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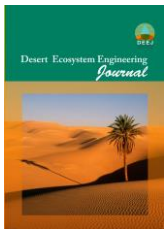

Theinvestugayion of some drought resistance parameters in *Calligonum polygonoides* in natural conditions

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Abstract

Drought is one of most important factors in desert ecosystems that affect plant growth. In this study some of drought parameters in *Calligonum polygonoides* were studied under control and irrigated conditions in natural condition. Results showed significant differences in water potential between control and irrigated conditions. Proline content in control with the amounts of 3.1 mg /gfw was significantly higher than irrigated conditions. The highest amount of soluble sugar also found in the controls. These results showed Irrigation significantly decreased water potential (more positive), proline and total soluble sugar in *Calligonum polygonoides*. The amounts of K+ were significantly higher than Na. There are not significant differences in relative water contentbetween stands and in average it was about 32 percent. It is concluded that this speciesadapted to its own habitat and by accumulationof proline, K+ and total soluble sugars regulatesits osmotic potential.

Keywords: *Calligonum*, Proline, Drought, Osmotic potential, Relative water content, Soluble sugars.

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