

EFFECT OF INTERCROPPING COWPEA, FRENCH BEAN, TURMERIC AND GINGER WITH COLOCASIA UNDER AGRO-CLIMATIC CONDITIONS OF CHHATTISGARH PLAINS

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Abstract: The experiment was carried out in the field of AICRP on tuber crops, Research and Instructional Farm, Department of Horticulture, College of Agriculture (IGKV), Raipur (C.G.) during *Kharif*, 2010-11. The experiment was laid out in a randomized block design with nine treatments three replications with an objective to study the effect of intercropping cowpea, french bean, turmeric and ginger with colocasia under agro-climatic conditions of Chhattisgarh plains. The treatment consisted of sole and intercropping viz: T₁- Colocasia (sole) with 60 x45 cm, T₂ - Colocasia + Cowpea (1:1) with 60 : 30 cm, T₃ - Colocasia + Cowpea (1:2) with 60 : (15 : 15) cm, T₄ - Colocasia + French bean (1:1) with 60 : 30 cm, T₅ - Colocasia + French bean (1:2) with 60 : (15 : 15) cm, T₆- Colocasia + Turmeric (1:1) with 60 : 30 cm, T₇ - Colocasia + Turmeric (1:2) with 60 : (15 : 15) cm, T₈ - Colocasia + Ginger (1:1) with 60 : 30 cm, T₉ - Colocasia + Ginger (1:2) with 60 : (15 : 15) cm. The name of variety for different crops are Colocasia : Indira Arvi-1, Cowpea : Pusa komal, French bean : Contender, Turmeric : Rashmi, and Ginger: Suprabha. The result revealed that growth parameters of colocasia viz., plant height, number of leaves and yield attributes like number of cormels plant⁻¹, weight of cormels plant⁻¹, weight of mother corm plant⁻¹, total yield plant⁻¹, total tuber yield and marketable tuber yield t ha⁻¹ were recorded significantly highest under sole cropping of colocasia. Among all intercropping system, plant height and number of cormels plant⁻¹ were observed higher under colocasia + cowpea at the 1:1 row ratio followed by colocasia + french bean at the 1:1 row ratio. Beside that; weight of cormels plant⁻¹, weight of mother corm plant⁻¹, total tuber yield and marketable tuber yield t ha⁻¹ were found higher under colocasia + ginger at the 1:1 row ratio among the other intercropping system.

Keywords: Intercropping, colocasia, cowpea, frenchbean, turmeric, ginger

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