

Analysis of Population and Growth Rate Methanotrof Bateria as Reducers Methane Gases Emission in Rice Field

Authors : Maimuna Nontji

Abstract : The life cycle of rice plant has three phases of growth; they are the vegetative, reproductive and maturation phase. They greatly affect the life of dynamics metanotrof bacterial as reducer methane emissions in the rice field, both of population and on the rate of growth. The aim of this study was to analyze the population and growth rate of methanotrof isolates which has been isolated in previous studies. Isolates were taken at all the life cycle of rice plant. Population of analysis was conducted by standard plate count method and growth rate was analysed by logarithmic calculation. The results showed that each isolate varied in population and growth rate. The highest population was obtained in the isolates Gowa Methanotrof Reproductive (GMR 8) about 7.06×10^{11} cfu / ml on 3 days of incubation and the lowest population was obtained in the Gowa Methanotrof Maturation (GMP 5) about 0.27×10^{11} cfu / ml on 7 day of incubation. Some isolate were demonstrated in long growth rate about 5 days of incubation and another are 3 days.

Keywords : emission, methanotrof, methane, population

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