

The Influence Of Sowing Rates And Fertilizers On The Yield Of Durum Wheat Seeds

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Abstract: This article provides data on the influence of sowing rates and fertilizers on the field germination of seeds of durum wheat varieties Krupinka, Zilol and Nasaf. According to the data obtained from the study, it was determined that with an increase in sowing rates, the field germination of seeds of durum wheat varieties decreased.

Key words: variety, norm, fertilizer, germination, durum wheat, temperature, drought, option, grain quality, ear.

Scientists breeders face an important task to create new varieties of durum wheat of intensive type resistant to diseases, insects, lodging, adverse environmental factors, heat-resistant, drought-resistant, high-yielding and with high grain quality indicators that meet the appropriate requirements intended for cultivation in soil and climatic conditions of the southern regions of the republic.

From an economic point of view, in the conditions of irrigation agriculture of the republic, durum wheat should be sown in autumn. Compared to sowing seeds in the autumn period, plants have a full opportunity to take advantage of the ecological conditions of the autumn-winter and spring periods, higher yielding and early ripening, the yield index of which is up to 40-50% higher than those sown in the spring period. In the fields after the grain sown in the fall as repeated crops, you can cultivate corn (grain, green mass), soy, mash and other agricultural crops and get a good additional profit.

According to G.Kurbonov and others, scientifically based cultivation of durum wheat is the key to the stability of the economy of the Republic, as well as providing consumers with high-quality pasta, confectionery and bakery products.

To obtain a high-yielding grain with a high quality index of durum wheat and when reproducing seed material, it is necessary to take into account the biological and ecological characteristics of each variety and prevent admixture of seeds within the species (soft wheat), attention should also be paid to the reproduction being carried out on the basis of a high agrophone and agricultural technology in the conditions of southern hot regions [1].

Achieving optimal density and uniform germination of sprouts is an important measure for obtaining high yields of durum wheat. It is known from practice that the field germination of seeds does not correspond to laboratory data, that is, the percentage of field germination of seeds is lower than laboratory results. The field germination of seeds is interrelated with the quality of seeds, the agricultural machinery used, with soil and climatic conditions, with the type of wheat and with many other factors. Many scientists have studied the factors affecting the decrease in field germination of seeds. The wrong choice of precursors, the choice of seed depth, poor quality of seed material, lack of soil moisture and temperature, various diseases are the reasons for the decrease in field germination of seeds [2;3].

For full and uniform germination of seeds in the field, 12-20 0C is the most optimal air temperature, usually for germination of seeds from the soil, the required average sum of daytime temperatures is 120-140 0C.

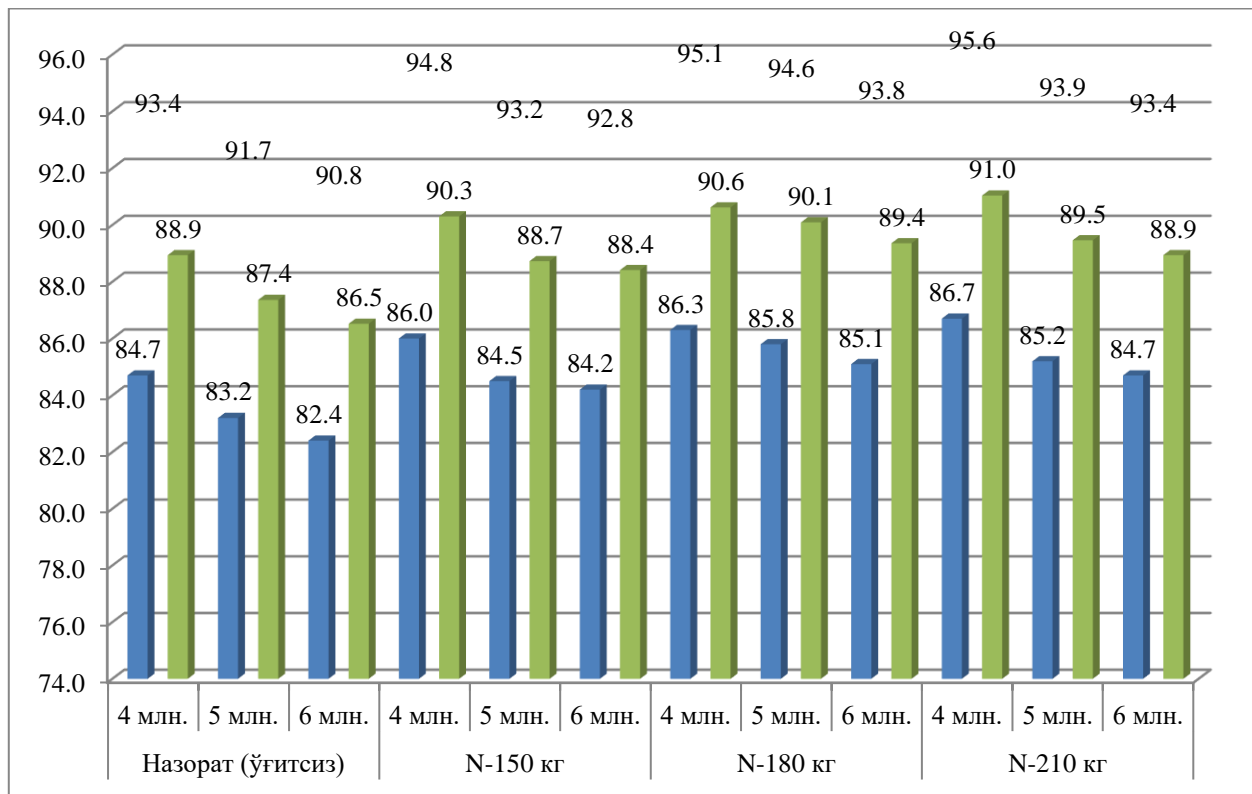
Based on the above data, in the conditions of light-gray soils of the Kashkadarya region, studies were conducted on the agricultural technology of durum wheat.

