

Peeranuch Sornyen 2007: Raw Material Inventory Management of a Feed Mill. Master of Arts (Agribusiness), Major Field: Agribusiness, Department of Agricultural and Resource Economics. Thesis Advisor: Assistant Professor Visit Limsombunchai, Ph.D. 142 pages.

The main objectives of this study are to study the raw material inventory management of a feed mill and to minimize the total inventory costs, which include material costs ordering costs and carrying costs. The data used in this study were obtained from a feed mill which cannot be named. Raw materials in this study are soy bean mill and corn which are the main ingredients of feed. Economic Order of Quantity (EOQ Model) and Linear Programming Model (LP Model) are used as the analytical tools to achieve the objectives of the study.

The study results show that the total inventory costs of soy bean mill and corn can be reduced to 8,996,007.49 and 8,127,329.22 Baht, or by 1.76 and 1.57 percent, respectively, when the EOQ Model is used for controlling the raw material inventory. The reductions in ordering costs are 221,553.72 and 647,107.25 Baht, which is equivalent to 29.96 and 78.49 percent, respectively. The carrying costs also decreased to 3,571,599.58 and 7,305,246.57 Baht, or 87.34 and 97.63 percent, respectively. Furthermore, the number of orders was reduced to 215 and 753, or 29.86 and 78.46 percent, respectively. When the LP Model is applied, the results show that the total inventory costs of soy bean mill and corn was reduced to 482,516.54 and 663,534.54 Baht, or 0.09 and 0.13 percent, respectively. The reductions in ordering costs are 482,702.74 and 659,549.41 Baht, which is equivalent to 65.28 and 80.00 percent, respectively. However, the model cannot decrease the carrying costs. The number of orders was reduced to 215 and 753, or 29.86 and 78.46 percent, respectively.

The results indicate that the EOQ Model yields lower total inventory costs, compared with the LP Model. The EOQ Model is based on the assumption that demand and price of raw materials are stable, but practically they are not. Therefore, the use of the LP Model to manage the raw material inventory is more appropriate. In addition, it can reduce the total inventory costs of the feed mill.

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Student's signature



Thesis Advisor's signature

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