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                                                   Albertson et al., 1953
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O'- Connor 1995

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| ، Prosopis gla | ndulosa | | | |
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| .() | | .() | Agropyron o | eristatum |
| | • | Bouteloua | 6 | |
| (| | Pascopyrum | 6 | gracilis |
| () .() | | .() | | smithii |
| | | Gutierrezia) | | sarothrae |
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| Festuca ovina | | | oa tenacissima | .(). |
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| Smaliak 1056 | | _ | | |

Smoliak, 1956

Reinert, 1962

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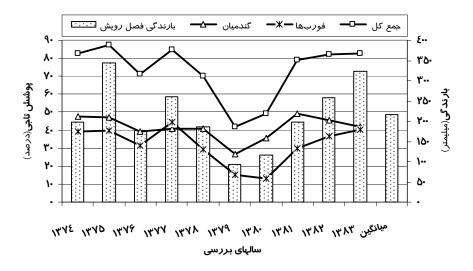
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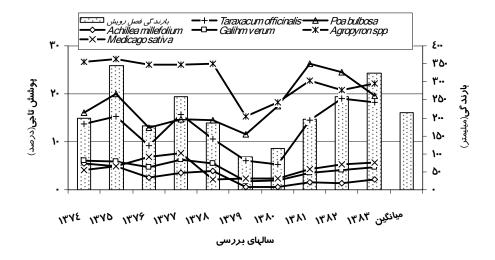
Agropyron Agropyron intermedium

Poa bulbosa trichophorum

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Medicago sativa · Taraxacum officinalis Achillea millefolium Galium verum

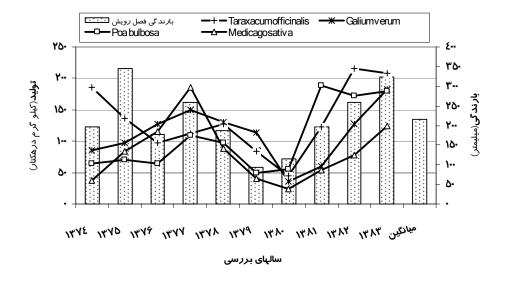


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| Taraxacum officinalis | / * | / * | / * | 1 | 1 | / * | 1 | | 1 | 1 | 1 | |
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Y = a + bX b a .

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Agropyron Agropyron
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Agropyron Agropyron intermedium
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Taraxacum officinalis

 R^2

Medicago sativa

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| Agropyron spp. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| Galium verum | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| Medicago sativa | 1 | 1 | 1 | 1 | 1 | / * | 1 | | 1 | 1 | 1 |
| Taraxacum officinalis | 1 | / * | 1 | / * | 1 | 1 | 1 | | 1 | 1 | 1 |
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Y = a + bX

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Effect of precipitation on cover and production of rangeland plants in Polour

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Abstract

The major portion of rangelands of our country is laid in arid and semi-arid regions. Fluctuation in precipitation year by year is an important factor that influences the vegetation cover. In dry years that a decrease is rainfall is experienced ranges are damaged and the cover and production is reduced. The decrease in forage production exerts more pressure on ranges. This study was conducted in ten years in Polour with the aim of examining the effect of decrease in precipitation on the canopy cover and production in Polour. The canopy cover and production was measured every year in permanent and random plots, respectively. Figures on precipitation were collected from nearby stations. With a considerable decrease in seasonal rainfall in first years of the study, a dry period began that continued until 2001 while 2000 was the driest year in this period. Results show that most of plant species are affected by rainfall fluctuation. The vegetation cover and production declined in dried years and a meaningful relationship between rainfall level and the amount of canopy cover of many species was observed. The total canopy cover of species in wet years was two times greater than it was in the driest year. The forage production was also influenced by fluctuation in precipitation, and the correlation between these two concerning certain species was statistically significant. However, various species reacted differently to the rainfall decline in terms of cover and production. In general, precipitation in the growth season had a greater effect on the cover and production in some species. Based on rainfall data in this period it was possible to anticipate change in plant's cover and production. Total forage production in wet year was 2.5 times greater than production in the driest year. This ratio was 2 in grasses and approximately 5 in forbs.

Keywords: Semi-arid rangelands, Precipitation, Canopy cover, Forage production, Polour

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