

Laboratory Determination of Seed Germination of Soybean Samples

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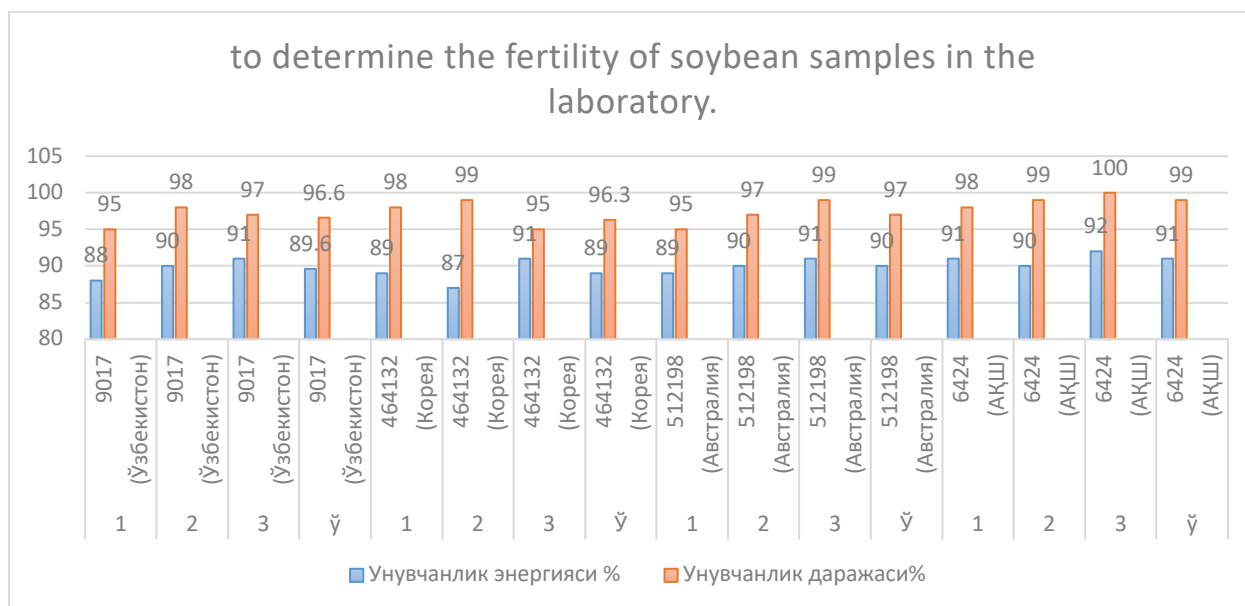
Abstract: The article Information about the ability of soybean samples to germinate in laboratory conditions, the energy of germination of seeds in 3 days and the degree of germination in 7 days.

Keywords: seed, physiological, legumes, assimilation, dissimilation, seed energy, fertility.

Introduction. One of the main factors in obtaining a high-quality harvest is timely and high-quality collection of soybean seedlings and timely maintenance. In order to collect the seeds on time, it is necessary to determine the laboratory fertility of the seeds used for planting, to fully comply with the requirements of the state standard. Also, currently there is not enough information about the abiotic components of soybean seeds and the effect of soybean husk on rooting. Field germination of seeds is a complex indicator that depends not only on the quality of sowing seeds, but also on ecological, agrotechnical and other factors. Fertilization of seeds is one of the most important characteristics that determine their suitability for sowing. Fertilization of seeds is an important indicator of the crop, which has a significant effect on seedling thickness, lateral development of plants, and other characteristics. Germination of seeds under laboratory conditions is always higher than under field conditions. One of the main reasons for this is that optimal conditions (heat, humidity and air) are created for the germination of seeds in laboratory conditions. In field conditions, various factors influence seed germination. Nevertheless, the germination of seeds determined in laboratory conditions is a good enough representation of their suitability for planting.

Soil temperature is one of the most important factors in soybean cultivation. if the soil is not well heated, the seed may rot or fungal diseases may appear. Fertility also decreases, lawns become thinner, and weeds increase [1]. Many scientists have stated that the growth and development of soybean mainly depends on the soil temperature, water potential, as well as the mechanical composition of the soil that forms the crop area or the fertile layer of the soil [2.3]. Fertilization of seeds is one of the most important characteristics that determine their suitability for sowing. Fertilization of seeds is an important indicator of the crop that has a significant effect on seedling thickness, lateral development of plants, and other characteristics. Germination of seeds under laboratory conditions is always higher than under field conditions. One of the main reasons for this is that optimal conditions (heat, moisture and air) are created for the germination of seeds in laboratory conditions. In field conditions, various factors influence seed germination. Nevertheless, the germination of seeds determined in laboratory conditions is a good enough representation of their suitability for planting. One of the main factors in obtaining a high-quality harvest is timely and high-quality collection of soybean seedlings and timely care. In order to collect the seeds on time, it is necessary to determine the laboratory fertility of the seeds used for planting, to fully comply with the requirements of the state standard. The laboratory fertility of soybean seeds is classified into 3 classes. In this case, the laboratory fertility of I, II and III -

class seeds should be 90, 85, 80%. Only seeds of class I and II are recommended for planting. It has been emphasized in many literatures that the higher the growth energy, laboratory fertility, and growth power of seeds, the higher the field fertility of seeds. Fertilization determination of soybean seeds according to Gost 12038-84 in 3 repetitions of 100 seeds at a temperature of 25° C. Germination energy in 3 days and germination rate in 7 days were determined in percent according to the demand of the grain.



Every year, before planting, the laboratory germination of soybean samples from foreign variety samples (9017 Uzbekistan, 464132 Korea, 512198 (Australia, 6424 USA)) was studied. According to the laboratory results, the germination energy of the seeds of the soybean variety sample 6424 (USA) 512198 (Australia) is high, It was found that the germination energy of "9017 (Uzbekistan) 464132 (Korea)" varieties was in accordance with the varieties. 4%, it was found that the laboratory seed germination of soybean variety samples was high in all varieties, 99.% in the imported variety "6424 (USA)" and 96.3% in the variety "464132 (Korea)" and "9017 (Uzbekistan)" it was noted that it was 96.6% in the sample and 97.0% in the sample "512198 (Australia)".

CONCLUSION

Based on the data, it can be concluded that the seeds of soybean samples have positive germination energy in laboratory conditions, and the increase in their level of germination lays the groundwork for ensuring a high weight of the seedlings that sprout from them.

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