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VARIETIES OF COMMON FALL WHEAT INFLUENCE OF PLANTING TIME, PLANTING RATE AND FERTILIZER RATE ON YIELD COMPONENTS

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Abstract:

The article provides information on planting norms, periods, and the effect of mineral fertilizers on the structure of the crop, based on the biology of each created wheat variety, in the cultivation of high and stable yields from grain crops.

Keywords: *New, rate, fertilizer, million pieces, temperature, drought, variant, intensive type, ear , grain*

Today, there are around 240.8 million areas of grain crops in the world, and in 2017, a total of 757.4 million tons of wheat grains were grown from these areas, and the share of soft wheat in the world is 95%. Wheat is grown in 132 countries in the world. 70% of the grain harvest is accounted for by countries such as England, Germany, France, China, USA, India, Russia, Canada, Ukraine and Australia. In these countries, wheat is grown on the basis of advanced technologies. the average productivity in the world is 3.1 tons per hectare.

In the world's major wheat-growing countries, an increase in grain yield and quality is achieved due to the use of advanced methods of soil conditions, variety characteristics and agrotechnology of cultivation. Based on the soil and climate conditions, the development and implementation of winter wheat sowing period, standards, and feeding procedures with fertilizers is one of the urgent tasks of the grain industry.

A high grain yield is achieved by using the internal capabilities of the winter soft wheat varieties grown in our republic and on the basis of the use of advanced agricultural techniques. However, insufficient attention has been paid to the agrotechnics of cultivation of intensive varieties of winter soft wheat, including the development of planting time, standards and fertilizing procedures in accordance with the biological characteristics of each variety, especially in the conditions of the desert regions of Kashkadarya region with arid climate.

Field experiments were conducted in 2014-2016 in light gray soils of the Kashkadarya branch of the Scientific Research Institute of Cereals and Legumes.

In order to study the effect of planting period, planting and fertilizing standards on the productivity and yield components of autumn soft wheat varieties, new soft wheat varieties "Yaksart", "Bunyodkor", "Gozgon" recommended for planting in the southern regions and "Krasnodarskaya-99" varieties, which are planted in large areas, were taken. .

Taking into account the biological characteristics of autumn soft wheat varieties in the conditions of light gray soils of Kashkadarya region, the optimal planting period, standards and mineral fertilizer standards have been determined. Under these conditions, when the autumn soft wheat varieties: "Yaksart", "Bunyodkor", "Gozgon" are planted early (1.10.), the planting rate is 4.0 million per hectare. germinating seeds and mineral fertilizers $N_{180} P_{108} K_{54}$ kg/ha, 5.0 million per hectare in the optimal period (20.10). $_{105\ kg/ha}$ of fertile seeds and fertilizers $N_{210} P_{147} K$ /ha, late period (10.11) planting rate of 6.0 mln. it was determined that when the grain was increased to germinating seeds and fertilizers were applied at the rate of $N_{210} P_{147} K_{105}$ kg/ha, a higher grain yield and economic efficiency were achieved than autumn soft varieties.

One of the main indicators of the yield of soft winter wheat varieties is the number of grains in the ear and its mass. The number of grains in an ear of wheat depends on the plant's moisture supply, mineral nutrition, light, temperature, planting dates and standards, biological characteristics of the variety. The lack of moisture or nutrients during the period of winter wheat budding-budding or ear formation reduces the number of grains in the ear. This indicator is also significantly affected by the planting period and standards [1.2].

M.R. According to the research of Reynolds et al., the number of grains per ear depends on the biology of the plant, the length of the ear and the number of grains per ear increase significantly in high agrobackground. Selection based on the number of grains per ear was effective. There is a positive correlation between this indicator and productivity [3].

In our experiments, the effect of sowing period, rates and fertilization on the yield structure of soft winter wheat varieties (the length of ears, the weight of one ear and 1000 grains, the number of grains in an ear) was studied. In the experiment, the length of the ear of the new autumn wheat, the number of grains in the ear, the weight of one ear and 1000 grains, the time of sowing, the rates and the method of fertilizing change.

