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INFLUENCE OF WINTER WHEAT PLANTING TIMES AND FEEDING REGIME ON GRAIN YIELD

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Abstract
The article discusses the effects of the sowing date and feeding regime of winter wheat Starshina variety on the irrigation regime of winter wheat and grain yield in saline soils of the Bukhara region. Based on the data obtained, the sowing date of winter wheat Starshina variety was sown from October 10 to October 20, the feeding regime N-250; R-175; K-90 kg/ha was used, and the soil moisture before irrigation was irrigated at 70-80-65% relative to the NDMS. In variant 15, the grain yield of winter wheat was 61.2 c/ha.

Keywords: Winter wheat, salinity, mineral fertilizers, productivity, irrigation standards, feeding.

Introduction

Today, "wheat" is 220.4 mln. planted per hectare, the average grain yield is 31.1 t/ha, cotton is 33 mln. 35 mln. tons, corn 183.3 mln. per hectare, the average yield is 49.0 ts/ha. In order to obtain a high and quality harvest from agricultural crops, it is important to correctly determine the types of crops, soil-climatic conditions, irrigation procedures and mineral fertilizer standards.

If the sowing dates and feeding regimes of winter wheat are correctly selected in the conditions of the Bukhara region, it is possible to achieve high results. During the research, the field was prepared for sowing at the end of August and the sowing was carried out from the beginning of September to November. During the research, it was found that the sowing of winter wheat at later dates was mainly explained by its increased moisture requirements, and it was possible to

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see that the plant's tolerance to cold decreased due to the high biomass of the plant in the winter months. In addition, it was possible to see that the irrigation rate increased as a result of the early sowing of the crop.

Materials and methods of research

During the research, winter wheat was irrigated while maintaining the same soil moisture, that is, the soil moisture before irrigation was irrigated at 70-80-70% of the maximum soil moisture content, and three fertilization regimens were used: N-150; P-100; K-60 kg/ha and N-200; P-150; K-60 kg/ha and N-250; P-175; K-90 kg/ha. The sowing dates were September 1-10, September 10-20, from September 20 to October 1, and from October 1-10, October 10-20, and from October 20 to November 1. Scientific analyses of the effects of irrigation on plant growth and development, yield, and yield were conducted.

Analysis and results

During the research, the winter wheat Starshina variety was planted in the period from September 1 to 10, when the soil moisture content before irrigation was 70-80-70% relative to the NDMS, the fertilization rate was N-150; P-100; K-60 kg/ha, and the sowing period was September 1-10. In the first variant, winter wheat was irrigated 6 times during the season, with 798-1024 m^3/ha of water being used for each irrigation, and the seasonal irrigation rate was 5437 m^3/ha. Also, in the second variant of the experiments, i.e., the fertilization rate was N-200; P-150; K-60 kg/ha, and the irrigation rate was 772-968 m^3/ha and the seasonal irrigation rate was 5304 m^3/ha, the fertilization rate was N-250; R-200; In option 3, where K-90 kg/ha was applied, winter wheat was irrigated 6 times in the 2-3-1 system, the one-time irrigation rate was 756-942 m^3/ha and the seasonal irrigation rate was 5223 m^3/ha, and 214 m^3/ha less water was used during the season compared to the control.

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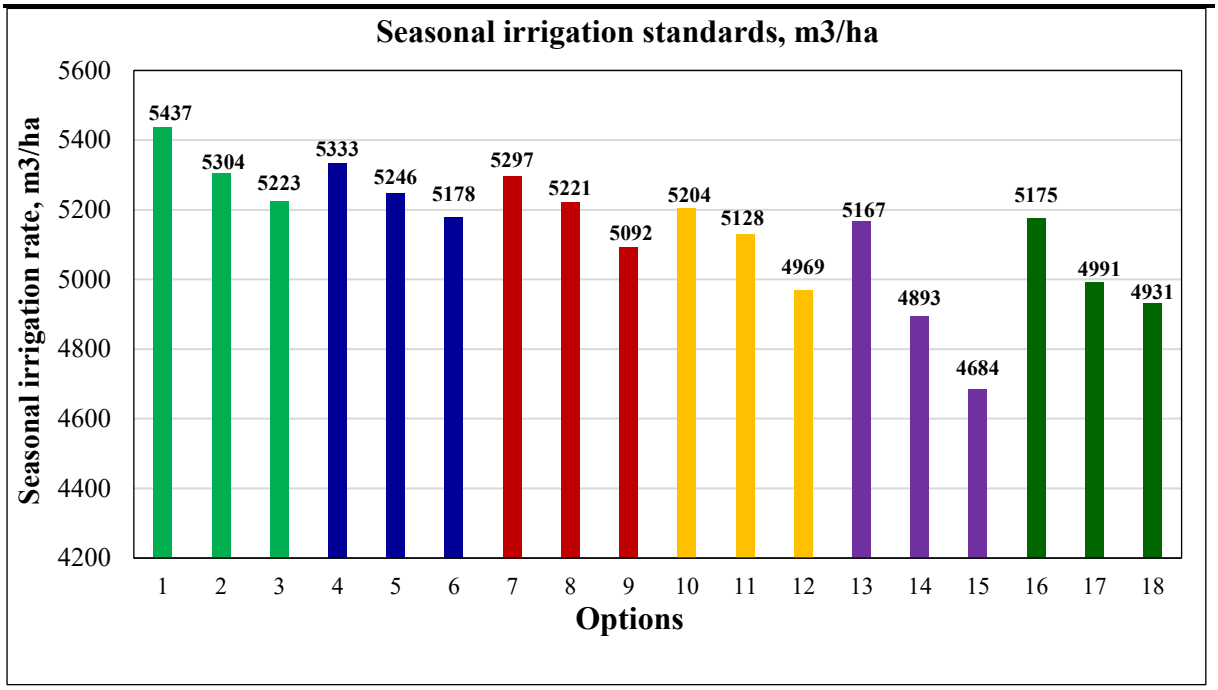

Figure 1. Effect of winter wheat planting dates and feeding regimes on seasonal irrigation rates.

