Integrated Education, 3(11), 37-40.
7. Khurramovna, S. S., & O'G, Z. Q. G. A. (2021). Medicinal plants in folk medicine. European Scholar Journal, 2(3), 109-112.
8. Суллиева, С. Х., Бобоева, Н. Т., & Зокиров, К. Г. (2019). ЭФФЕКТИВНОСТЬ ЗЕМЛИ ВМЕСТЕ В ТЕКУЩЕМ ЛЕЧЕНИИ. Мировая наука, (6), 450-452.

9.Sulliyeva, S., & Zokirov, Q. (2019). REPRODUCTION PLANTATIONS OF (HIPPOPHAE) IN SURHANDARYA REGION. Scientific and Technical Journal of Namangan Institute of Engineering and Technology, 1(2), 148-150.

10.Menglikulovich, A. S., Chutbaevich, B. K., & Habibullaevich, A. F. (2022). RESTORATION OF SEED FERTILITY IN ORDER TO RENEW THE SAMPLES OF VEGETABLE CROPS STORED IN THE GENE POOL. American Journal of Interdisciplinary Research and Development, 8, 91-95.

11.KHURRAMOVNA, S. (2020). TECHNOLOGY OF GROWING ZAFFARON IN THE SURHANDARYA AREA. INTERNATIONAL JOURNAL OF DISCOURSE ON INNOVATION, INTEGRATION AND EDUCATION, 1(5), 335-337.

12.Abdunazarov, E. E., & Zokirov, Q. (2019). PHYTOCHEMICAL INDICATORS OF MEDICINE PLANTS UNDER INTRODUCTION ON SALTED LANDS. Scientific and Technical Journal of Namangan Institute of Engineering and Technology, 1(5), 44-46.

13.Yakubjonovna, N. A., Chorievich, J. U., & Khasanova, M. (2022). PRODUCING, STORAGE AND PROCESSING OF MELONS USING MODERN RESOURCE-SAVING TECHNOLOGIES. American Journal of Interdisciplinary Research and Development, 10, 375-381.

14.Yakubjonovna, N. A., Chorievich, J. U., & Khasanova, M. (2022). Effect of Storage Methods and Periods on the Nutritional Properties of Watermelon. Texas Journal of Agriculture and Biological Sciences, 10, 63-66.

15.Yakubjonovna, N. A., Chorievich, J. U., & Khasanova, M. (2022). Changes in yield and quality of melon dried fruit grown using different types of fertilization. Texas Journal of Agriculture and Biological Sciences, 10, 67-70.

16.Khurramovna, S. S., & O'g, Z. Q. G. A. (2021). Economic efficiency of application of herbicides against double and double weeds in autumn wheat field.

17.Суллиева, С. Х., Бобоева, Н. Т., & Зокиров, К. Г. (2019). ВИДЫ И СОРТА ХРИЗАНТЕМ. Экономика и социум, (10 (65)), 315-317.