According to the analysis of the data, the planting rate of autumn soft wheat varieties is 4.0 mln. units/ha in the early periods (October 1), and in the control plots without fertilizers, the spike length of Krasnodarskaya-99 was 9.5 cm, the mass of one spike was 1.49 g, the number of grains in the spike was 52.8, and the mass of 1000 grains was 35. 1 gram, these indicators are 10.3 cm, 1.58 g, 54.5 pieces and 35.7 g in the Yaksart variety, 10.5 cm, 1.65 g, 54.7 pieces in the Bunyodkor variety. and 36.2 g., and in the Gozgon variety, it was noted that it was equal to 10.6 cm, 1.67 g., 54.8 pieces and 36.4 grams.

Autumn soft wheat varieties in the early term (October 1) 5.0 mln. spike length, mass of one spike, number of grains in spike and mass of 1000 grains, seeds 4.0 mln. 0.5 cm, 0.02 g., 0.9 pcs. and 0.3 g. for Yaksart variety 0.1 cm., 0.01 g., 0.3 pcs. and 0.3 g. 0.2 cm, 0.02 g., 0.1 grain and 0.3 g., and in the Gozgon variety, it was found to be higher by 0.1 cm, 0.01 g., 0.1 grain and 0.2 gram. In this planting period, the length of the ear of the autumn soft wheat varieties (Krasnodarskaya-99, Yaksart, Bunyodkor and Gozgon) in the fields where the seeds were sown at the rate of 6.0 million units/ha, the grain mass in one ear, the number of grains in the ear and the mass of seeds in 1000 grains are 4.0 especially 5.0 mln. It was found that it was somewhat lower than the parameters of winter wheat varieties planted in terms of units/ha.

showed the best results in the formation of grains in the wheat varieties on the cuttings fed at the rate of N $_{180}$ P $_{108}$ K $_{54}$ kg/ha during the growing season , the seeds were 5.0 mln. In the varieties planted at the rate of grains/ha, in the Krasnodarskaya-99 variety, the spike length was 11.0 cm, the grain weight in one spike was 2.15 g, the number of grains in the spike was 69.8, and the mass of 1000 grains was 37.6 grams, while these indicators were in the Yaksart variety respectively 11.2 cm, 2.25 g, 70.7 pieces and 37.3 g., Bunyodkor variety 11.3 cm, 2.35 g., 71.6 pieces and 38.3 g., and Gozgon variety , 11.4 cm, 2.38 g., 72.8 pieces and 38.5 grams. Against the background of the specified fertilizers, it was noted that the elements of the crop structure were reduced in the options planted at the rate of 4.0 and 6.0 million pieces/ha of winter wheat varieties.

where the rate of mineral fertilizers was increased (N $_{210}$ R $_{147}$ K $_{105}$ kg/ha) and the seeds were planted at the rate of 4.0 million pieces per hectare, the length of the ear of the Krasnodarskaya-99 variety is 11.1 cm, the number of grains in the ear is 69.4 pieces , the masses of one ear and 1000 grains were equal to 2.15 and 38.6 grams, these indicators were 11.4 cm, 71.2 pieces, 2.23 and 38.7 g in the Yaksart variety, 11.6 cm in the Bunyodkor variety , 71.6 pieces, 2.34 and 38.7 g, and 11.7 cm, 73.1 pieces, 2.37 and 39.4 grams were noted in the Gozgon variety.

So, autumn soft wheat varieties in the early period (October 1) 4.0 mln. It was determined based on the results of the research that planting at the rate of seeds per ha and feeding the plant with N $_{180}$ P $_{108}$ K $_{54}$ kg/ha during the growing season had a positive effect on the formation of its grains and created opportunities for high grain yield.

where the autumn soft wheat varieties were planted at the optimal time (October 20) and at the rates (5.0 million seeds/ha) and were fed with mineral fertilizers at the rate of N $_{210}$ R $_{147}$ K $_{105}$ kg/ha was 11.9- 12.4 cm, the number of grains in the spike is 72.7-73.8, the mass of one spike and 1000 grains is 2.38-2.43 and 42.3-43.0 grams, these indicators are Krasnodarskaya of autumn soft wheat -99 and Yaksart varieties were observed to be less by 0.6-0.2 cm., 1.9-1.8 grains, 0.19-0.16 and 0.6-2.0 grams in accordance with the indicators of crop elements. Bunyodkor and Gozgon varieties of this autumn soft wheat are 5.0 million per hectare in optimal periods. It was found that the best favorable conditions for the formation of crop elements are created and a high grain yield is ensured when the grain is planted at the rate of germinating seeds and fed with fertilizers N $_{210}$ R $_{147}$ K $_{105}$ kg/ha.

