

Abstract

This study investigated the effect of different age classes of Saxaul on vegetation and soil characteristics in Shandon region – Sib-Soran city in Sistan and Baluchestan province. In the study area, according to Planting date and available vegetation maps, three age classes were chosen respectively below the age of 3 years, 3 to 6 years and above 6 years. In each age category three transects randomly were placed in order (100 meters long) and 10 plots with proportional size to the size of transects plants along were established. In each age class the list of species, canopy cover percentage density of plant species, amount of litter and bare soil were determined. Richness species was calculated by Margalef and Man Hing index and species diversity was calculated by Shannon-Weiner index, Simpson and Hill, using PAST software. To compare the effectiveness of different ages of plantation, a control area was chosen as witness along each age category, and all calculated parameters about the vegetation in these areas were measured. Soil sampling at depths 30-0 cm and 30- 60 cm between the spaces of the *Haloxylon* plants was done. After transferring the soil samples to the laboratory and drying and passing them through a 2mm-sieve and, then, physical and chemical factors of soil consist of soil texture, organic matter, acidity (pH), electrical conductivity, lime percent, phosphorus, nitrogen and potassium were measured by standard laboratory methods. Data analysis was performed while ensuring normality of data distribution and homogeneity of variances, by using SPSS software with a factorial experiment in a completely randomized design and the statistical/average comparison was performed by Duncan's method. The results showed that canopy cover, vegetation density class I, vegetation density class II, richness and species diversity in Saxaul – more than 6 years- are greater than the other regions. In addition, the *Haloxylon* plant cultivation, had no significant effect on nitrogen, phosphorus, potassium, and lime, but had a significant effect on pH, electrical conductivity and organic matter, in Saxaul with different ages.

Keywords: Species Diversity, Richness Species, Soil Characteristics, Shandan Area.



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**Effect of Saxaul (*Haloxylon spp*) Stands With Different
Age Classes on Vegetation Cover and Soil Properties in
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