

Land Equivalent Ration of Chickpea - Barley as Affected by Mixed Cropping System and Vermicompost in Water Stress Condition

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Abstract : Study of the effect of vermin compost on yield, and Land equivalent ration (LER) of chickpea-barley mixed cropping under normal dry land condition can be useful in order to increase qualitative and quantitative performance. In this case, two factors include fertilizer (vermicompost biological fertilizer, ammonium phosphate chemical fertilizer, vermicompost + %75 chemical fertilizer) and chickpea + barley mixed cropping (sole chickpea, %75 chickpea: %25 barley, %50 chickpea: %50 barley, %25 chickpea: %75 barley, and sole barley) in RCBD in three replications in two experiments include normal and dry land conditions were studied. Result showed that total LER base on dry matter was affected by environment and mixed cropping interaction and was more than 1 in all mixed cropping treatments. In different mixed cropping rates, wet forage yield decreased by decreasing chickpea ratio as well as increasing barley ratio. Total LER mean in base on forage dry matter in mixed-, chemical-, and vermicompost fertilizer treatments were 1.12, 1.05 and 1.10 in normal condition and 1.15, 1.08 and 1.14 in dry land condition, respectively, represented the important of biological fertilizer in mixed cropping systems.

Keywords : land equivalent ration, biological fertilizer, mixed cropping systems, water stress

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