D-49: Qualitative and a quantitative analysis of micro-vermiforms of paddy-field fauna

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A qualitative and a quantitative analysis of micro-vermiforms of paddy-field soil was done during cultivated (wet) and uncultivated (dry/fallow) periods. Measured amounts of soil from bund and middle of the field were tested separately, at regular intervals during each phase. Temperature and pH were measured.

Since Enchytraids and Lumbricids were present in negligible numbers, the evaluation was based on the nematodes. In the fallow phase there was an alternative fluctuation in the number of nematodes in the bund and soil. Parasitic forms were more abundant than free-living forms. This was more pronounced in the bund. During the cultivated phase, the total number of nematodes contained in the bund was low, however the proportion of parasitic forms were higher.

In contrast, the number of nematodes was high in the field soil. However, after harvesting, the total number of nematodes reduced drastically in the field soil while the number in the bund soil increased significantly.

During fallow and cultivated phases, *Hirshmanniella, Helicotylenchus* dorylaimids, *Macroposthonia*. Rhabditid types etc. dominated the field. The variation of the nematode fauna during the fallow phase was less. However, the sudden increase in the number during the cultivated phase, especially towards the latter period, could be due to availability of roots, aeration and water, increase in the number of nutrifiers and nutrification capacity, changes in the pH etc. There could be a free movement of nematodes between bund and the middle of the field to a certain extent.