

Effect of Inorganic Fertilizers and Humic Acid on Soil Nutrients of Foxtail Millet Crop under Foxtail Millet-Bengal Gram Cropping System

Y S Satish Kumar, Ch Sujani Rao, P R K Prasad, K Jayalalitha, S Jaffar Basha and
TVenkata Sridhar

Department of Soil science and Agricultural Chemistry, Agricultural College, Bapatla, A. P.

ABSTRACT

A field experiment was conducted at the College Farm, Agricultural College, Mahanandi, Andhra Pradesh during *kharif* & *rabi* seasons of 2020-21 and 2021-22. The experimental soil was sandy loam in texture with 7.52 pH, 0.42 dsm⁻¹ EC, 0.32 % OC, low available N (175 kg ha⁻¹), medium in P (18.48 kg ha⁻¹), high in K (580 kg ha⁻¹) and sufficient in Zn status (0.85 ppm). The experiment was laid out in split plot design with three replications with four main plots and six sub plots total twenty four treatments. The available nutrient status of Nitrogen and Phosphorous were significantly increased with the increasing level of fertilizers from 0 (M₁) to 100 kg RDF ha⁻¹ (M₄). Among humic acid levels, available N & P were recorded significantly highest in S₆ (20 kg ha⁻¹Humic acid as soil application + 0.2% foliar application of Humic acid) treatment and this was on par with S₃ (20 kg ha⁻¹Humic acid as soil application alone) treatment at panicle initiation and at harvest stage of foxtail millet. The soil available Nitrogen and Phosphorous differed significantly due to inorganic fertilizer treatments and levels of humic acid, but not by their interaction during both the years of study. Application of inorganic fertilizers and humic acid levels showed non significant difference on soil potassium at panicle initiation and at harvest stage of foxtail millet.

Keywords: *Humic acid-Inorganic fertilizers-Nutrient availability studies-Foxtail millet-Bengalgram cropping system.*