During the research, winter wheat was sown between September 1-10, and the soil moisture before irrigation was irrigated at 70-80-70% relative to the NDMS, and the feeding regimen N-150; P-100; K-60 kg/ha was used. In variant 1, the grain yield of winter wheat was 44.1 c/ha. In variant 2, the grain yield was 48.6 c/ha, and in variant 3, the grain yield was 53.7 c/ha. This was 5.1-9.6 c/ha higher than in variants 1 and 2. In variants 4, 5 and 6, when winter wheat was sown between September 10 and 20, and the feeding regimen N-150;P-100;K-60; N-200;P-150;K-60 and N-250;P-175;K-90 kg/ha was used, the grain yield of winter wheat was 44.0 c/ha, 49.0 c/ha and 54.2 c/ha, respectively. In variant 7, when winter wheat was sown between September 20 and October 1, and the feeding regimen N-150;P-100;K-60 kg/ha was used, the grain yield was 45.1 c/ha, and the feeding regimen N-200;P-150; In variant 8, where K-60 kg/ha was applied, it was 48.7 c/ha, and in variant 9, it was 54.7 c/ha. In variant 10, where the winter

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wheat variety Starshina was sown between October 1 and 10, and the feeding regimen N-150; P-100; K-60 kg/ha was applied, its grain yield was 45.8 c/ha, while in variant 11, i.e., the feeding regimen N-200; P-150; K-60 kg/ha, the grain yield was 49.1 c/ha. In variant 12 of the experiment, the grain yield of winter wheat was 57.5 c/ha.

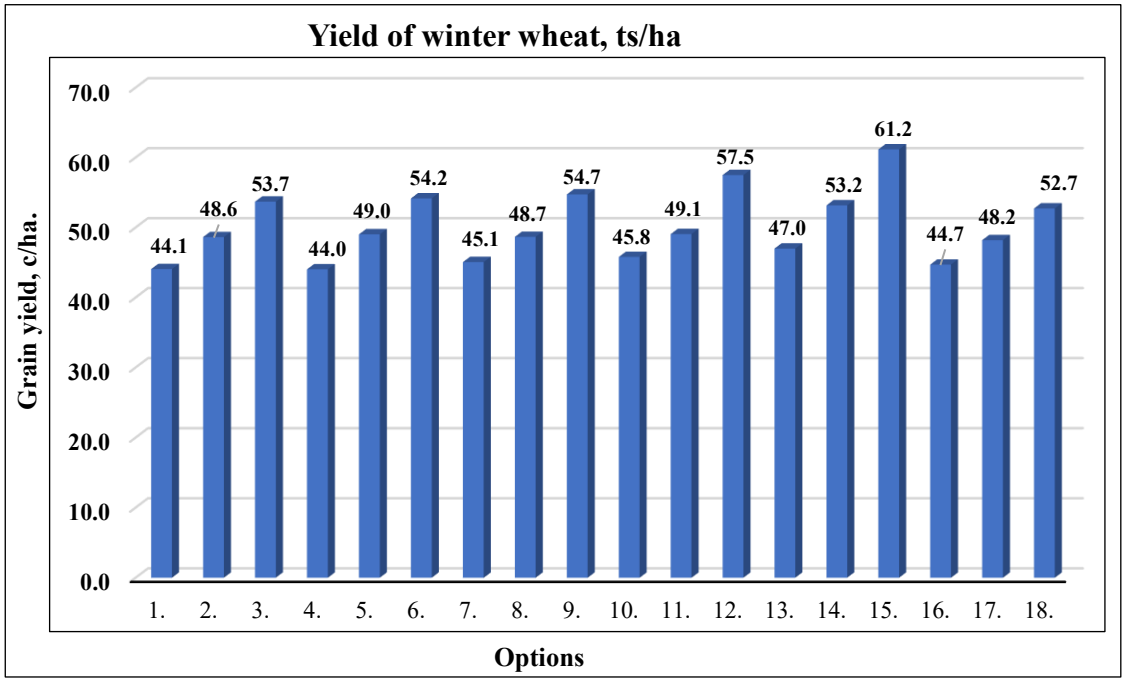

Figure 2. Effect of planting time and nutrition standards on grain yield of winter wheat variety Starshina.

Studies have shown that late sowing of winter wheat affects the germination, establishment, and seedling density of crops during winter, and that increased nutrient availability also increases yield.

Conclusion

1. In the conditions of moderately saline, medium-porous soils of the Bukhara region, the sowing dates of the winter wheat variety Starshina were from October 10 to October 20, and the feeding regimen was N-250; P-175; K-90

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kg/ha, as a result of the timely completion of the plant development phases, the yield of winter wheat was 8.0-14.2 c/ha higher than the control, amounting to 61.2 c/ha.

2. In the conditions of moderately saline, medium-porous soils of the Bukhara region, the sowing dates of the winter wheat variety Starshina were from October 10 to October 20, and the feeding regimen was N-250; P-175; K-90 kg/ha, the grain quality indicators were good, with a protein content of 15.1% and a gluten content of 28.4%.

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