

عنوان مقاله:

Forage Yield and Quality Evaluation in Intercropping of Kochia, Sesbania and Guar under Saline Irrigation

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خلاصه مقاله:

Salinity is one of the most important factors limiting plants growth and production in irrigated agriculture. The natural potential of salt tolerant plants like Kochia could be exploited through legume-containing intercropping systems as an effective strategy in mitigating the increasing salinity crisis. This experiment used split plots based on a randomized complete block design with three replications, in ۲۰۱۶ and ۲۰۱۷, at the Iranian National Salinity Research Center, Yazd, Iran. Water salinity was considered as the main factor ($EC = ۴, ۹, \text{ and } ۱۴ \text{ dS m}^{-1}$) and the cropping system was considered as subfactor with seven levels including sole cropping of Kochia (*Kochia scoparia*), Sesbania (*Sesbania aculeate*), and Guar (*Cyamopsiste tragonoliba*) and their possible dual and triple intercropping systems. The highest absorbed light was observed in triple intercropping and the total forage yield in triple intercropping was increased by ۵% and ۴.۱% at ۴ and ۹ dS m^{-1} salinity, respectively, compared to that in Kochia sole cropping, while it decreased by ۱.۵% at ۱۴ dS m^{-1} . The Land Equivalent Ratio (LER) values ranged from ۰.۹۹ to ۱.۳۳. The total crude protein yield in triple intercropping was increased by ۵۵.۸ to ۶۶.۳% as compared to Kochia sole cropping. The NDF (Neutral Detergent Fiber) and ADF (Acid Detergent Fiber) were decreased by ۷ to ۲۲% in various intercropping systems. Considering increased forage quantity and quality, mainly through decreasing NDF and increasing Dry Matter Intake (DMI) levels, cultivation of Kochia within triple intercropping systems can be recommended instead of Kochia sole cropping.

کلمات کلیدی:

Acid detergent fiber, Crude protein, Dry matter intake, Neutral detergent fiber, Salinity

لینک ثابت مقاله در پایگاه سیویلیکا:

