

**Analisis Parameter Kualitas Air
Terhadap Pertumbuhan Ikan Nila (*Oreochromis niloticus*)
di Kolam *Teaching Factory* Bioteknologi Perikanan
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ABSTRAK

Kualitas air merupakan salah satu faktor utama yang memengaruhi keberhasilan budidaya ikan nila (*Oreochromis niloticus*) karena berperan dalam mendukung proses fisiologis dan pertumbuhan ikan. Penelitian ini bertujuan untuk menganalisis kondisi parameter kualitas air berupa suhu dan derajat keasaman (pH), menganalisis pertumbuhan ikan nila berdasarkan pertambahan panjang dan berat, serta menganalisis keterkaitan parameter kualitas air dengan pertumbuhan ikan nila di Kolam *Teaching Factory* Bioteknologi Perikanan Universitas Pendidikan Ganesha. Penelitian dilaksanakan pada bulan Februari hingga Juli 2025 dengan menggunakan metode penelitian deskriptif kuantitatif. Objek penelitian meliputi parameter kualitas air berupa suhu dan pH serta pertumbuhan ikan nila. Sampel penelitian terdiri atas 150 ekor ikan nila yang dipelihara pada tiga kolam budidaya, yaitu Kolam A, Kolam B, dan Kolam C. Data diperoleh melalui pengukuran suhu, pH, panjang, dan berat ikan, kemudian dianalisis secara deskriptif.

Hasil penelitian menunjukkan bahwa suhu air selama masa pemeliharaan berkisar antara 25,4–30,4°C, sedangkan nilai pH berkisar antara 7,6–8,3. Kisaran tersebut masih sesuai untuk mendukung pertumbuhan ikan nila. Pertumbuhan ikan mengalami peningkatan yang ditunjukkan oleh bertambahnya panjang dan berat tubuh selama masa pemeliharaan. Kondisi suhu dan pH yang relatif stabil mendukung proses metabolisme, pemanfaatan pakan, serta pertumbuhan ikan sehingga pengelolaan kualitas air di *Teaching Factory* Bioteknologi Perikanan Universitas Pendidikan Ganesha dinilai telah mendukung kegiatan budidaya ikan nila dengan baik.

Kata kunci: kualitas air, suhu, pH, pertumbuhan ikan, *Oreochromis niloticus*, *Teaching Factory*.

**Analysis of Water Quality Parameters on the Growth of Nile Tilapia
(*Oreochromis niloticus*) in the Fisheries Biotechnology Teaching Factory
Ponds**

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ABSTRACT

Water quality is one of the primary factors influencing the success of Nile tilapia (*Oreochromis niloticus*) cultivation, as it plays an essential role in supporting the physiological processes and growth of fish. This study aimed to analyze water quality parameters, namely temperature and pH, evaluate the growth of Nile tilapia based on increases in body length and weight, and examine the relationship between water quality parameters and the growth of Nile tilapia in the Fisheries Biotechnology Teaching Factory ponds at Universitas Pendidikan Ganesha. The study was conducted from February to July 2025 using a quantitative descriptive research method. The research objects included water quality parameters (temperature and pH) and the growth of Nile tilapia. The samples consisted of 150 Nile tilapia reared in three culture ponds, namely Pond A, Pond B, and Pond C. Data were collected through measurements of water temperature, pH, fish length, and fish weight, and were analyzed descriptively. The results showed that the water temperature during the rearing period ranged from 25.4 to 30.4°C, while the pH values ranged from 7.6 to 8.3. These ranges were suitable for supporting the growth of Nile tilapia. Fish growth increased throughout the rearing period, as indicated by increases in both body length and weight. Relatively stable temperature and pH conditions supported metabolic processes, feed utilization, and fish growth. Therefore, water quality management at the Fisheries Biotechnology Teaching Factory of Universitas Pendidikan Ganesha was considered effective in supporting Nile tilapia aquaculture activities.

Keywords: water quality, temperature, pH, fish growth, *Oreochromis niloticus*, Teaching Factory.