In our experiments, the seeds of winter wheat varieties are 6.0 million per hectare. At the rate of 1 grain of seed, the formation of yield elements was the highest in wheat varieties planted in the late periods (November 10) and fed with mineral fertilizers (N $_{210}$ R $_{147}$ K $_{105}$ kg/ha), and these indicators were the spike length of 11.5 cm in the Krasnodarskaya-99 variety. the number of grains in an ear is 68.4 pieces, the mass of one ear and 1000 grains is 2.12 and 37.2 g., 12.1 cm in the Yaksart variety, 69.7 pieces, 2.19 and 38.1 g., in the Bunyodkor variety 12 ,7 cm, 71.0 pieces, 2.27 and 39.1 g., and in the Gozgon variety, these indicators were 12.4 cm, 72.3 pieces, 2.33 and 40.3 grams.

Currently, high grain yield is achieved by using the internal capabilities of the autumn soft wheat varieties grown in our republic and on the basis of the application of intensive agro-techniques. However, insufficient attention has been paid to the agrotechnics of cultivation of intensive varieties of winter soft wheat, including the development of planting periods, norms and fertilizing procedures in accordance with the biological characteristics of each created variety, especially in the conditions of the desert regions of Kashkadarya region with arid climate. In the Strategy of Actions for the Development of the Republic of Uzbekistan for 2017-2021 3.3, it was emphasized that special attention should be paid to " introduction of intensive methods, first of all, modern agro-technologies in the field of agricultural production, especially to further strengthening of the country's food security ". In this regard, taking into account the high demand for soft winter wheat grains in the world, scientific research on improving the agrotechnics of winter wheat varieties recommended for cultivation on irrigated lands, suitable for each soil and climate conditions, is of great importance.

So, when autumn soft wheat varieties are sown late (November 10), for the formation of high-yielding elements in them, 6.0 million seeds per hectare are required. it was noted that sowing at the rate of germinating seeds and feeding the plants with N $_{210}$ R $_{147}$ K $_{105}$ kg/ha creates favorable conditions for growing high quality grain crops.

In conclusion, in the conditions of irrigated pale gray soils of Kashkadarya region, autumn soft wheat varieties in early periods (October 1) yield 4.0 million per hectare. When a grain is planted at the rate of seed and fed with N $_{180}$ P $_{108}$ K $_{54}$ kg/ha, the length of the spike is 10.2-11.2 cm, the number of grains in the spike is 69.6-72.6, the mass of

one spike and 1000 grains is 2.13- 2.36 and 37.1-37.8 grams, when the seeds are sown late (November 10) at the rate of 6.0 million pieces/ha and fed with mineral fertilizers (N_{210} R_{147} K_{105} kg/ha), the most in terms of crop structure good indicators are observed in Yaksart Bunyodkor and Gozgon varieties, the length of the ear is 12.1-12.4 cm, the number of grains in the ear; 69.7-72.3 one ear and the mass of 1000 grains was 2.19-2.33 and 38.1-40.3 grams, while Bunyodkor and Gozgon varieties of winter wheat (5.0 million seeds/ha) when planted at the rate and time (October 20) and fed with N_{210} R_{147} K_{105} kg/ha during the period of operation, the highest indicators of the formation of crop elements were observed, the length of the spike was 1.7-1.2 cm compared to that of the varieties planted in the early period, in the spike the number of grains is 3.1-1.2 grains, the mass of one spike and 1000 grains is 0.25-0.07 and 5.2-5.3 grams, compared to those planted in the late period (November 10), the length of the spike, the number of grains in the spike and it was noted that the mass of one spike and 1000 grains is significantly higher, and under these conditions, it is possible to grow the highest quality grain crop.

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