

ABSTRAK

Kegiatan budidaya rumput laut *Gracilaria* sp., pada area silvofishery Pantai Utara Jawa Tengah memiliki potensi ekonomi, serta kandungan nutrisi optimal. Penelitian ini bertujuan untuk menganalisis kandungan protein *Gracilaria* sp. serta faktor fisika-kimia air yang mempengaruhinya dengan pendekatan spasio-temporal di perairan tambak silvofishery Pantai Utara, Jawa Tengah. Metode penelitian menggunakan deskriptif komparatif, dengan mengkomparasikan hasil penelitian dan dijelaskan secara deskriptif. Pengambilan data menggunakan metode purposive random sampling. Pendekatan spasial dilakukan di empat lokasi, yaitu (S1: Brebes, S2: Tegal, S3: Pemalang, S4: Pekalongan), sedangkan pada pendekatan temporal dilakukan selama empat musim (Musim Peralihan II, Musim Barat, Musim Peralihan I, Musim Timur). Metode yang digunakan mencakup analisis kandungan protein dan TN menggunakan metode Kjeldahl dan pengukuran parameter fisika-kimia (suhu, salinitas, pH, DO dilakukan secara insitu total fosfor (TP) menggunakan metode spektrofotometri. Selanjutnya, analisis data menggunakan analisis deskriptif komparatif yang disajikan bentuk tabel kemudian dijelaskan secara deskriptif dan analisis data untuk mengetahui pengaruh faktor fisika kimia air menggunakan metode statistik Regresi Linear Berganda. Hasil analisis statistik menunjukkan, secara spasial parameter yang berpengaruh signifikan hanya DO (oksigen terlarut) diterima pada selang kepercayaan 99%. Secara temporal parameter yang berpengaruh signifikan hanya DO (oksigen terlarut), diterima pada selang kepercayaan 95%.

Kata kunci : *Gracilaria* sp., silvofishery, protein, spasio-temporal.

ABSTRACT

Cultivation of *Gracilaria* sp. seaweed, in the area of silvofishery area of the North Coast of Central Java has economic potential, as well as optimal nutrient content. This study aims to analyze the protein content of *Gracilaria* sp. and the physico-chemical factors of water that affect it with a spatio-temporal approach in pond waters. spatio-temporal approach in the silvofishery pond waters of the North Coast, Central Java. Research method using comparative descriptive, by comparing the results of research and described descriptively. Data collection using purposive random sampling method. Spatial approach was conducted in four locations, namely (S1: Brebes, S2: Tegal, S3: Pemalang, S4: Pekalongan), while the temporal approach was carried out during four seasons (Transitional Season II, Western Season, Transitional Season I, Eastern Season). Methods used included the analysis of protein and TN content using the Kjeldahl method and measurement of physico-chemical parameters (temperature, salinity, pH, DO). Total phosphorus (TP) was measured in situ using the spectrophotometric method. Furthermore, data analysis using comparative descriptive analysis which is presented in the form of a table and then explained descriptively tables and then explained descriptively and analyzed the data to determine influence of water chemistry physics factors using the Multiple Linear Regression statistical method. Multiple Regression statistical method. The results showed variations in protein content ranging from (9.94%-16.26%) in the spatial approach, while in the temporal range (1.64%-29.87%). The results of statistical analysis show that spatially, the only influential parameter is DO (dissolved oxygen) accepted on 99% confidence interval. Temporally, the only influential parameter is DO (dissolved oxygen), accepted on 95% confidence interval.

Key words : *Gracilaria* sp., silvofishery, protein, spatio-temporal.