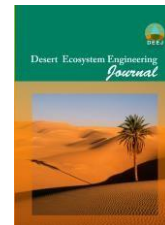




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Changes of Species Diversity and Functional groups in Relation to Grazing in Rangelands of Nodushan, Yazd province

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Abstract

Grazing of Livestock is one of the factors having influence on the structure and dynamics of the rangeland vegetation. Grazing management is a vital factor to control the intensity of the rangeland ecosystems degradation. In this study, plant functional traits and diversity and richness properties were used to assess the vegetation response to different grazing intensities. This was done in Nodushan Rangelands in Yazd province. Vegetation cover was recorded under three grazing intensities (heavy, moderate and light rates grazing). Results showed that the cover percentage of Compositeae and Papilionaceae, significantly showed a negative response to grazing intensity while Gramineae was not significantly affected by different grazing pressure. Some functional groups such as annuals, Geophytes, Chamaephytes, Shrubs and Forbs significantly reduced from light to heavy rates. On the other hands, Therophytes and hemicryptophytes were increased. The other findings of this study showed that decreaser plants significantly had less cover under heavy grazing whereas increaser plants had greater cover under heavy grazing. Also, diversity and richness had no significant response to grazing intensity. The results of this research showed that plant traits may change under grazing intensity. In conclusion, we recommend using these traits that show the highest response along the grazing as intensity gradient in the arid rangelands.

Keywords: Functional groups, Richness species, Heavy grazing, Nodushan, Yazd.

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