Dynamic System Modeling of Baked Banana Chips Production at CV Sunresist Indonesia in Jember

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ABSTRACT

The production process is a set of activities that form a system with various dynamic components. CV Sunresist Indonesia *is the only one of baked banana chips producer in the Jember Regency. This study aims to identify the dynamics of the baked banana chips production system at* CV Sunresist Indonesia *to develop projections for the future as an alternative or supporting decision-making for the company. This exploratory, descriptive research applies the case study method with an expert system approach. The subject of this research is the production system of baked banana chips at* CV Sunresist Indonesia*, which was determined through a purposive sampling technique. An open-ended questionnaire was selected as the research instrument, after which Powersim Studio Version 10 software was used to process the obtained quantitative data. Dynamic system modeling in this study was carried out based on subsystems with the most significant influence on the sustainability of the production system, namely the raw material subsystem, the processing subsystem, and the cost, revenue, and profit subsystem. The results of this research include a system model design whose validity level has been tested with the MAPE method, and an average deviation of* 0.82% *was obtained, so the model design is categorized as very precise in representing the actual system. Other research results are projection results divided into three scenarios: moderate, optimistic, and pessimistic.*

Key words: *System Modeling, Dynamic System, Production System, Banana Chips*