

Evaluation of growth parameters, yield parameters and yield of maize based intercropping systems in North coastal Andhra Pradesh

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ABSTRACT

A field experiment was conducted on sandy loam soils of Agricultural College Farm, Naira during the *rabi*, 2024-2025 to evaluate suitable maize (*Zea mays* L.) intercropping systems for North Coastal Andhra Pradesh region. Maize was planted with three intercrops viz., Blackgram, Greengram and Cowpea in paired rows, *in-situ* Green manuring with maize and farmers's practice sole maize against three nitrogen levels in split plot design. The results of investigation had revealed that plant height (247.4 cm), drymatter accumulation (19050 kg ha⁻¹) found to be significantly higher under maize + *in-situ* green manuring with sunnhemp which was at par with maize + blackgram and maize + greengram in paired row planting. Significantly higher values of yield attributes such as cob length (19.6 cm), cob diameter (5.14 cm) and number of kernels per cob (490.8) and kernel yield (7754 kg ha⁻¹) was recorded under maize + *in-situ* green manuring with sunnhemp which was comparable with maize + blackgram and maize + greengram in paired row planting. Among the nitrogen levels significantly higher values of growth attributes and yield attributes were recorded with application of 100 % RDN which was statistically at par with 75 % RDN + Biological fertilizer application.

Keywords: *Biological fertilizer consortia, Green manuring, Maize intercropping and Paired rows*