



Effect of irrigation and levels of fertilizers application on growth and yield of zero tilled cowpea (*Vigna unguiculata* L.)

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Abstract : A Field experiment was conducted at Agronomy farm of Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli during *Rabi* season of 2011-2012 to study the effect of irrigation and levels of fertilizer application zero tilled cowpea. After harvesting of rice, cowpea was sown on zero tilled condition. Results revealed that application of two irrigations (at branching and pod filling) recorded significantly higher growth and yield attributes resulting in higher grain (12.26 q ha^{-1}) and stover (26.17 q ha^{-1}) yield followed by treatments in which one irrigation (at branching) and zero irrigation (control). Application of 100 per cent RDF below seed placement recorded significantly higher growth as well as yield attributes resulted in higher grain (12.62 q ha^{-1}) and stover yield (26.48 q ha^{-1}) followed by 100 per cent RDF through line application, 75, 50, 25 per cent RDF below seed placement and control. Thus, the study revealed that during *Rabi* hot weather season cowpea crop grown under zero tilled condition should be provided with two irrigations (at branching and pod filling stage) along with 100 per cent recommended dose of fertilizer ($25:50:00 \text{ NPK kg ha}^{-1}$) applied below seed placement for obtaining higher yield.

Key Words : Irrigation, Fertilizer, Zero tilled cowpea

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