

ABSTRAK

Nostoc commune sering dijumpai di habitat terestrial maupun di habitat akuatik. *Nostoc commune* memiliki kegunaan untuk mengikat nitrogen yang berasal dari atmosfer, selain itu dimanfaatkan sebagai makanan atau obat-obatan. *Nostoc commune* di Indonesia masih sedikit pemanfaatannya, hal ini karena keberadaannya sering disalahartikan sebagai gulma persawahan. Tujuan penelitian ini untuk menganalisis kelimpahan dan biomassa *Nostoc commune* dari habitat persawahan, kolam lele dan sungai. Penelitian ini dilaksanakan dari bulan September-November 2022. Metode pengambilan sampel dan air yang digunakan yaitu *purposive sampling* di persawahan dengan 2 titik lokasi pengambilan sampel, kolam lele dengan 2 titik lokasi pengambilan sampel, dan sungai dengan 2 titik lokasi pengambilan sampel. Parameter kualitas air yang meliputi, nitrat, fosfat, amonia, TOM air, TOM sedimen, C/N rasio, tekstur sedimen. Data *Nostoc commune* diidentifikasi untuk mengetahui biomassa dan kelimpahan pada masing-masing lokasi. Hasil penelitian kelimpahan *Nostoc commune* terbanyak berada pada habitat persawahan sebesar 768,9 koloni/m². Hubungan kelimpahan *Nostoc commune* dengan faktor lingkungan menjelaskan bahwa kontribusi faktor lingkungan terhadap kelimpahan *Nostoc commune* sebanyak 77%, sedangkan sisanya 23% dipengaruhi oleh faktor lainnya. Tekstur sedimen pada persawahan dan kolam lele merupakan tipe substrat lanau, sedangkan pada sungai merupakan tipe substrat tanah liat berlanau. Hubungan kelimpahan *Nostoc commune* dengan tekstur sedimen menjelaskan bahwa kontribusi tekstur sedimen terhadap kelimpahan *Nostoc commune* sebanyak 59%, sedangkan sisanya 41% dipengaruhi oleh faktor lainnya.

Keyword: *Nostoc commune*, Kelimpahan, Biomassa, Habitat

ABSTRACT

Nostoc commune is often found in terrestrial and aquatic habitats. *Nostoc commune* is used to fix nitrogen from the atmosphere, and is also used as food or medicine. *Nostoc commune* in Indonesia is still little utilized, this is because its existence is often misinterpreted as a rice field weed. The purpose of this study is to analyze the abundance and biomass of *Nostoc commune* from rice fields, catfish ponds and rivers. This research was conducted from September to November 2022. The sampling method and water used is purposive sampling in rice fields with 2 sampling location points, catfish ponds with 2 sampling location points, and rivers with 2 sampling location points. Water quality parameters include nitrate, phosphate, ammonia, water TOM, sediment TOM, C/N ratio, sediment texture. *Nostoc commune* data were identified to determine the biomass and abundance at each location. The results showed that the highest abundance of *Nostoc commune* was in the rice field habitat with 768.9 colonies/m². The relationship between *Nostoc commune* abundance and environmental factors explained that the contribution of environmental factors to the abundance of *Nostoc commune* was 77%, while the remaining 23% was influenced by other factors. Sediment texture in rice fields and catfish ponds is a silt substrate type, while in rivers it is a silty clay substrate type. The relationship between *Nostoc commune* abundance and sediment texture explains that the contribution of sediment texture to *Nostoc commune* abundance is 59%, while the remaining 41% is influenced by other factors.

Keyword: *Nostoc commune*; Abundance; Biomass; Habitats