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**Heterotic Effects Regarding Salt Tolerance in Some Characters of Barley  
(Hordeum vulgare L.)**

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**Abstract:** The salt tolerance of some barley genotypes and their cross populations were evaluated at seedling stage in a greenhouse, and at the generative stage in a saline field in line x tester analysis. Promising crosses were determined through comparison of heterotic effects. Tokak-157/37 x LIGNEE-640, Quantum x MENTA "S" and Kaya-7794 x MENTA "S" were found to be superior cross combinations with respect to salt tolerance in both greenhouse and field conditions. In the cross populations, the highest- positive heterosis values were 25.00% for seedling emergence, 26.53% for root length, 66.27% for shoot length to root length ratio, 9.39% for spike length, 26.69% for number of spiklets per spike, 50.11% for thousand grain weight and 33.12% for single spike yield. The highest positive heterobeltiosis were 50.98% for shoot length to root length ratio and 46.58% for thousand grain weight respectively.

**Key Words:** Barley, Hordeum vulgare L., Heterosis, Salt tolerance, Line x Tester

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