

Inventory Management System of Seasonal Raw Materials of Feeds at San Jose Batangas through Integer Linear Programming and VBA

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Abstract : The branch of business management that deals with inventory planning and control is known as inventory management. It comprises keeping track of supply levels and forecasting demand, as well as scheduling when and how to plan. Keeping excess inventory results in a loss of money, takes up physical space, and raises the risk of damage, spoilage, and loss. On the other hand, too little inventory frequently causes operations to be disrupted and raises the possibility of low customer satisfaction, both of which can be detrimental to a company's reputation. The United Victorious Feed mill Corporation's present inventory management practices were assessed in terms of inventory level, warehouse allocation, ordering frequency, shelf life, and production requirement. To help the company achieve their optimal level of inventory, a mathematical model was created using Integer Linear Programming. Due to the season, the goal function was to reduce the cost of purchasing US Soya and Yellow Corn. Warehouse space, annual production requirements, and shelf life were all considered. To ensure that the user only uses one application to record all relevant information, like production output and delivery, the researcher built a Visual Basic system. Additionally, the technology allows management to change the model's parameters.

Keywords : inventory management, integer linear programming, inventory management system, feed mill

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