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Agropyron intermedium

Bromus tomentellus

Agropyron spp

Oryzopsis spp.

Poa bulbosa

Melica persica

Festuca ovina

Dactylis glomerata

Carex spp

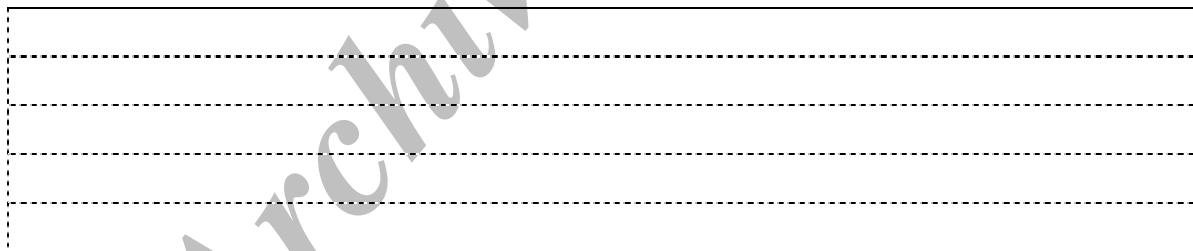
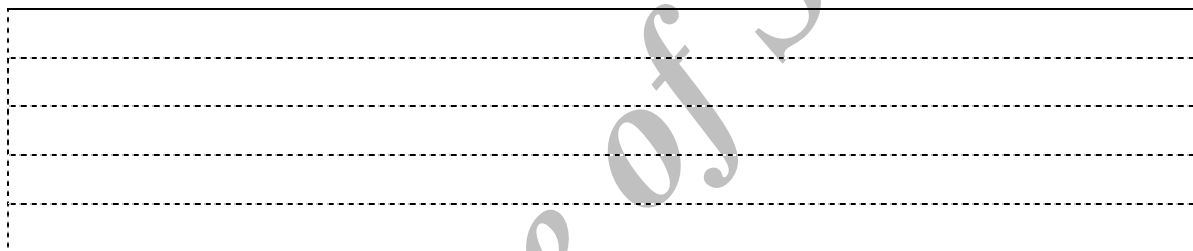
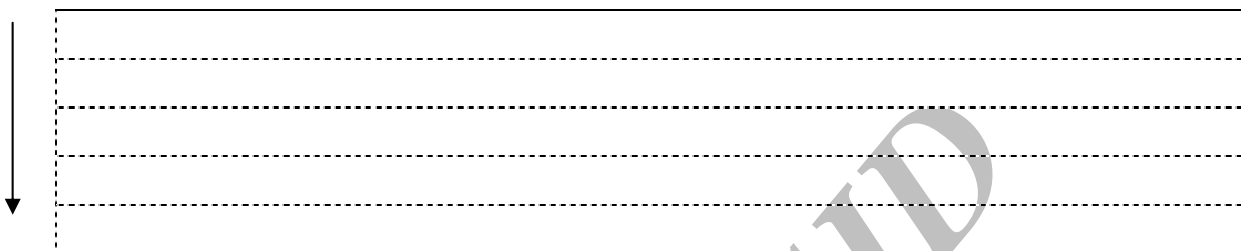
Ferula sp.

Onobrychis cornuta ,

Astragalus spp.

Thymus kotschyanus

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(*Bromus tomentellus*, *Agropyron repens*

(*Ferula* sp.)

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Agropyron intermedium),

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Cousinia sp, "

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Astragalus sp, Onobrichis sp, Exilirion sp

