

INTERCROPPING IN MUSTARD (*BRASSICA JUNCEA* L.) WITH CHICKPEA AND FIELD PEA

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Abstract: A field experiment was carried out during the winter (*rabi*) of 2019-20 at Agronomy Instructional Farm, Chimanbhai Patel College of Agriculture, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar to study the effect of intercropping in mustard (*Brassica juncea* L.) nine treatment combination viz., T₁ : Sole mustard, T₂ : Sole chickpea, T₃ : Sole field pea, T₄ : Mustard + chickpea (1:2), T₅ : Mustard + chickpea (1:3), T₆ : Mustard + chickpea (1:4), T₇ : Mustard + field pea (1:2), T₈ : Mustard + field pea (1:3) and T₉ : Mustard + field pea (1:4) were laid out in randomized block design replicated 3 times. Mustard + chickpea 1:3 ratio (T₅) recorded significantly higher number of primary and secondary branches plant⁻¹ and siliquae plant⁻¹. The sole crop of mustard (T₁) produced significantly the highest seed and stover yield in all the treatments. In mustard + chickpea/field pea intercropping system, the number of branches plant⁻¹, number of pods plant⁻¹, grain and straw yield was higher under sole chickpea (T₂)/ field pea (T₃). The higher LER (1.25) was recorded under mustard + chickpea 1:3 ratio intercropping system closely followed by mustard + chickpea 1:4 ratio of intercroppingsystem. Significantly higher mustard equivalent yield was recorded under mustard + chickpea in 1:3 ratio (T₅), which remained at par with mustard + chickpea 1:4 (T₆) and mustard + chickpea 1:2 ratio (T₄). In case of intercropping treatments, mustard + chickpea in 1:3 row proportion recorded the maximum gross returns, net profit and benefit : cost ratio (BCR) of ₹ 1,31,273, ₹ 99,346 ha⁻¹ and 4.11, respectively than rest of the treatments.

Keywords: Mustard, Chickpea, Field pea, Land equivalent ratio and Mustard equivalent yield

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