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Production Control Model of Crude Palm Oil Supply Chain Operations

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Abstract

The industry's challenge is to increase operational efficiency. The main problem in the crude palm oil agro-industry is managing the supply chain, especially upstream. This study builds a model for managing the supply chain upstream of the crude palm oil agro-industry. The supply chain units involved are plantations, mills, and shipping. The research stages include mathematical formulation, application design, and model testing. The resulting mathematical model involves all the important elements represented in variables and parameters. This paper carries out a more advanced study by formulating a problem in a multi-objective optimization type. Application design helps decision-makers in analyzing operations in the next few periods. Mathematical formulation and application design are important components of a decision support system.

Keywords: supply chain, plantation, factories, shipping, decision support