

Growth and Yield of Maize- Rajmash Cropping Sequence Affected by Different Agronomic Practices

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ABSTRACT

A field experiment was conducted during the *kharif* and *rabi* seasons for two consecutive years 2008-09 and 2009-10 to evaluate effect of Agronomic Practices on growth and yield under Maize-Rajmash Cropping Sequence on sandy clay loam at Agricultural College Farm, Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad, Andhra Pradesh. The treatment variables were three green leaf manuring options viz. no green leaf manure, dhaincha green leaf manuring @ 10 t ha⁻¹, sunhempgreenleafmanuring @ 10 t ha⁻¹, two irrigation levels viz. Rainfed conditions. Irrigation at 1.0 IW/CPE ratio to maize and 0.8 IW/CPE ratio and 1.0 IW/CPE ratio to rajmash and four fertility levels viz. F₁ – 120:60:40 / 40:60:30 kg NPK ha⁻¹ F₂ – 120:00:40 / 40:00:30 kg NPK ha⁻¹, F₃ – 180:00:40 / 60:00:30 kg NPK ha⁻¹ and F₄ – 240:00:40 / 80:00:30 kg NPK ha⁻¹ to maize and rajmash, respectively. In maize, greenleaf manuring with dhaincha and sunhemp @ 10 t ha⁻¹ and scheduling irrigation at 1.0 IW/CPE ratio significantly increased growth parameters at harvest, grain yield as compared to no green leaf manuring and rainfed maize treatment. Among fertility levels, 240:00:40 kg NPK ha⁻¹ (F₄) produced significantly taller plants with higher leaf area index and drymatter production and as well as the grain and stover yield but it was on par with fertility level of 180:00:40 kg NPK ha⁻¹ (F₃) in both years. In rajmash, greenleafmanuring with dhaincha and scheduling irrigation at 1.0 IW/CPE ratio significantly influenced the growth parameters. Seed and haulm yield as compared to no greenleafmanuring and 0.8 IW/CPE ratio treatments in both the years. Among the fertility levels, 80:00:30 NPK kg ha⁻¹ (F₄) resulted in numerically higher growth and yield but it was on par with fertility level on 40:60:30 kg NPK kg ha⁻¹ (F₁).

Keywords : *Agronomic Practices, Green Manuring, Irrigation, Maize, Nutrient Management and Rajamsh.*