

ABSTRACT

FORMULATION STUDY AND FINANCIAL FEASIBILITY ANALYSIS OF FISH FEED BASED ON FERMENTED CASSAVA RESIDUE WITH THE ADDITION OF FERMENTED CHICKEN FEATHER MEAL

By

DIVA DEVALDA REYNA YOLANDA

Feed was an important component in supporting fish growth and survival. The use of highly nutritious local ingredients served as a solution to reduce production costs and improve aquaculture efficiency. This study aimed to analyze the optimal formulation of fish feed based on fermented chicken feather meal and cassava residue, as well as to assess its financial feasibility. A descriptive method was applied, incorporating protein content analysis of various raw materials, including fish meal, fermented chicken feather meal, rice bran, and fermented cassava. The results indicated that the best formulation was Formulation 6 (F6), with a protein content of 29.43%, consisting of 27% fermented chicken feather meal, 27% fermented cassava, 36% rice bran, 6% tapioca, and 4% vitamins and minerals. This formulation successfully met the protein requirements for fish, substituted fish meal, and utilized nutrient-rich waste optimally. The financial analysis of F6 showed that the business was feasible, with a Net Present Value of Rp 30,888,956 (positive), an Internal Rate of Return of 33.41% (above the discount rate), and a Net Benefit-Cost Ratio of 1.04 (>1), indicating that the feed production initiative was profitable and had promising prospects.

Keywords: fish feed, fermented chicken feather meal, feed formulation, financial analysis

ABSTRAK

KAJIAN FORMULASI DAN ANALISIS FINANSIAL PAKAN IKAN BERBASIS ONGGOK FERMENTASI DENGAN PENAMBAHAN TEPUNG BULU AYAM FERMENTASI

Oleh

DIVA DEVALDA REYNA YOLANDA

Pakan merupakan komponen penting dalam mendukung pertumbuhan dan kelangsungan hidup ikan. Penggunaan bahan lokal bernutrisi tinggi menjadi solusi untuk menekan biaya produksi dan meningkatkan efisiensi budidaya. Penelitian ini bertujuan untuk menganalisis formulasi terbaik pakan ikan berbasis tepung bulu ayam dan onggok fermentasi, serta menilai kelayakan finansialnya. Metode yang digunakan adalah penelitian deskriptif dengan analisis kadar protein dari berbagai bahan baku, antara lain tepung ikan, tepung bulu ayam fermentasi, dedak, dan onggok fermentasi. Hasil penelitian menunjukkan bahwa formulasi terbaik adalah Formulasi 6 (F6) dengan kadar protein 29,43%, yang terdiri dari tepung bulu ayam fermentasi (27%), onggok fermentasi (27%), dedak (36%), tapioka (6%), serta vitamin dan mineral (4%). Formulasi ini dinilai mampu mencukupi kebutuhan protein ikan, menggantikan tepung ikan, dan memanfaatkan limbah bernutrisi secara optimal. Analisis finansial terhadap F6 menunjukkan bahwa usaha ini layak dijalankan, dengan nilai NPV sebesar Rp 30,888,956 (positif), IRR 33.41% (lebih tinggi dari tingkat diskonto), serta Net B/C sebesar 1,04 (>1), yang menunjukkan usaha pembuatan pakan ini prospektif dan menguntungkan.

Kata kunci: pakan ikan, tepung bulu ayam fermentasi, formulasi pakan, analisis finansial