

Indian Journal of Ecology (2019) 46(1): 65-69

Manuscript Number: 2793 NAAS Rating: 4.96

Influence of Zinc Nutrition and Green Leaf Manuring on Dry Matter Yield, Nutrient Uptake and Economics of Rice Cultivation

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Abstract: Field experiment was conducted during *Rabi* season of 2015-2016 to study the potential of zinc nutrition and green leaf manuring on dry matter production, nutrient uptake and available soil nutrients and economics of rice. Application of 100% recommended dose of fertilizer (RDF) (NPK 150:50:50) + green leaf manure (GLM) @ $6.25 \text{ tha}^{-1} + \text{ZnSO}_4$ @ 12.5 kg/ha as basal + 1.0% foliar spray of ZnSO₄ increased the N, P, K and Zn uptake and registered higher values of dry matter yield. Soil available nutrients after harvest of the crop was higher under the application of 100% RDF + GLM @ $6.25 \text{ tha}^{-1} + 0.5\%$ foliar spray of ZnSO₄. The higher net return and benefit cost ratio were with application of 100% RDF + GLM @ $6.25 \text{ t/ha} + \text{ZnSO}_4$ @ 12.5 kg ha⁻¹ as basal + Foliar spray of ZnSO₄ @ 1.0%. The 100% RDF registered the lower gross and net return.

Keywords: Rice, Zinc, Green leaf manure, Dry matter yield, Nutrient uptake, Economics