

## **Abstract**

Accumulation of anions and cations in soil solution prevents plant nutrients uptake. The main problem in saline soils related to soluble salts. Saline soils have the significant salts, therefore import the leaching this soils. This study was conducted to evaluate, using soil columns picked from Azizabad of Bam, the movement of solutes. Leaching experiments were conducted on columns of five texture soils (clay loam, loam, sandy clay loam, sandy loam, loam sandy). The soils were filled in columns to achieve uniform bulk density  $1.5 \text{ g cm}^{-3}$ . The columns were leached with approximately 5 pv. Effluents from each leaching were collected for chemical analysis. Leachate samples were analyzed for soluble cations ( $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Na}^{+}$  and  $\text{K}^{+}$ ). After completion of the leaching the soil columns were allowed to drain free, then split open and cut into 3 sections, each 10 cm. Soil samples at different column depths were analyzed for  $\text{Ec}$ ,  $\text{Na}^{+}$ ,  $\text{Ca}^{2+}$  and  $\text{Mg}^{+}$ . The results showed, most of the solutes were removed from the soils during the first pv, and used water in leaching experiments could reduce solutes concentration and in following saline soils, and this soils any need to correct matter. Generally the effect of coarse texture soil on the ion movement is more than in the case of fine textured soil. The solute arrival in effluent solution is ahead when soil texture is coarse. The amount of clay, play an important role for retaining and ions removal from soil. The difference between the amounts of irrigation water needed for salinity removal to the texture of soils. The most common of such reactions is cation exchange.

**Key words:** Leaching, Soil texture, Soil columns, Saline soils.



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**The thesis Submitted for the Degree of Master of Science  
In Irrigation & Drainage**

**Leaching quantity effect on saline soils  
quality through unsaturated soil  
columns in Azizabad of Bam**

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December 2011