

EXPERIMENTAL APPROACH FOR IMPROVEMENT OF SOIL FERTILITY BY DOSE ADMINISTRATION OF CHEMICAL AND ORGANIC FERTILIZERS IN KHARIF RICE FIELD

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Abstract: Experimental approach was taken up by dose administration of chemical (CDCF-chemical dose commonly used by farmers; CDRA-chemical dose recommended by Agriculture Dept., Govt. of WB) and organic fertilizers (ODAC-organic dose using *Azolla* and cow-dung and ODAO-organic dose by using *Azolla* only) in Kharif rice field at Chandipur, North 24 Parganas district of West Bengal in two consecutive years (2015 and 2016) for continuous monitoring of the soil fertility by analyzing different physicochemical properties (texture, water holding capacity, moisture content, pH, EC, organic carbon, organic matter, total Nitrogen, available Nitrogen, Phosphorous, and Potassium) of soil applicable for measurement of soil health. The comparative assessment of the studied soil parameters depict that among all the administered doses, presently proposed organic fertilizer dose of *Azolla* (900kg/hectare land) and cow dung (3150 kg/hectare land) is proved best for enhancing soil fertility over the years and this should be promoted for sustainable rice farming.

Keywords: *Azolla*, Cow dung, Green revolution, Organic matter, Total Nitrogen, Water holding capacity

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