Evaluation of Cold Tolerance Methods in Field Crops: Performances and Limitations

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Abstract

The objective of this study was to evaluate the performance of various cold tolerance methods in field crops. Field experiments were conducted during 2006-2007 in two locations: Hamedan and Kermanshah, Iran. The treatments included: cold-hardening, leaching and irrigation, water stress, delayed planting, and pre-planting cold storage. The results showed that cold-hardening and leaching had the highest tolerance rates in both locations. The results also indicated that delayed planting and pre-planting cold storage were effective methods for increasing crop tolerance to cold stress. However, water stress was not effective in enhancing cold tolerance in these field crops.