Adaptability varieties of seed peas in the Krasnoyarsk forest-steppe

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In the process of breeding work with the Pisum sativum culture, its manufacturability increases due to the introduction of new economically valuable features, as a result of the influence of abiotic factors on pea varieties is transformed. The work is relevant in timely identification of changes in influences and analysis of these transformations on the reconstructed genotype are important in breeding evolution. Investigations were conducted in the Krasnoyarsk forest-steppe according to the method of state variety testing in 2017 – 2019. The material for the study was 12 samples of five varieties of Pisum sativum.
According to the results of our research for 2017 - 2019, between the index of resistance and stability of varieties and the evolution of culture in the conditions of the forest-steppe of Eastern Siberia, a strong negative relationship was revealed ($r = -0.800 \pm 0.354$).

Strong negative dependences ($r = -0.914 \pm 0.234$) and ($r = -0.883 \pm 0.271$) were found between the evolution of culture and the stability index, as well as breeding value. Var. vulgare had a higher stability index (17.48), the smallest - in Var. cirriferum (4.90) (Figure 1).

The adaptability and stability indices of the samples – Indicator of the stability level of the variety, stability index, stress tolerance, breeding value, and the dependence of the adaptive properties of the culture on the complexity of its genotype were determined.
The stress tolerance of the varieties was chaotic; its relationship with the evolution of the genotype is very weak. A strong positive relationship was revealed between the complication of the genotype and the coefficient of variation; a strong negative relationship was revealed between the resistance and stability index of the varieties. Strong negative dependencies were revealed between the evolution of culture and the stability index, as well as breeding value.

Thus, on the basis of the conducted studies, it can be concluded that with the process of evolution and complication of the culture genotype, the adaptive abilities of the culture which expressed in terms of the stability and breeding value of the samples, stability index, breeding value is weakened, and the range of variation in yield increase. For a more objective analysis of the conclusions it is necessary to conduct similar studies on large numbers of varieties and varieties of samples, more years, as well as in different soil and climatic conditions.