

Effect of different form of Zinc on the seed yield of paddy in red and lateritic soils of Paschim Medinipur of West Bengal

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ABSTRACT : Zinc is one of the seven micronutrients needed by crop plants. Zinc plays the role of metal activator in plants. Deficiency of Zn is generally encountered in soil with coarse texture, low in organic matter, high in pH and calcium carbonate content. In Eastern India, red and red lateritic soil is dominated as main growing media of paddy. Most of the area comes under rain fed, high acidic soil having pH range from 5-5.5 and is deficit of Zn. Due to Zinc deficiency the normal vegetative growth of plants disturb and causes less no of tillers/hill, short panicle length and less no of grain per panicle. Ultimately the yield losses due to such type of causes. A trial was laid out in the different villages under the jurisdiction of Krishi Vigyan Kendra, Kaggari, Paschim Medinipur with four treatments viz. T1- FYM @ 5 tons/ha., T2: FYM @ 5 tons/ha + Zinc Sulphate @ 15kg./ha. as basal application, T3: FYM @ 5 tons/ha + Chelated Zinc @ 1 gm/lit at 21and 42 days after transplanting and T4: FYM @ 5 tons/ha + Zinc Sulphate @ 25 kg/ha as basal application. The different forms of Zinc in different doses applied to the plants attributed higher yields over control. The treatment four i.e. FYM @ 5 tons/ha + 25 kg/ha as basal application at the time of last puddling showed better yield (44.07 quintal/ha grain) and other treatment T2 and T3 has been produced 40.14 & 38.78 quintal/ha respectively and other physical characters like plant height, no of tillers/hill and panicle length, no. of ear branch/panicle and no. of grain/panicle were also higher in comparison to the other three treatments.

Key Words: Paddy, zinc, deficiency, red and lateritic soil.