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## **The ratio of yield and content of nucleic acids in heterotic hybrids of wheat (*t. Durum* desf.)**

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An analysis of the existing data on heterosis gives reason to believe that its manifestation is largely associated with the regulatory mechanisms of the genetic apparatus. Taking this into account, the aim of our research was to study the quantitative changes in the content of nucleic acids during heterosis. The hybrids studied by us, obtained from crossing representatives of durum wheat, belonging to different species diversity, are characterized by a significant heterotic effect. As an indicator of heterosis, the mass of grain from one ear was taken. According to this indicator, hybrids were very different from their parents. As the results of the study showed, the relative content of nucleic acids (mg%) hybrids did not differ from their parents. The recalculation of the obtained data per cell made it possible to establish a clear picture of an increase in the absolute content (pg) of nucleic acids in hybrids. So, in the hybrid Sevinch, var. *hordeiforme* x var. *leucurum*, k-70306, the content of DNA per cell was 9.66 pg, while in parents it was 7.64 and 6.64 pg, respectively. This hybrid also differed from its parents in terms of content of RNA in the cell: in the leaf cell of the hybrid, there were 26.6 pg of RNA, in the parents, 23.3 and 23.0 pg, respectively. Approximately the same picture was observed in the hybrid var. *hordeiforme*, k-291025 x Sevinch, var. *hordeiforme*. The observed increase in the amount of RNA is associated precisely with an increase in the content of DNA in the cell, that is, with the activation of DNA replication processes in the hybrid organism.

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