

ABSTRAK

KELAYAKAN USAHA BUDIDAYA IKAN NILA *BLACK PRIMA* DI KOLAM AIR DERAS (Kasus di Dhifiari Fish Farm)

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Budidaya perikanan berperan penting dalam mendukung ketahanan pangan dan perekonomian nasional. Salah satu komoditas potensial adalah ikan nila (*Oreochromis niloticus*), khususnya varietas Nila *Black Prima* yang unggul dalam pertumbuhan cepat, tahan penyakit, dan adaptif terhadap kepadatan tinggi. Namun, kajian terkait kesesuaian teknis dan kelayakan finansial budidaya varietas ini pada sistem kolam air deras masih terbatas. Kolam air deras merupakan sistem budidaya dengan aliran air yang mengalir terus-menerus di kolam beton. Sistem ini menjaga kualitas air, meningkatkan oksigen terlarut, dan memungkinkan padat tebar tinggi, sehingga mendukung pertumbuhan ikan. Meski demikian, sistem ini memerlukan pasokan air besar dan manajemen teknis intensif. Sistem seperti kolam tanah, kolam terpal, dan bioflok juga digunakan di perikanan, masing-masing dengan keunggulan dan tantangan tersendiri, tergantung kondisi lahan, modal, dan tujuan usaha. Penelitian ini bertujuan mengkaji (1) kesesuaian teknis budidaya, (2) biaya, penerimaan, dan pendapatan, serta (3) kelayakan finansial budidaya Nila *Black Prima* di kolam air deras. Penelitian dilaksanakan April–Juli 2025 di Dhifiari Fish Farm, Kecamatan Sukarama, Kabupaten Tasikmalaya, menggunakan 44 kolam berukuran 15-24 m² dengan debit air ± 30 liter/detik. Sebanyak 42.122 ekor benih ditebar dengan bobot awal 25–35 gram/ekor dan dipelihara selama empat bulan. Pakan pelet diberikan 2–3 kali per hari, didukung manajemen air ketat dan penggunaan probiotik. Hasil menunjukkan FCR 1,40 dan mortalitas 5,04%, mencerminkan efisiensi teknis yang baik. Secara finansial, penerimaan Rp 330.000.000 dengan biaya Rp 240.650.168 menghasilkan pendapatan bersih Rp 89.349.832. Nilai R/C Ratio 1,37 membuktikan usaha ini layak secara ekonomi.

Kata kunci: Ikan Nila *Black Prima*, Kolam Air Deras, Kelayakan Teknis,
Kelayakan Usaha

ABSTRACT

FEASIBILITY STUDY OF BLACK PRIMA NILE TILAPIA FARMING IN RACEWAY PONDS (Case in Dhifiari Fish Farm)

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*Aquaculture plays a vital role in supporting food security and the national economy. One promising commodity is Nile tilapia (*Oreochromis niloticus*), particularly the Black Prima variety, known for its fast growth, disease resistance, and adaptability to high stocking densities. However, studies on the technical suitability and financial feasibility of this variety in running water pond systems remain limited. Running water ponds are culture systems with continuous water flow in concrete ponds, ensuring good water quality, high dissolved oxygen, and allowing dense stocking. This system promotes optimal fish growth but requires abundant water and strict management. Other systems such as earthen ponds, tarpaulin ponds, and biofloc systems offer different advantages and limitations depending on land conditions, capital, and business objectives. This study aimed to assess (1) technical feasibility, (2) costs, revenues, and income, and (3) financial viability of Black Prima tilapia farming in running water ponds. The research was conducted from April to July 2025 at Dhifiari Fish Farm, Sukarama District, Tasikmalaya Regency. A total of 44 running water ponds (15-24 m² each) with a water discharge of ± 30 liters/second were used. About 42,122 fingerlings (25–35 g/fish) were stocked and cultured for four months. Feeding was done 2–3 times daily with floating pellets, supported by strict water management and probiotics. The results showed an FCR of 1.40 and a mortality rate of 5.04%, reflecting good technical efficiency. The business generated IDR 330,000,000 in revenue with total costs of IDR 240,650,168, yielding a net income of IDR 89,349,832 (IDR 22,337,458/month). An R/C Ratio of 1.37 confirmed its economic feasibility. With proven efficiency and promising profits, Black Prima tilapia farming in running water ponds is feasible for sustainable aquabusiness.*

Keywords: *Black Prima Tilapia, Running Water Pond, Technical Feasibility, Business Viability*