

**STUDY THE RESPONSE OF DIFFERENT INTERSPECIFIC SUNFLOWER  
FORMS TO PEG-MEDIATED WATER STRESS**

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**ABSTRACT**

Response of five sunflower genotypes with different origin to drought stress at germination and seedling stage was investigated using polyethylene glycol (PEG 6000) as drought simulator under laboratory conditions. Normal treatment and two levels of osmotic stress were monitored. Germination percentage, root length, shoot length, root to shoot length ratio, and depression were determined for the studied genotypes, represented by three replications to evaluate the response of sunflower variety, cultivated hybrid, two interspecific hybrids and an accession of *H. argophyllus* under normal and simulated drought stress treatments. Plant height for all studied hybrids decreased with increasing water stress. Studied interspecific hybrids showed similar responses at osmotic potentials of both -0.6 MPa and -1.62 MPa. They performed better and were classified as drought tolerant. The cultivated sunflower hybrid Baikal showed medium tolerance and variety Favorit – sensitive one. The variation among studied genotypes was found to be a reliable indicator to screen the drought tolerant ones at primary growth stage.

**Key words:** Interspecific hybrids, osmotic stress, PEG 6000