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EFFECT OF TUMAT BIOSTIMULATOR ON AUTUMN GRAIN WHEAT YIELD AND ITS QUALITY

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ABSTRACT

According to the results of the study, 100 ml of winter wheat before sowing with the stimulator "Tumat" navigate Asr. It was observed that the germination rate increased by 10.4-10.6% per 1 ton of seeds during the processing stages of the plant. In the developmental phases, it increased the cold tolerance of crops in the cultivated area, accelerated plant metabolism, and resulted in plant growth and development at 57 quintals of grain per hectare, with an average yield of 2.6 quintals per hectare more than the control option.

KEYWORDS: *Tomato, Winter Wheat, Accumulation Tube, Growth And Development, Harvest*

INTRODUCTION

In order to increase the yield of grain in the country in recent years, it is recommended to treat it with various organic and biological additives. Great attention is paid to the use of substances that affect the growth and development of plants in the cultivation of abundant and high-quality products from agricultural crops.

These indicators are physiologically active substances, metabolic processes in plant ontogeny, in particular photosynthesis, respiration, enzyme activity, biosynthesis of amino acids, nucleic acids, proteins and phytohormones, metabolism, accumulation and distribution of nutrients, crop growth and development, formation of crop organs, are factors that can have a major positive impact on productivity and product quality.It is known that in order to accelerate the assimilation of phosphorus and potassium mineral fertilizers applied to crops by planting, nutrient suspension through the leaves accelerates the development of the plant root system and assimilation of nutrients due to expansion and thickening of the leaf surface.

Results of the investigation. Taking into account the above, the professors of the Andijan Institute of Agriculture and Agrotechnology on a trial basis conducted a new biostimulator "TUMAT", which allows to increase the resistance of winter wheat to diseases and insects, grain quality and high yields. The experiment was conducted in 2019-2020 on the allocated field experimental field of the farm "Sardor mirishkor" Andijan district in the variety of winter soft wheat "Asr".

The experiment was conducted in 4 variants, 4 repetitions.

1- variant control

2- variant 200 ml of Baikal stimulator is applied to 1 ton of seed wheat before sowing. was treated by mixing at the rate of 30 liters of working solution.

3-variant the stimulator “Tumat I” is applied to the plant during the vegetation and accumulation phases of the vegetation period at the rate of 1 l per hectare. processed.

4-variant the Tumat II stimulator is 200 ml per ton of seed grain. 1 l per hectare in the accumulation and tubing phases of the plant, treated in moderation. treated with a rod sprayer at the expense of.

In the comparison (standard) variant with Baikal biostimulator 200 ml per hectare. The seeds were processed into grain as well as during harvesting and threshing.

According to the analysis of the results of the observation of the 2019 experiment, in the control variant of germination and accumulation phases, 75% germination occurred on October 15, 75% accumulation phase on November 20. In the experimental variants, 75% germination occurred on October 20-25, in 3-4 variants, the accumulation phase occurred on November 10-15. The difference in control was 5-6 days.

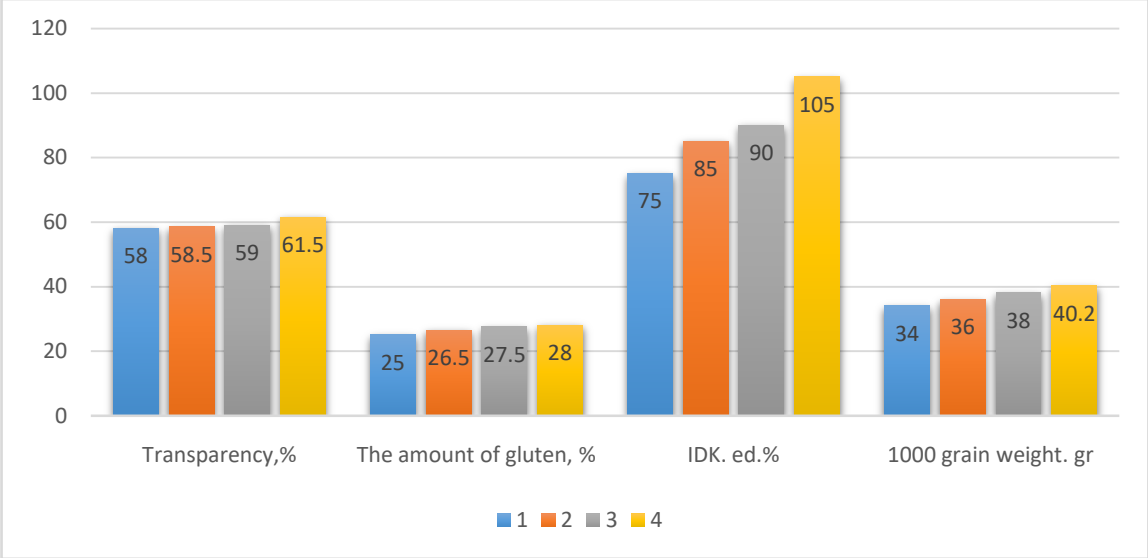
Thus, when pre-sowing winter wheat was treated with Tumat I stimulator, the germination rate increased by 10.4-10.6%. During the developmental phases, it increased the frost resistance of the crops in the cultivated area, accelerated the metabolism in the plant, and created favorable conditions for the growth and development of the plant. In the experiment, the height of the winter wheat stalk was 22.8-23.6 cm in the control (unprocessed) and standard Baikal variants on

April 3, 2020, and 24.5-27 cm in the experiment with Tumat I. The next variant “Tumat II” is 28.2 cm when applied to the plant during sowing and harvesting before sowing, and in these variants it is 1.7–5.4 cm compared to control. was high.

When analyzing the length of the spike, the control variant was 7.6 cm, and the experimental Tumat I seed was 8.2 cm. The seed and vegetation period of “Tumat II” in the processed variant is 8.6 cm. was observed to be 0.6–1.0 cm longer than the control variant.

According to the results of the experiment, the following data were obtained when studying the effect of the biostimulator "Tumat" on grain yield.

Based on the results of the experiment, the following conclusions can be drawn to the production: In the conditions of light gray soils of Andijan region, before sowing of winter wheat with germinating seeds "Tumat I" at a rate of 1 l / ha, germination of seedlings 10.4-10.6 It was found in the experiment that the number of healthy seedlings from the winter increased by 61.2-67.1, with an increase in the level of resistance of grasses to external environmental conditions and diseases.



Grain quality indicators on the variants of the experimental variety "Asr".

CONCLUSION

When the grain of winter wheat is inoculated with the stimulator "Tumat I" and processed in the phases of harvesting, tubing, the good development of the root system, plant growth and development is accelerated, the height of the stem is 1.7-5.4 cm and the length of the spike is 0.6-1. It was observed that it was higher than 0 cm.

Before sowing of winter wheat with the stimulator «Tumat II» 100 ml. For 1 ton of seeds, 57 quintals of grain per hectare was harvested during the harvesting stages of the plant, and an average of 2.6 quintals of additional grain per hectare was achieved compared to the control option.

Grain quality indicators revealed that grain transparency increased by 3.5%, gluten content by 3%, transparency in Baikal by 0.5%, gluten content by 1.5%, IDK in Baikal by 10% compared to control.

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