

Morphological Identification and Growth Rate of Various Bacterial Groups of Sugarcane Soil Exploration in Fermented Liquid

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ABSTRACT

Research related to morphological identification and growth rates of various groups of sugarcane land soil exploration bacteria in fermented liquid was conducted in September - October 2022 at PG Pradjekan PTPN XI Bondowoso. This research method uses observation method and descriptive data analysis, namely by observing changes in color and odor every week and in laboratory analysis which is then explained descriptively. The results of the research of soil exploration bacteria that grow in this cemented liquid are Pseudomonas spp, Rhizobium spp, Azotobacter spp, and Lactobactillus spp. Colony morphology of sugarcane soil exploration bacteria includes shape, color, size, elevation, surface, edge, gram staining, and cell shape. The total growth of sugarcane soil exploration bacteria in the first week was $3,4 \times 10^7$ or 34,000,000 CFU/ml, the second week of sugarcane soil exploration bacteria growth was $1,97 \times 10^8$ or 197,000,000 CFU/ml, and the third week of sugarcane soil exploration bacteria growth was $6,2 \times 10^7$ or 62,000,000 CFU/ml.

Keyword: *Bacteria, Morphology, Rate of Growth*