

INTERCROPPING OF *ATRIPLEX HALIMUS*, *SALSOLA VERMICULATA* AND BARLEY FOR SUSTAINABLE FEED PRODUCTION UNDER RANGELAND CONDITIONS IN JORDAN

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ABSTRACT

The Jordanian rangeland has been deteriorated due to successive drought and human misuse. The present study was conducted at Al-Majjediah village during 2012 and 2013 and aimed to study the effect of intercropping fodder shrubs and barley in the grazing productivity and stocking rate using different cropping systems. The study was analyzed using Randomized Complete Block Design including planting methods. High significant differences had noticed of fresh and dry yield between years. Year 2012 was more productive than 2013. Survival % was higher for *Salsola*, and *Salsola*-barley compared with *Atriplex*, and *Atriplex*-barley systems. *Atriplex* and *Salsola* had more fresh and dry yield compared with *Atriplex*-barley, and *Salsola*-barley systems. In the other side, *Atriplex*-barley and *Salsola*-barley treatments showed high significant differences for biological yield, total dry yield and stocking rate. In addition, stocking rate was higher for *Atriplex*-barley and *Salsola*-barley in comparison with *Atriplex*, *Salsola* and barley systems. Intercrop barley with fodder shrubs isn't recommended under rangeland conditions or low rainfall areas. Further studies are required to investigate the effect of soil plowing for barley planting, supplemental irrigation and nutritive value improvement.

KEYWORDS: *Atriplex halimus*, Barley, Intercropping, Rangeland, *Salsola vermiculata*