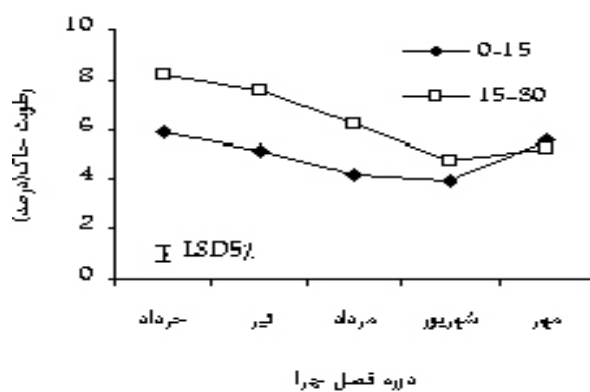
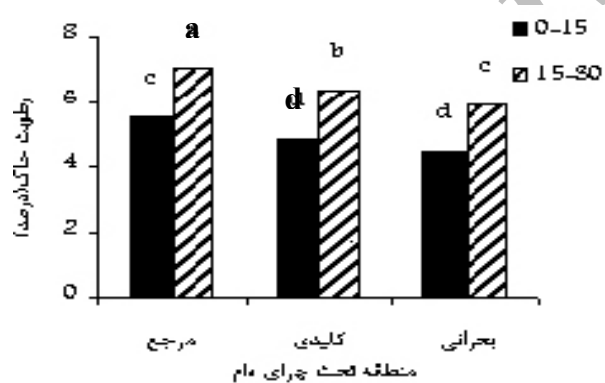
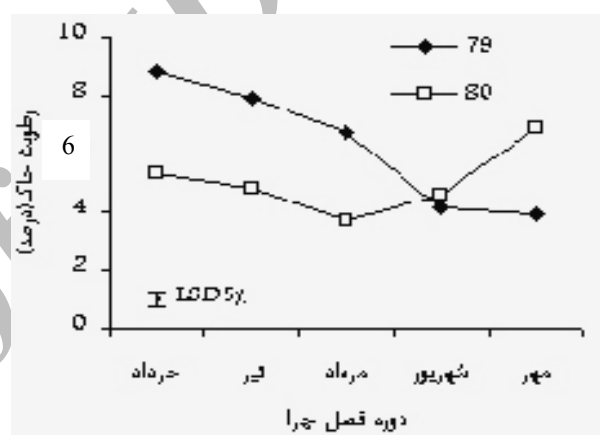
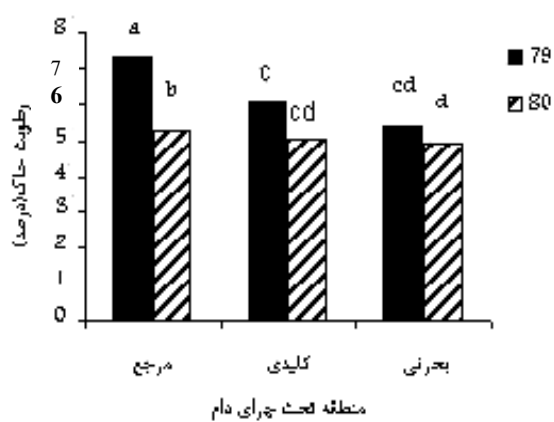
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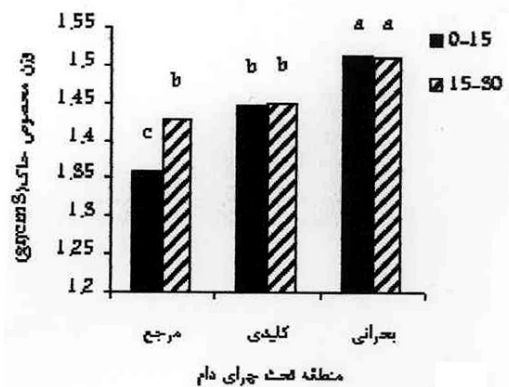
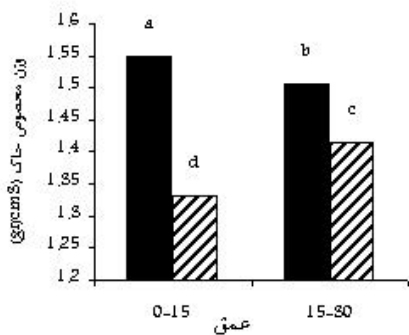
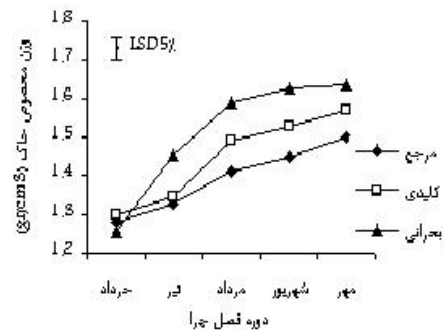
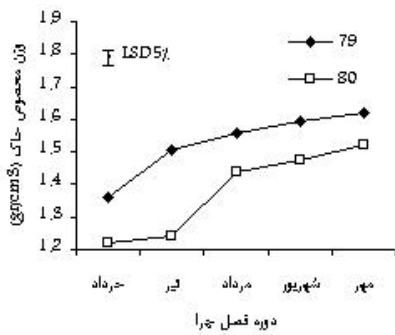
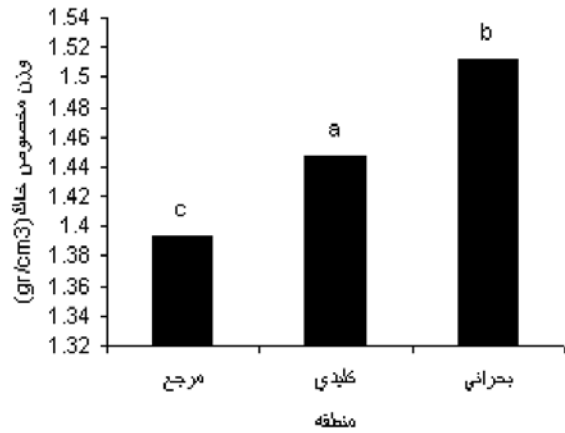
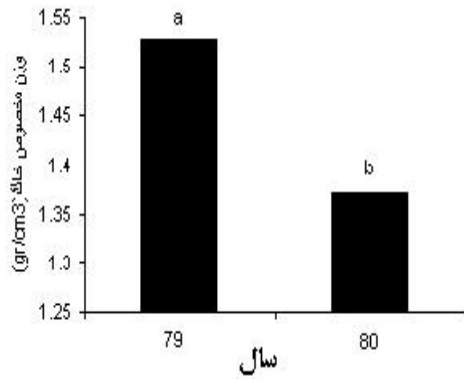
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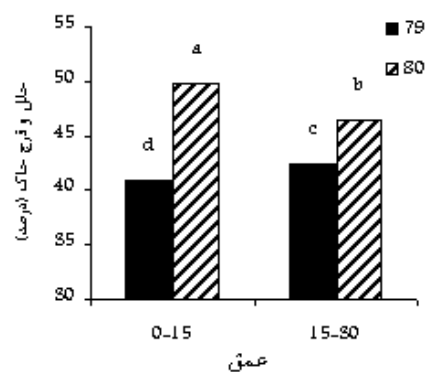
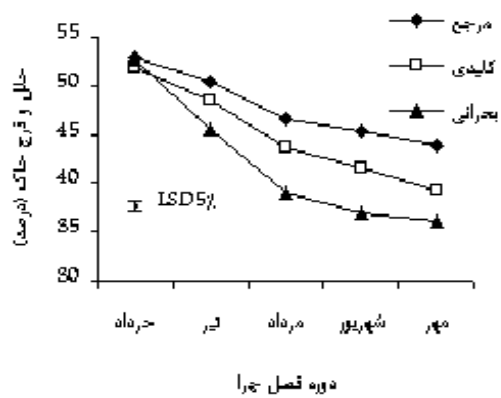
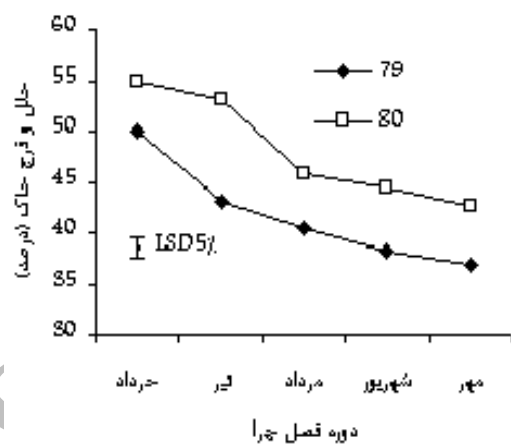
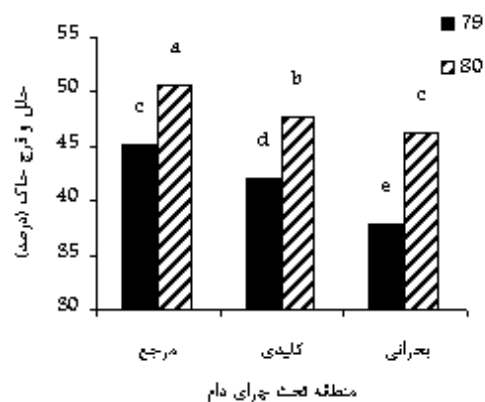
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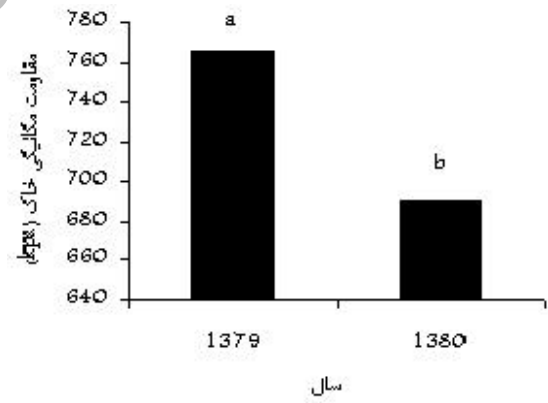
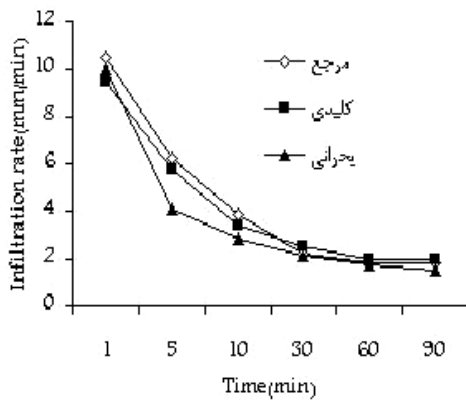
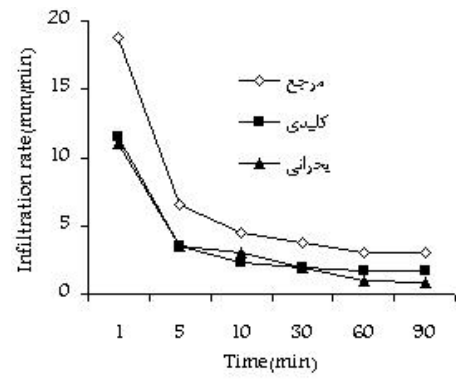
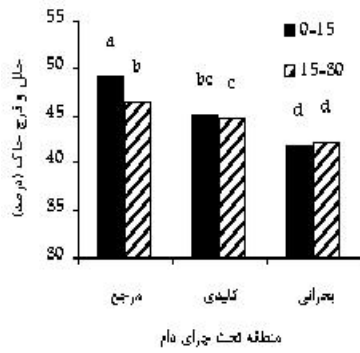
