

## **SUNFLOWER GENOTYPES WITH HIGH TOLERANCE TO DROUGHT AND EXTREME TEMPERATURES, HAVING GOOD RESISTANCE TO SOME SPECIFIC DISEASES**

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### **Abstract**

Sunflower is considered to be moderately resistant to drought, but in hot conditions, the plants suffer reduction in fertility, yield performance and quality of products. In literature there are mentioned some adoptive mechanisms of plants to drought: escape, avoidance and tolerance, as well as their genetic variability. For sunflower it is very important to increase the cold resistance in early development stages, at stage of germination, emergence and the stage of 2-3 leaves, in order to facilitate an early sowing. Wild *Helianthus* species are a very valuable source of resistance in increasing drought resistance as well as resistance to low temperatures in sunflower. Some of our best elite lines have been introduced in a process of improvement of resistance to drought, using recurrent selection. Also it has been transferred some genes for controlling the attack of some important pathogenes. In this process of selection, we obtained inbred lines (CMS and pollen fertility restorer lines) having very good tolerance to drought as well as resistance to low temperatures.

**Key words:** sunflower, wild species; drought resistance, cold resistance