Abstract

Livestock as one of the main components of rangeland ecosystems had always different effects on different parts of these ecosystems. Grazing as one of these effects with different intensities can have different effects on the soil and vegetation of rangelands. Livestock grazing directly and indirectly affects the structure and dynamics of rangelands vegetation. These effects can be evaluated through setting exclosures. So, the present study was conducted to evaluate the effect of grazing intensity on some soil properties of Mahonooieh rangelands, Baft county. To do so, three rangeland sites with different grazing intensities (severe, moderate, and low) were selected based on the research goal. In each site, soil samples were taken from 0-30 cm depth. Soil properties including pH, EC, soil texture, organic carbon content, absorbable phosphorus, organic matter, sodium adsorption ratio, absorbed potassium, soluble sodium, dissolved calcium and magnesium, calcium equivalent carbonate (CCE) and bulk density, sodium adsorption ratio Organic carbon were measured using standard methods. Finally, the data were analyzed using T-test and one-way ANOVA. The results of soil properties analysis showed that severe grazing increased potassium, sodium, electrical conductivity, material and bulk density of soil. But soil acidity was dropped. There was no significant change in phosphorus content. Rangeland exclosure has improved soil chemical properties. The results of this research have shown that rangeland exclosure improves the chemical properties of the rangeland soil of the studied area.

Keywords: grazing intensity, exclosure, soil physicochemical properties, Mahonooieh rangeland, Baft county.

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Title:
Effect of grazing intensity on some soil properties in the Mahonui rangelands of Baft City

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