

Perancangan Unit Pengolahan Dan Analisis Kelayakan Usaha Produksi

Tepung Umbi Porang Kapasitas 300 Kg/Hari

*(Processing Units of Design and Feasibility Analysis for the Production of
Porang Tuber Flour with a Capacity 300 Kg/Day)*

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ABSTRACT

The porang tuber plant is a plant that belongs to the type of taro which is still in the same family as suweg and walur. The price of wet porang tubers ranges from IDR 1,000 to IDR 3,000 kg/kg. Porang tuber flour comes from the porang tuber plant which has a high protein content and is low in fat. This study uses a quantitative descriptive research method by collecting data from various journals and literature studies. Data analysis in this study includes technical aspects and financial aspects. The results of the study stated that the location of the factory in Madiun Regency had a production capacity of 98,894 kg per year, the process of making porang tuber flour started from stripping-packaging. The operations map consists of 7 operations, 1 inspection, and 1 dual activity. Mass balance 1146 kg, energy balance 104 MJ, machines and equipment 2 peeling machines, 2 washing machines, 1 tasting machine, 1 drying machine and 1 milling machine. The designed factory has a total area of 700 m², requires 118.37 kWh of electrical energy, 10,000 liters of water, and 10 hours of work. Initial factory investment IDR 906,850,000, Value of residual assets IDR 485,040,000, COGS IDR 33,389, Cashflow in the last year IDR 7,338,376,682, MIRR 48.1%, NPV 3,944,937,756, BEP 62,859 kg, business efficiency 1.26, and PP 1.12 years.

Key words : BEP, finansial, MIRR, factory, porangtubers