

**MODELING OF CRYTAL SUGAR PRODUCTION SYSTEM AT SEMBORO  
SUGAR FACTORY AND ITS CONTRIBUTION TO  
NATIONAL SUGAR NEEDS**

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**ABSTRACT**

*Sugar is one of the important commodities in Indonesia economy market. The needs of sugar in Indonesia is continue to increase, however the production of sugar does not meet the needs of people and for industry, it is inflict the government importing sugar. Its production system which has always worked with sugar cane farmers, has caused the government to establish some policies and regulations. This research aims to determine the factors that affect production and the system that serves to maintain productivity and continuity of sugar distribution which has impact on the availability of sugar for consumption and industrial needs on a national scale. This research was applied expert system method and scientific system approaches in management. System modeling is a model establishment study that illustrates simulations related to the problem of sugar production to identify the factors that establish the sugar production system and solve problems of national sugar availability for the next 5 years. The scenario test that applied in this research were scenario, optimistic and pesimistic. Based on the supporting factors of Crystal Sugar production system in Semboro sugar factory and its contribution to National Sugar Availability is land area, production process, market share ,cost and income. The most influential factor for market share of Semboro sugar factory is the area that continues to change and tends to decrease every year, especially for local sugar cane.*

**Key Words :** *Production Systems, Sugar Supplies, System Modeling.*

Note:

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