Dynamic System Modeling of Production and Marketing Barlin Banana Sale Products (Musa acuminata AA.) at UD Mak Enak, Sumbersari District, Jember Regency

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ABSTRACT

This research was conducted at UD Mak Enak, Sumbersari District, Jember Regency, which is a descriptive quantitative exploratory study using the expert system method and a systems approach to the analysis process. Sampling was carried out deliberately, using samples selected according to the research to be carried out. The samples used in this study were business owners and people who know and understand the processing of barlin banana sale products. Data collection was carried out using interview sampling techniques by providing open questionnaires for informants as research respondents. The results of data mining were then compiled in a system model using Powersim Constuctor Version 2.5 software. This research resulted in a dynamic system model with the topic of production and marketing of UD Mak Enak's barlin banana sale products with a very precise or good level of validity with a MAPE yield of less than 5%. The design of the system model refers to several subsystems that greatly influence the production and marketing process, including the raw material subsystem, processing subsystem, and cost, revenue and profit subsystem. The model that has been developed and has been tested for validity is then used to project the future state of the company using three scenarios, including moderate scenarios, optimistic scenarios, and pessimistic scenarios.

Keywords : System modelling, dynamic system, production, marketing, barlin banana sale