

**Perancangan Unit Pengolahan Sari Jeruk Siam Semboro Kualitas *Low Grade*  
Kapasitas 10.00 Liter/Bulan**

(Design and Development of a Low-Grade Semboro Siamese Orange Juice  
Processing Unit with a Monthly Capacity of 10,000 Liters)

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***ABSTRACT***

*Orange is one of the national commodity products that has an important value for the country's foreign exchange. Siamese orange (Citrus nobillis Lour var.microcorva) is a horticultural plant that has good prospects because it is needed by both domestic and foreign countries, rich in vitamin C and other substances that have benefits for body health. The purpose of this study was to obtain the design of a Semboro Siamese orange juice processing unit and the feasibility of establishing a Semboro Siamese orange juice business. The establishment of the Semboro Siamese orange juice unit is located in Jember Regency, Jombang District, East Java with a built area requirement of 355 m<sup>2</sup>. The production capacity of Semboro Siamese orange juice with raw materials is 1,050 kg per day. From the financial aspect, the Net Present Value (NPV) was obtained of Rp 7,670,201,856, Benefit/Cost Ratio (B/C Ratio) 1.66, Internal Rate of Return (IRR) 21.9%, and Payback Period (PBP) 3 years 7 months. Based on the results obtained, the establishment of a Semboro Siamese orange juice processing unit is feasible to be realized because the criteria values for financial feasibility are very much met with NPV > 0, B/C ratio > 1, IRR > 13%, and PBP < 6 years.*

*Keywords: NPV, B/C Ratio, IRR, PBP*