

ABSTRACT

FEASIBILITY ANALYSIS OF TECHNICAL AND FINANCIAL ASPECTS OF MAGGOT BUSINESS USING RAW MATERIAL OF OLD PALM OIL TRUNK DRAIN FREE OF SINCH

By

NANDO SAPUTRO

Old oil palm stems contain various valuable components such as cellulose (45-50%), hemicellulose (25-35%), and starch (3-5%) which could be converted into various value-added products. This research was conducted to determine the feasibility analysis of technical and financial aspects of maggot farming using sap-free old oil palm stem pulp raw material. The methods used in this research were direct surveys, interviews, observations, documentation, and literature studies, which were analyzed using technical and financial feasibility indicators, and sensitivity analysis. The results showed that this business was technically feasible with market demand, raw material availability, additional material availability, and efficient production. Financially, it showed an NPV of Rp 73,240,859, IRR of 196%, B/C Ratio of 11.99, production BEP of 3,269 kg, and Payback Period of 1 year. Sensitivity analysis showed that the business remained feasible to operate despite 25% increase in production costs based on inflation factors of raw materials and other components. Based on the results obtained, this maggot farming business had good prospects source of additional income and could support agroindustrial or plantation waste management efforts.

Keywords: *Black Soldier Fly maggots, technical feasibility, financial, old oil palm trunks*

ABSTRAK

ANALISIS KELAYAKAN ASPEK TEKNIS DAN FINANSIAL USAHA MAGGOT BERBAHAN BAKU AMPAS BATANG KELAPA SAWIT TUA BEBAS NIRA

Oleh

NANDO SAPUTRO

Batang kelapa sawit tua mengandung berbagai komponen berharga seperti selulosa (45-50%), hemiselulosa (25-35%), dan pati (3-5%) yang dapat dikonversi menjadi berbagai produk bernilai tambah. Penelitian ini dilakukan untuk mengetahui analisis kelayakan aspek teknis dan finansial usaha maggot berbahan baku ampas batang kelapa sawit tua bebas nira. Metode yang digunakan dalam penelitian ini adalah survei langsung, wawancara, observasi, dokumentasi, dan studi pustaka, serta dianalisis menggunakan indikator kelayakan teknis dan finansial, dan analisis sensitivitas. Hasil menunjukkan bahwa usaha ini layak secara teknis dengan permintaan pasar, ketersediaan bahan baku, lalu ketersediaan bahan tambahan serta produksi yang efisien. Secara finansial dengan NPV sebesar Rp 73.240.859, IRR 196%, B/C Ratio 11,99, BEP produksi 3.269Kg, dan *Payback Period* selama 1 tahun. Analisis sensitivitas menunjukkan usaha tetap layak dijalankan meskipun terjadi kenaikan biaya produksi berdasarkan faktor *inflasi* bahan baku dan komponen lainnya sebesar 25%. Berdasarkan hasil yang diperoleh, usaha maggot ini memiliki prospek yang baik sebagai sumber pendapatan sampingan serta dapat mendukung upaya pengelolaan limbah agroindustri atau perkebunan.

Kata kunci: Maggot Black Soldier Fly, kelayakan teknis, finansial, batang kelapa sawit tua.