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RESEARCH PAPER

Microbial biomass and total nitrogen as affected by organic and conventional farming systems in soils of southern Karnataka, India

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Abstract : In the past decade, there has been increased scientific interest in organic farming, especially in comparison with conventional agriculture. Many recent studies compare these two fundamentally different systems for soil properties, in different regions of the world. Soil samples from two depths (0-15 cm and 15-30cm) collected from 4 farmer's fields each under different periods of practicing of organic farming (0-3 years, 3-6 years and over 6 years) and same number of soil samples collected from neighboring conventional farming fields in central dry agro-climatic zone and southern dry agro-climatic zones of southern Karnataka during 2008 and 2009 were studied to determine the effects of these two agricultural systems on soil properties at the farm level. The fields under organic management showed significantly better soil nutritional and biochemical attributes; with increased level of total nitrogen, an increased microbial biomass content. Results of the study suggest that, over the period of organic management system strongly affects soil properties.

Key Words : Organic farming, Conventional farming, Soil microbial biomass, Total nitrogen

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