

Effect of Various Nutrient Management Practices on Yield Attributes, Quality Parameters and Economics of Sweet Corn

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ABSTRACT

A field experiment was conducted by using different organic and inorganic nutrient input sources in Sweet corn (*Zea mays* L. *saccharata*) during *Rabi*, 2021-22 at Agricultural College Farm, Naira. The soil was sandy loam having pH 7.2, EC 0.051 dSm⁻¹, organic carbon 0.45%, available N 221 kg ha⁻¹, available P₂O₅ 16.7 kg ha⁻¹ and available K₂O 245 kg ha⁻¹. The experiment was laid out in randomized block design, replicated thrice with nine treatments. Results revealed that application of 100% RDF (180-60-60) NPK Kg ha⁻¹ resulted in significantly higher cob girth (15.10 cm), single cob weight without husk (270.3 g), fresh cob yield (10,486 Kg ha⁻¹), kernel uptake N (136.67 kg ha⁻¹), P (30.40 kg ha⁻¹) and K (55.53 kg ha⁻¹), kernel protein content (8.50%), TSS (15.67%) and sugar content (13.63%). The highest gross returns ha⁻¹ (Rs. 1,84,935/-), net returns ha⁻¹ (Rs. 1,16,677/-) and B:C ratio (2.71) were recorded under 100% RDF treatment. The treatment combination at 75% RDF along with poultry manure @ 2 t ha⁻¹ decomposed with waste decomposer solution remained on parity for the yield attributes, quality parameters and economics without having any significant variation with integrated nutrient management treatments having substitution of 25 to 50% RDF with various organic sources of nutrients under study.

Keywords: *Organic, Poultry manure, Total Soluble Solids, Paddy straw and Waste decomposer.*