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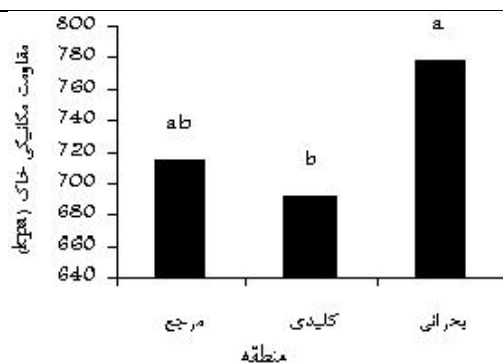
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Trampling Effects of Livestock Grazing on Soil Physical Properties and Range Vegetation Cover

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Abstract

Soil physical properties have an important role on vegetation growth in rangelands through affecting the development of root system. The goal of this research was to investigate the trampling effect of livestock grazing on soil physical properties and range vegetation cover. The experiment was conducted on three range condition sites (reference, key and critical area) in Lar rangelands during grazing season from 2000 to 2001. The results of the experiment showed that soil moisture reduced from reference area to critical area as well as through grazing season in both 0-15 and 15-30 cm depths. Soil bulk density increased during grazing season and was the lowest in reference area and the highest in critical site. Through the grazing season bulk density was higher at 0-15 cm compared to 15-30 cm. Reference site had the highest soil porosity while the porosity reduced both in key and critical area. As the grazing season continued soil porosity reduced in all sites in both 0-15 and 15-30 cm soil depths. Soil infiltration rate decreased and mechanical resistance increased in all experimental sites as the grazing period continued. The proportion of grass was the highest in vegetation composition in reference area while it reduced to as low as 1 percent in critical site. The total vegetation covers of 7 percent (93 percent of bare soil) at the end of the grazing season made the soil very vulnerable to water and wind erosions at critical site.

Keywords: Livestock grazing, Treading, Soil physical properties, Vegetation cover.

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