

Bilgili U, Carpici EB, Asik BB, Celik N (2011) Root and shoot response of common vetch (*Vicia sativa* L.), forage pea (*Pisum sativum* L.) and canola (*Brassica napus* L.) to salt stress during early seedling growth stages. Turkish Journal of Field Crops. 16:(1) 33-38.

Abstract

The objective of the present study was to identify the most salt-tolerant species among common vetch (*Vicia sativa* cv. Uludag), forage pea (*Pisum sativum* cv. Kirazli) and canola (*Brassica napus* cv. Bristol). To this end, the effects of salinity on the seedlings were determined, and four salt concentrations (0, 50, 100 and 150 mM NaCl) were evaluated. Seedlings were exposed to salinity stress for 45 days, and the seedling height, root length, shoot and root dry weight, leaf number per seedling, leaf area per seedling and Na, K and Ca content of the shoots and roots were determined. In addition, the K/Na and Ca/Na ratios were calculated. For all of the species, salt treatments significantly altered several characteristics of the shoots and roots. For instance, the Na content of the roots and shoots increased with an increase in the salt concentration, and the K and Ca content of the roots and shoots decreased. Furthermore, the results indicated that *Pisum sativum* cv. Kirazli was more resistant to salt stress than the other cultivars and can be cultivated on salty soils containing less than 100 mM NaCl.