

## **Tetraploid Maize - A New Model For Research In The Field Of Ecological Genetics**

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### **ABSTRACT**

The increase in the frequency of dry vegetation seasons in Moldova in recent decades determines the need to expand the range of research work on agroecology, in particular, in the field of ecological genetics. Specificity of understanding ecological genetics involves studying the genetic basis of variability and inheritance of adaptive plant reactions occurring at different levels of biological organization. In the present work it was suggested to use genomic (by tetraploid chromosome set) and gene (by the *opaque-2* gene) mutations of maize as a contrast material for studying the adaptive response to various types of modeled drought. The results of the response of genomic mutants of maize in the process of ontogenetic development to various types of simulated drought are discussed: soil, air, and complex. The comparative study of the complex of physiological and biochemical parameters, such as the germination capacity, the content of photosynthetic pigments, the water-retaining capacity of the leaf apparatus, the leaf thickness stability coefficient, etc., allow us to identify specific features manifested by changing the genomic set of different maize genotypes, that in perspective expands the variation of germplasm for the selection of maize for drought resistance.

**Key words:** Tetraploid Maize, Adaptive Response, Modeled Drought.