

CORRELATION OF PH AND ORGANIC CARBON WITH AVAILABLE IRON (FE) IN RED AND YELLOW SOIL (*INSEPTISOLS*) OF NAVAGARH BLOCK IN JANJGIR –CHAMPA DISTRICT IN CHHATTISGARH

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Received-05.03.2015, Revised-24.03.2015

Abstract: A Study was undertaken to evaluate the fertility status of Navagarh block, Janjgir- Champa district, Chhattisgarh, covering 112 villages of Navagarh block and 78 villages under soil fertility on the basis of correlation between status of OC, pH and available Fe in red and yellow soil. The statistical description of soil characteristics indicated that the pH of the soils varied from 4.5 to 7.2 (mean- 5.73). The variation in organic carbon in these soil from 0.25 to 0.85 percent (mean-0.53%). It was observed that soil had low to medium in organic matter status. The DTPA-extractable available Fe content were ranged from 3.24 to 51.42 mg kg⁻¹ (mean- 26.52 mg kg⁻¹) respectively in soil of Navagarh block. The present study revealed that there is wide variation in soil fertility status in soils of Navagarh block, but by and large, the soils were moderately acidic to neutral in reaction, low to medium in organic carbon, available iron content showed high status. The correlation studies between available micronutrient Fe and soil properties (pH ,OC) showed significant negative correlation with pH but significant positive correlation with OC.

Keywords: Correlation, Organic carbon, pH, Fe

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