



Investigation of Soil Properties effects on Establishment of Vegetation Types (Case Study: Sabzdasht, Bafgh)

Majid Sadeghi Nia (1), Mohammad jafari (2), Ghavomoldin Zahedi Amiri (3), Naser Baghestani Maybodi (4), and Ali Tavili (5)

(1) Assistant Professor in Range Management- Ardakan University- Yazd- Iran, Islamic Republic Of (msadeghinia@gmail.com), (2) Professor, Faculty of Natural Resources, University of Tehran, IRAN, (3) Associate Professor, Faculty of Natural Resources, University of Tehran, IRAN, (4) Associate Professor, Agricultural and Natural Resources Research Center of Yazd, IRAN, (5) Associate Professor, Faculty of Natural Resources, University of Tehran, IRAN

This research was conducted to investigate the relationships between soil (Organic Matter, potassium, phosphorous, sodium, Fine gravel, soil texture, EC, Lime, Gypsum, Nitrogen) and environmental (Elevation, Slope) factors with distribution of vegetation types in rangelands of Sabzdasht, located in Bafgh, Yazd province at 2012. For this purpose, four vegetation types were selected as follows: Artemisia sieberi; Artemisia sieberi, Stipa barbata, Eurotia ceratoides; Dorema ammoniacum, Artemisia sieberi, Eurotia ceratoides; and Hammada salicornica. Minimal area was determined using nested plots. Afterward, vegetation factors were measured and five soil profiles were dug randomly in minimal area. In each profile, data for depths of 0-10 and 10-80 cm were recorded.

Principal Component Analysis was applied to analyze the data. Results showed that soil texture, potassium, phosphorous, EC and lime had the most impact on variation and distribution of vegetation types.

Keywords: Environmental Factors, Principal Component Analysis, Minimal Area, Bafgh, Yazd