Effect of integrated nutrient management on sustainable productivity in redgram (*Cajanus cajan* L.) + Foxtail millet (*Setaria italica* L.) intercropping system

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ABSTRACT

A field experiment was conducted to study the effect of integrated nutrient management on sustainable productivity in Redgram (*Cajanus cajan* L.) + Foxtail millet (*Setaria italica* L.) intercropping system on clay loam soils at RARS, Lam, Guntur during *kharif*, 2025-2026. The experiment was laid out in randomized block design with ten treatments and replicated thrice. A perusal of the data revealed that different integrated nutrient management treatments significantly influenced the growth, yield attributes, grain yield and economics of the intercropping system. The combined application of inorganic fertilizers with organic manure, biofertilizer and crop residue mulch resulted in superior crop performance compared to the individual application of nutrient sources and with reduced levels of fertilizers (75%). The results revealed that the maximum grain yield was realised with application of 100% RDN + FYM @ 5 t ha^{-1} + VAM @ 12.5 kg ha^{-1} + mulching with crop residue @ 5 t ha^{-1} in redgram (2190 kg ha^{-1}) and foxtail millet (918 kg ha^{-1}). The redgram equivalent yield (2427 kg ha^{-1}), gross returns (Rs.189988) and net returns (Rs. 119770) were also found to be higher with the application of 100% RDN + FYM @ 5 t ha^{-1} + VAM @ 12.5 kg ha^{-1} + mulching with crop residue @ 5 t ha^{-1}.

Key Words: *Integrated nutrient management, Redgram, Foxtail millet, Yield, Yield attributes, Redgram equivalent yield and Economics*