

A Quantitative Evaluation of Nematodes in Cultivated Rhizosphere Soil

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The direct count and MPN(Most Probable Number) methods were used to measure the number of nematodes in soils collected from cultivated and non-cultivated fields. As a result, the number of nematodes from cultivated soils was higher than the non-cultivated soils(NC-1, NC-2). On the other hand, upon measuring the value from the organo farming cultivated soils (OB, OR) and conventional cultivated soils (CB, CR), the values from the organic farming cultivated soil showed 16 times higher than the conventional soil. These results indicate that nematode population which can multiply in the organic compounds abundantly exist in the organic farming cultivated soil. Isolated entomopathogenic nematodes are composed of two orders, which were *Rhabditida* and *Diplogasterida*. To determine the pathogenicity *Rhabditida* nematode stains using the 5th larvae and pupae silkworm, the following mean LD₉₀ values were found: 24 and 30 hours, respectively, *Diplogasterida* nematode stains, 36 and 48 hours. This study indicates that nematodes are sensitive to this kind of environmental disturbance. Isolated entomopathogenic nematodes were demonstrates that are quite within the realms of possibility for biological control agents.