

عنوان مقاله:

?How planting density and grazing intensity affect the above- and below-ground carbon pools in a dryland ecosystem

محل انتشار:

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خلاصه مقاله:

Climate change is known as one of the most important environmental challenges. Sequestration of carbon in terrestrial ecosystems is a low-cost option that may be available in the near-term to mitigate increasing atmospheric CO₂ concentrations, while providing additional benefits. In this study, we estimated the effects of planting density and grazing intensity on the potential of *Atriplex canescens* for carbon sequestration in a rangeland in Qazvin Province, Iran. The experimental design consisted of a randomized block design, including two planting densities (2 × 2m and 4 × 4m) and four grazing intensity treatments simulated by different plant pruning intensities. We observed no significant difference between the rate (%) of organic carbon in the treatments of density, grazing intensity, and their interaction in the 0-20 cm and 20-80 cm soil layers. Between the treatments of height pruning, control (no pruning) and light grazing, had the highest total biomass and total carbon. The total biomass carbon content of 2370 kg m⁻² in the 2×2m treatment was about twice as much that of 4×4m treatment. These findings can be useful in rangeland management plans

کلمات کلیدی:

Carbon sequestration, Biomass, *Atriplex canescens*, Grazing intensity, Planting density

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