
Isolasi, Identifikasi, dan Analisis Karyotipe *Biofertilizer*-Mikroalga dari Tanah Persawahan Desa Tradisional Kasepuhan, Gunung Halimun, Jawa Barat

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Cyanobacteria are regarded as one of the most successful groups of prokaryot organisms in Earth history based on a fossil record (Golubic & Seong-Joo, 1999; Graham & Wilcox 2000). One of important roles carried out by cyanobacteria is their ability to convert inert atmospheric N₂ into a metabolically accessible form such as nitrate or ammonia (Newton & Orme-Johnson 1980). N-fixing cyanobacteria are known to be a prominent component of the microbial population in wetland soils, especially rice fields, contributing significantly to the fertility as biofertilizer (Jeong-Dong & Lee 2006). The aim of present research is collecting samples of soil algae from two villages Ciptagelar and Ciptarasa belong to Kasepuhan Region, located in National Park Halimun Salak, West Java, Indonesia. People in Kasepuhan Region are known as farmers who preserve their cultures, including traditional paddy plantation system. The result showed that 8 genera from 3 Order of Oscillatoriales (*Oscillatoria*, *Schizothrix*), Nostocales (*Anabaena*, *Nostoc*, *Scytonema*, *Cylindrospermum*), and Stigonematales (*Hapalosiphon*, *Fischerella*) were found. Most of identified species are collected from soil surface; not from 5-cm depth soil samples. This is concurrent with the theory that microbial biomass decreases with depth. Ten heterocyst-cyanobacteria have been successfully cultured, i.e *Anabaena* (1), *Nostoc* (6), *Fischerella* (2), dan *Hapalosiphon* (1). Two N-fixing isolates (Cpg06-00 and Cpg08-00) showed nitrate production potency. Another aim of present research is to find staining chromosome technique for microalgae. It is found that Acetocarmin Staining Technique gave better result than Giemsa Staining Technique. Future plan of the research is to test the N-fixing potency of isolated heterocyst-cyanobacteria.