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STUDIES ON THE MINERALIZATION OF ORGANIC MATTER IN TWO HIGH ORGANIC MATTER CONTAINING RICE SOILS

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The potential for mineralization of two high organic matter containing rice soils, one each from the Bolgoda and Irranavillu Drainage and Reclamation Schemes, was studied. The amount of carbon dioxide evolved was taken as an index of the rate of mineralization.

The Bolgoda soil which had the higher quantity of organic matter liberated more carbon dioxide than the Irranavillu soil, upon incubation, as measured using a Collin's calcimeter.

Submerged conditions retarded rate of evolution of carbon dioxide. Addition of lime had little effect on mineralization within the first three weeks whereas glucose and peptone increased it appreciably. Readily available nitrogen and phosphorus fertilizer had no effect on mineralization.

Release of nitrogen from mineralization was increased by additions of urea and peptone, whereas addition of glucose had opposite effect. Submerged conditions retarded nitrogen release. Lime application was found to increase nitrogen release in the more acidic Irranavillu soil.

These results are discussed in relation to fertility of these soils.