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Investigate of Tepary Bean and Millet Intercropping Effects on some Quantitative Traits and Forage Yield

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Abstract

In order to investigate of Tepary bean and millet intercropping effects on forage yield, a field experiment was conducted as factorial experiment based on randomized complete blocks design (RCB) with three replications at research farm of Jiroft, Iran during 2015-2016. The factors were replacement intercropping ratios (100:0, 75:25, 50:50, 25:75 and 0:100) of Tepary bean and millet cultivars (Bastan and Pishahang). The results showed that there were significant differences between traits. The interaction of intercropping ratios and millet cultivars was affected dry leaf weigh and dry forage yield of Tepary bean, plant height of millet and total dry forage yield. The highest amount of total dry forage yield was obtained from 50:50 Tepary bean-millet ratio with 12.59 % and 87.57 % compared to the sole cropping of them respectively. Also, the highest amount of Tepary bean dry forage yield and millet dry forage yield was obtained from 50:50, 100:0 and 0:100 Tepary bean-millet ratios. There was no significant difference between millet cultivars. The Land equivalent ratio (LER) was more than one and its highest amount was obtained from 50: 50 Tepary bean-millet. According to these results, it seems that intercropping of Tepary bean and millet was much better than the sole cropping.

Keywords: Intercropping ratio, land equivalent ratio, legumes, sustainable agriculture

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