

PRODUCTION POTENTIAL AND ECONOMICS OF INTERCROPPING IN AUTUMN PLANTED- SUGARCANE UNDER NORTH HILL ZONE OF CHHATTISGARH

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Abstract: A field experiment was conducted during autumn season of 2017-18 at Instructional-cum-research farm RMD CARS, Ambikapur to evaluate the most profitable crops grown as intercrops with winter planted sugarcane under thirteen treatments formulated with intercropping *i.e.* sugarcane sole, sugarcane + onion (1:3), sugarcane + onion (1:4), sugarcane + potato (1:1), sugarcane + potato (1:2), sugarcane + sweetcorn (1:1), sugarcane + sweetcorn (1:2), sugarcane + wheat (1:2), sugarcane + wheat (1:3), sugarcane + frenchbean (1:2), sugarcane + frenchbean (1:3), sugarcane + mustard (1:1) and sugarcane + mustard (1:2) in randomized block design. Based on the one year study, onion (1:3) intercropping was selected as most remunerative in autumn/winter cane with the highest no. of millable cane ($93.69 \times 10^3 \text{ ha}^{-1}$), millable cane length (309.26 cm), cane weight ($2.72 \text{ kg cane}^{-1}$), cane yield (255.41 t ha^{-1}), cane equivalent yield (295.95 t ha^{-1}) and net return and B:C ratio (Rs. 799244 ha^{-1} and 9.08) among all the intercropping systems. Sugarcane + onion (1:4) and sugarcane + potato (1:1) intercropping were also found comparable with sugarcane + onion (1:3). Whereas, lowest no. of millable cane ($44.55 \times 10^3 \text{ ha}^{-1}$), millable cane length (258.33 cm), cane weight ($1.61 \text{ kg cane}^{-1}$), cane yield (71.79 t ha^{-1}), cane equivalent yield (89.58 t ha^{-1}) and net return and B:C ratio (Rs. 189227 ha^{-1} and 2.38) recorded under sugarcane + wheat (1:3) intercropping system among the intercrops.

Keywords: Production potential, Economics, Sugarcane, Intercropping, Cane equivalent yield

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