

Working Suitability of Extractants in Organic Nitrogen Estimation under Organic Production Nitrogen Estimation under Organic Production System in Nadia District, West Bengal, India

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Abstract—*With the progress of Soil Science, different extractants were developed to assess total organic nitrogen of soil. Among them, Sequential extraction is used widely though it is tedious, time consuming having with potential errors and at times not very reproducible. To overcome this hurdle, developing a novel extractant is an important alarming issue in present day agriculture. In this experiment, Soils were sampled from different well-recognized organic farms and conventional farms of New Alluvial Zone in Nadia district of West Bengal. A set of extractants comprising graded strength of NaOH [0.125 to 1.0 (M) EDTA were used to extract different inorganic nitrogen fractions. On the other hand, popular $KMnO_4$ oxidisable nitrogen (conventional method) was also measured for all soil samples. Among the extractants, 0.375 (M) NaOH + 0.05 (M) EDTA extracted heighest amount of inorganic nitrogen recording 784 kg N.ha⁻¹ in 84 days after incubation in Phulia and Gayeshpur sites of Nadia district rather than conventional method. The modified method manifested better estimation of inorganic nitrogen status of soil. The outcome of the present exercise will help to develop novel soil tests method for routine nitrogen estimation to serve the need of organic farmers.*