In the course of research, it was also determined that with an increase in seed planting rates, the percentage of field germination of seeds decreased. Depending on the norms of seed planting and doses of fertilizers, the percentage of field germination of seeds varied in the Krupinka variety from 82.4% to 86.7%, in the Zilol variety from 90.8% to 95.6% and in the Nasaf variety from 86.5% to 91.0 (1-Figure).

The increase in seed planting rates negatively affected the percentage of field germination, in the control variant, with the rate of planting 4-6 million seeds of the Krupinka variety, the percentage of field

germination of seeds ranged from 84.7% to 82.4%, in the Zilol variety from 93.4% to 90.8%, in the Nasaf variety from 88.9% to 86.5%.

The same pattern of decreasing the percentage of field germination was observed when using fertilizers based on the norm of N-150 kg of nitrogen of the Grain variety, the percentage of field germination of seeds ranged from 86.0% to 84.2%, in the Zylene variety from 94.8% to 92.8%, in the Nasaf variety from 90.3% to 88.4%. And when using fertilizers based on the norm N-180 kg of nitrogen of the Grain variety, the percentage of field germination of seeds ranged from 86.3% to 85.1%, in the Zylene variety from 95.1% to 93.8%, in the Nasaf variety from 90.6% to 89.4%, and at the norm N-210 kg of nitrogen of the Grain variety, the percentage of field germination of seeds ranged from 86.7% to 84.7%, in the Zylene variety from 95.6% to 93.4%, in the Nasaf variety from 91.0% to 88.9%.



1-diagram. The influence of sowing rates and fertilizers on the field germination of seeds of durum wheat varieties

According to a number of researchers, the rate of seed planting certainly affects the percentage of their field germination to one degree or another. For example, if the research data of some scientists show that with an increase in the rate of seed planting, the percentage of field germination decreases, and according to others, on the contrary, it increases.

Our studies determined a noticeable effect on the percentage of field germination of seeds planted in the autumn period. The field germination of seeds, depending on the rate of seed planting in the varieties Krupinka, Zilol and Nasaf with a rate of planting 4 million seeds varied between 84.7% - 95.6%, and with a rate of planting 6 million seeds in the variety Krupinka by 1.2-2.3%, in the variety Zilol by 1.3-2.5% and in the variety Nasaf by 1.3-2.4%, this indicator was lower than in the variant with a rate of planting 4 million seeds.

Conclusion

According to the results of the studies conducted in order to determine the effects of sowing rates and fertilizers on the field germination of seeds of durum wheat varieties Krupinka, Zilol and Nasaf, a decrease in the percentage of field germination of seeds with an increase in planting rates was determined. It is possible that the data given by other authors, about an increase in the percentage of field germination with

an increase in seed planting rates, are associated with many other aspects, for example, with the structure of soils, etc. V.N.Craft, V.F.Saiko note that a decrease in the percentage of field germination of seeds with an increase in seed planting rates is interrelated with the swelling of seeds and the influence of toxic substances during germination of sprouts.

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