

Delineation of Multi Micronutrient Deficiencies in Soils and Plants of Chittoor District

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Soil fertility mapping with specific reference to micronutrients and sulphur was carried out by analyzing 576 geo-referenced soils collected from 64 mandals of Chittoor district of Andhra Pradesh. The soils of Chittoor district was found to be suffering from one or other or combination of two or more micronutrients in 325 out of analysed 576 samples and constituted 56 per cent (Zn alone in 103, Fe in 40, B in 60, Mn in 5, Cu in 5 and multi micronutrient deficiencies in 108 samples). The soils having two or more micronutrient deficiencies in the same sample were found to be 108 out of total 576 and constituted 18.6 per cent of the total soils and 33% of 325 samples suffering from micronutrient deficiencies in the district. These multi micronutrient deficiencies occurred with nine combinations of two micronutrients, six combinations of three micronutrients and one with four micronutrient combination. Zn+Fe (35 numbers) and Zn+B (31 no) combinations in the same soil sample of the district were recorded as predominant multi micronutrient deficient categories. Based up on the magnitude of micronutrients and sulphur deficiencies that were observed in the district, twenty six mandals were identified wherein mandal specific micronutrient and sulphur related interventions are most important for alleviating their problems and to enhance the crop production.

Keywords: *Micronutrients, Sulphur, deficiency and Chittoor.*