

Research Article

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Effect of targeted yield approaches on growth, yield, yield attributes and nutrient uptake in maize (*Zea mays* L.)-chickpea (*Cicer arietinum* L.) cropping sequence in UKP command area of Karnataka

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Summary

Field experiments were conducted during *Kharif* and *Rabi* seasons of 2013-14 and 2014-15 at Agricultural Research Station, Raddewadagi, dist. Kalaburagi, University of Agricultural Sciences, Raichur, Karnataka to study the effect of targeted yield approach on growth, yield, yield attributing and nutrient uptake in maize-chickpea cropping sequence by involving SSNM, STCR targeted yield approaches. Application of nutrients through SSNM for targeted yield of 8.0 t ha⁻¹ recorded significantly higher plant height (235.23 cm), number of leaves per plant (12.43), leaf area index (0.70), total dry matter production per plant (249.88 g plant⁻¹), grain yield (8.62 t ha⁻¹), length of cob (21.30 cm), number of grains per cob (397.30), hundred seed weight (31.63 g) and uptake of nitrogen, phosphorus and potassium by maize crop as compared to other treatments except STCR through fertilizers for targeted yield of 8.0 t ha⁻¹. The growth parameters of chickpea crop *viz.*, plant height, total number of branches per plant and total dry matter production (36.55 cm, 29.57 and 19.13 g plant⁻¹, respectively), yield attributes *viz.*, seed yield and 100 seed weight (29.90 q ha⁻¹ and 25.25 g, respectively) and total uptake of N, P and K was significantly higher (118.25, 26.63 and 102.09 kg ha⁻¹, respectively) with the residual effect of nutrients applied through SSNM approach for targeted yield of 8.0 t ha⁻¹ followed by STCR approach targeted yield of 8.0 t ha⁻¹ as compared to other treatments.

Key words : Maize-chickpea cropping sequence, SSNM, STCR targeted yield approaches, Growth, Yield, Yield attributes, Nutrient uptake

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