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TOPIC: EFFECT OF SUPPLEMENTARY FEEDING WITH MINERAL FERTILIZERS AND MICRONUTRIENTS ON LEAVES AND STEMS ON THE PRODUCTIVITY OF JASMINA WHEAT GENUS

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Abstract:

Feeding with organic and mineral fertilizers, as well as supplemental feeding through leaves and stalks, has a positive effect on the indicators of autumn wheat yield elements, including spike length, number of grains per spike and mass of 1000 grains. is one of the main technological factors that ensure the cultivation of high and quality crops. Autumn wheat is one of the leading grain crops in the country.

Keywords: Wheat, mineral fertilizers, high-quality grain, micronutrients, selection, productivity elements.

INTRODUCTION.

In recent years, the grain sector, which is one of the main sectors of agriculture in the country, is developing rapidly. Our selectioners have created a number of sorts of crops that are suitable for local conditions, productive and valuable traits, the organization of seed production, the development of effective technology to ensure high and quality yields, taking into account the biological characteristics of genera and certain conditions. The introduction of grain led to the achievement of grain independence in our country.

Studies show that the potential of new genera of autumn wheat created in recent years is high, and when sowing and care of high-yielding varieties of wheat on irrigated lands can be carried out by agricultural techniques, the yield can reach 70-80 quintals [3]. In addition, the improvement of technological elements used in the cultivation of crops will increase productivity and improve product quality. One such important measure is to feed the crop with optimal amounts of organic and mineral fertilizers [5].

At present, the optimal terms, norms and methods of feeding autumn wheat genera with organic and mineral fertilizers, recommended for different soil and climatic conditions of the republic, have been developed [6]. For example, high efficiency of phosphorus and potassium fertilizers in the form of powder or granules, mainly when applied to the soil in the fall, timely care of crops in the tubing and germination phases of high-quality grain yield data from the literature on cultivation support are given [9].

In recent years, the method of suspension feeding of plants with mineral fertilizers through additional leaves and stalks in the phases of accumulation, tube, spike is used in grain growing. According to the data, when fed in this way, the number of chlorophyll grains in the leaves of the plant increases, depending on the productivity of autumn wheat, ie the growth of wheat height, grain length, the number of grains per grain, as well as Shows its effect on 1000 grain weight. [3; 4].

It should be noted that the efficiency of any technology, elements used in the cultivation of the crop depends on the biological characteristics of the sorts and soil-climatic conditions. Therefore, the study of the impact of supplementary feeding with mineral fertilizers and micronutrients on the growth and development characteristics of cultivated and especially new autumn wheat genera is one of the current issues in the industry.

THE AIM OF THE STUDY

Consists of determining the effect of supplementary feeding of leaves and stalks with fertilizers enriched with macronutrients and new micronutrients on the growth, development, productivity and seed yield of autumn wheat new Jasmina genus

OBJECT OF RESEARCH:

New Jasmine genus included in the State Register of autumn soft wheat.

MATERIALS AND METHODOLOGY:

Our research was conducted at the scientific seed farm "Farboma sellect" in Jambay district of Samarkand region. Field soils are irrigated meadow gray soils. In the experiment, the grain was used as a basic nutrient for plants

$N_{120}P_{90}K_{60}$, $N_{180}P_{90}K_{90}$ kg / ha of mineral fertilizers and fresh as a feed through the stems, leaves, enriched with micronutrients and macronutrients Nutri Power, Micromix, Rootwinner, Seaweed, and N20: P20: K20 kg / kg of micronutrients were studied for variants applied at a rate of 1000-3000 mg \ ha.

According to the experimental structure, the options were arranged in such a way that the size of the area, taking into account the two reversible, one pellet, was 50 m2. Phosphorus and potassium fertilizers of all variants were fully distributed before plowing, the annual norm of nitrogen fertilizers was divided into two in the early spring accumulation phase and at the beginning of the tubing phase.

Results and their analysis: The results of the study showed that in the control variant, the height of the new Jasmina variety of autumn wheat averaged 61.4 cm, the spike length 8.3 cm, single the average number of grains per spike was 34.2 grains, and the weight of 1000 grains was 36 g. When organic and mineral fertilizers, as well as micronutrients are fed through additional leaves and stems, the above values were observed to increase accordingly. In the variant of mineral fertilizers applied in the norm N120: P90: K60, these figures increased and averaged 67.1 cm, 8.8 cm, 40.8 pieces and 39 grams, respectively. It should be noted that the increase in the rate of nitrogen fertilizers to 180 kg per unit area due to the active substance, in addition to the increase in plant biometric indicators, including the average height of 69.9 cm , also led to an increase in productivity elements. For example, in this genus, the average length of each grain is 9.3 cm, while the number of grains formed in each grain is 53.4, and the mass of 1000 grains is 41 grams on average. indicators were obtained.

