

## EFFECTIVENESS OF PRE-SOWING TREATMENT OF SPRING WHEAT SEEDS WITH BIOLOGICAL PREPARATIONS.

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<p><b>Received:</b> 14<sup>th</sup> December 2023  <b>Accepted:</b> 10<sup>th</sup> January 2024  <b>Published:</b> 20<sup>th</sup> February 2024</p>	<p>This article examines the effectiveness of the stimulants Fitobiosol and Fulvohumate on the germination of winter wheat seeds in laboratory conditions. At the same time, the results of the study proved that treatment with the stimulant Fulvogumat 0.5 l/t increases laboratory germination by 9%, and treatment with the stimulator Fitobiosol 2 l/t increases laboratory germination by 6%.</p>
<p><b>Keywords:</b> Winter wheat, variety, stimulants, rate, seeds, germination, percentage, efficiency</p>	

Stimulants are one of the environmentally friendly and low-risk fertilizers in wheat production. Their use increases the yield, the quality of seeds, reduces the cost of cultivation, allows to get ecologically clean products.

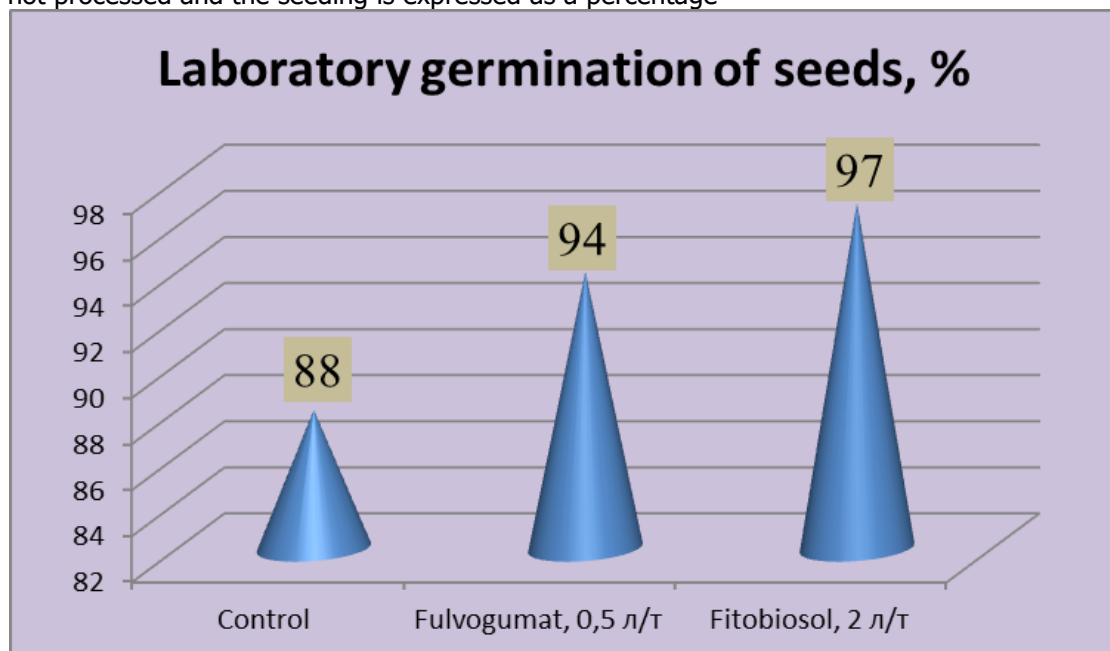
A key factor in achieving a high and high-quality yield is the timely collection of quality seeds and timely care. The seed germination time depends on the effectiveness of the preparations used in seed processing.

To get a good harvest, it is important to protect plants from environmental hazards. Changes in temperature, seasonal droughts, sudden cold and heat affect crops and reduce yields. In order to reduce exposure, it is important to use special drugs or plant growth stimulants.

Pre-seeding is one of the easiest ways to improve seed quality and yield. In spite of various methods of pre-seeded seed treatment, these methods of seeding became widespread all over the world (Talanov I.P., 2002, Abdualimov S.H., 2015). Crop yield depends on the quality of the seed and its preparation for planting (Yemelyanova N.A., Bezgina Yu.A., Maznitsyna L.V., 2008). Pre-seeded seed treatment with various stimulants is one of the most important plant protection measures (Abelentsev V.I., 2011, Jablonskaya E.K., 2015).

The higher the laboratory germination and the strength of crop growth, the higher the field germination of seeds. It should not be forgotten that the germination depends on the quality of the seeds and the active ingredient of the drug pre-seeded seed treatment and consumption rate (Grishechkina L.D., Dovzhenko V.I., 2012).

Taking into account the above, in the Phytotron and Plant Physiology Laboratory of the Southern Research Institute of Agriculture Kashkadarya region, the winter wheat seeds of the Hisorak variety were treated with preparations Fitobiosol (2.0 l/t) and Fulogumat (0.5 l/t), according to GOST 12038-t84 placing 100 seeds in each petri dish and growing seeds on moistened filter paper in a thermostat at a temperature of 21<sup>o</sup>C. In the control variant, the seeds were not processed and the seeding is expressed as a percentage



**Fig 1.** The influence of various stimulants on the germination of the Hisorak variety of winter wheat seeds.

Under laboratory conditions, the study of germination of winter wheat seeds in stimulant-treated variants and without treatment. The seed germination in the untreated version is 88%, 94% when treated with Fitobiosol 2.0 l/t stimulant and 97% when treated with Fulogumat 0.5 l/t. With the use of stimulants, it has been established that the treatment of seeds with the stimulant Fulogumat 0.5 l/t increases the germination rate by 9%, and the treatment with the stimulant Fitobiosol 2 l/t increases the germination rate by 6%.

In conclusion, preseed treatment of crop seeds with stimulants indicates higher field growth, depending on the efficacy of their effects and laboratory germination, resulting in higher yields.

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