

IMPACT OF SOME INSECTICIDES APPLICATION ON SOIL RESPIRATION IN AN ALLUVIAL SOIL

ABSTRACT : The aim of the study is to assess the effect of three different insecticides viz. Triazophos Carbaryl, Neemarin (Azadiractin formulation) belonging to different groups namely Organophosphate, Carbamate and Botanical insecticide on basal and substrate induced soil respiration under controlled laboratory conditions in an alluvial soil. The insecticides were applied to the soil at field recommended dose (FR) i.e. 0.1327mg/kg for Triazophos 0.8296 mg/kg for Carbaryl, 0.0021mg/kg for Azadiractin formulations and 10 fold the recommended dose (10 FR).The incubation study was carried out at 60% water holding capacity of the soil at 30⁰C. The result clearly shows that at FR dose Triazophos and Azadiractin formulations has short term inhibitory effect on basal and substrate induced respiration while Carbaryl has short term stimulatory effect. At 10 FR dose the extent of effects in comparison of FR dose were much more distinct.

Key words: **Basal soil respiration (BSR), Substrate induced soil respiration (SIR), Triazophos, Carbaryl, Azadiractin formulation.**