In our studies, in addition to the effect of mineral fertilizer standards on plant productivity, the effectiveness of supplemental feeding in the form of a suspension through the leaves and stems of plants with macro- and micronutrients was also studied.

Field experiments showed that in the variant of mineral fertilizers $N_{120}P_{90}K_{60}$ as the main nutrient, the height of plants was slightly increased compared to the control variant (67.1 cm). according to the options, this figure was 67.3-68.4 cm. The length of spikes formed in plants was 8.6-9.2 cm in the micronutrient-supplemented variants, while in the control variant, spikes averaged 8.1 cm in length per plant. It should be noted that according to this indicator, only the Seaweed micronutrient-fed variant plants were inferior to the $N_{180}P_{90}K_{90}$ norm-fed variant plants, with an average of 8.6 seedlings. in plants fed Nutri Power, Micromix, and Rootwinner, spikes of 9.0–9.2 cm were formed. Analogous results were obtained in the variant of plants fed at $N_{180}P_{90}K_{90}$ (Table-1).

Table-1

Effect of supplementary feeding with mineral fertilizers and micronutrients on leaves and stems on the productivity of wheat genus Jasmina.

Variants	Indicators			
	Stem height	Spike length	The number of grains per spike	Weight of 1000 grains
Control (without fertilizer)	61,4	8,3	34,2	36
$N_{120}P_{90}K_{60}$	67,1	8,8	40,8	39
$N_{120}P_{90}K_{60}$ Nutri Power	68,2	9,1	44,3	39
$N_{120}P_{90}K_{60}$ Micromix	67,4	9,0	42,8	40
$N_{120}P_{90}K_{60}$ Rootwinner	68,4	9,2	45,1	41
$N_{120}P_{90}K_{60}$ Seaweed	67,3	8,6	46,2	38
$N_{120}P_{90}K_{60}$ $N_{20}P_{20}K_{20}$	70,1	9,5	52,4	41
$N_{180}P_{90}K_{90}$	69,9	9,3	53,4	41
$N_{180}P_{90}K_{90}$ Nutri Power	74,0	9,7	56,4	42
$N_{180}P_{90}K_{90}$ Micromix	74,8	9,7	52,2	44
$N_{180}P_{90}K_{90}$ Rootwinner	78,5	9,8	54,1	42
$N_{180}P_{90}K_{90}$ Seaweed	76,8	9,8	51,4	41
$N_{180}P_{90}K_{90}$ $N_{20}P_{20}K_{20}$	79,1	9,9	59,8	46

It should be noted that both the number of grains per spike formed in the plants and the indicators of 1000 grain weight were applied to both norms of mineral fertilizers in relation to the control option, and in addition to the plants. macro- and micronutrient preparations were found to be high in the variants used. The highest rate was obtained from the variant where the plants were fed with fertilizers at the rate of $N_{180}P_{90}K_{90}$ and additionally fed with a suspension of mineral fertilizers at the rate of $N_{20}P_{20}K_{20}$. In other words, in this variant, plants with an average length of 79.1 cm are formed, each plant produces spikes with an average length of 9.9 cm, with an average of 59.8 spikes per spike, 1000 it was found that a grain weighing 46 grams was formed. In the control version, these values were 61.4 cm, 8.3 cm, 34.2 pieces and 36 grams, respectively.

The effectiveness of the drugs used for supplemental feeding of autumn wheat plants through the leaves and stems is positive in the variants of mineral fertilizers of both norms, among which the productivity of plants The rates were higher in the variant in which the drug Rotwinner was used.

CONCLUSION.

In the conditions of irrigated lands of Samarkand region, mineral fertilizers in the amount of $N_{180}P_{90}K_{90}$ per hectare, as well as in the amount of $N_{20}P_{20}K_{20}$ per hectare, as the main nutrient for autumn wheat Jasmina supplemental feeding through the leaves and stems of plants during the growing season with a suspension of mineral fertilizers ensures the formation of high-yielding elements.

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