

THE MAIN CHARACTERISTICS OF INVENTORY MANAGEMENT IN THE NORTH GREAT PLAIN REGION

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Summary

We undertook a project within the frame of Regional Operational Program which is called Investigations on Enterprises and on Operative Management in the Region of Northern Great Plain. The second subprogram of this project is Investigations on Operative Management, within this we deal with inventory management as third partial program. We carried out a survey among agricultural enterprises in the Northern Great Plain Region aiming at revealing the inventory management of these enterprises. According to our results, inventory management is rather a theoretical issue as it turned out that agricultural enterprises are hardly aware of methods, costs, special indicators relating to inventory management. Education, extension service, research results can help farmers and entrepreneurs in getting acquainted with the up-to-date knowledge on inventory management.

INTRODUCTION

Where material flows break in space or time, stock develops. Inventory with its establishments, installation and equipment serves to save the consistence of stock and to harmonize material flows. Traditionally, companies maintained generous inventory levels to meet long-term customer demand because there were fewer competitors and products in a generally sheltered market environment. In the current international business environment, with more competitors and highly diverse markets in which new products are rapidly and continually introduced. Thus the level of inventory has increased. In production firms besides final products, there are stock of materials and equipment which serve production. The high cost of inventory has motivated managers to make the supply chain efficient, due to the non-harmonized transportations and much failure higher inventory level is necessary [1].

In this study we aim at investigating the characteristics of inventory management in the Northern Great Plain Region in Hungary focusing on inventory costs, ordering time and ordering quantity.

MATERIAL AND METHOD

Within the subprogram, we made a survey among agricultural enterprises in the Northern Great Plain on the major features of their inventory management, and practical realization. Altogether 148 enterprises got into the investigation. The questionnaire contained three main issues. In the first issue, we asked information on their inventory registration, then

in the second issue we inquired about their inventory costs, the ordering frequency, and the ordered quantity, and in the third issue we were interested in their storing methods. The survey was done in the autumn of 2006 and during the spring of 2007 by personally. The results were processed and analyzed by Excel for Windows.

RESULTS AND DISCUSSION

Inventory management is the enterprise activity which aims at ensuring the smoothness of material flows regarding the requirements of efficiency [2]. Usually, it is essential to reduce the level of inventory and to carry out a more effective and liquid production, as the costs of inventory are high. Though the entrepreneurs should consider the requirements of the consumers, too, as they expect that producers should have big and immediately available inventory stock. With respect to costs of inventory, 74% of the asked enterprises do not register the costs relating to inventory. The others tried to estimate the ratio of this cost from the whole cost of the production. It takes up about 20 to 25% from the total cost.

They were asked about uncertainty factors in inventory management and to give a score to these factors from 1 to 5. Figure 1. shows the average of their answers.

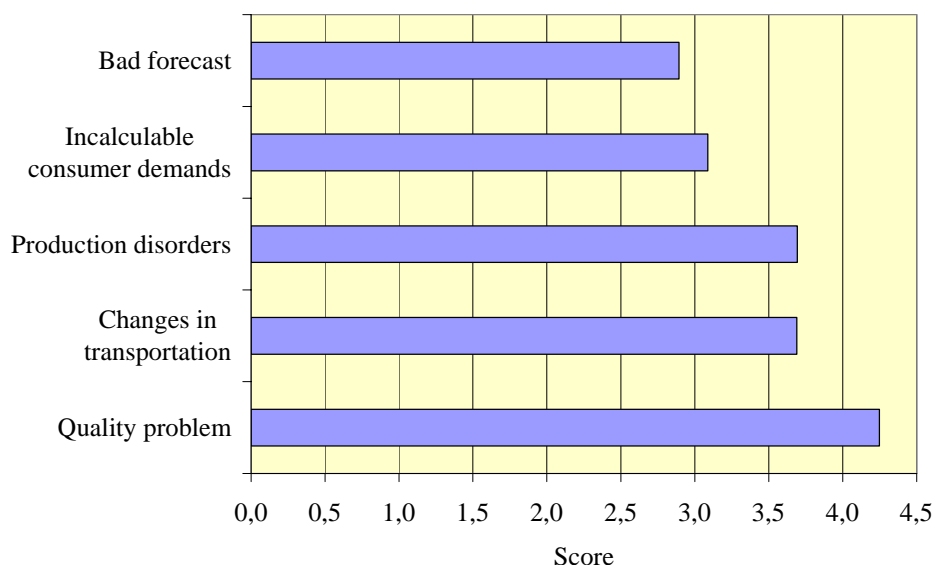


Figure 1. Uncertainty Factors in Inventory Management

As Figure 1. reflects, the most relevant uncertainty factor is the problem in the quality, followed by changes in transportation time and production disturbances.

The majority of the enterprises refills the inventory on their own and hardly asks for the help of transporters. It is crucial issue that how the products get to the consumers. 55% of them fulfill individual demands, 30% create products on the basis of a prepared plan for the consumers.

The two main questions of inventory management are „When to order?” and „How much to order?”. We examined both questions at the investigated enterprises. First, we inquired about the factors that influence the ordering time of inventory (Figure 2.). As it shows, the enterprises usually set the time of ordering in harmony with reaching a certain, minimal stock level.

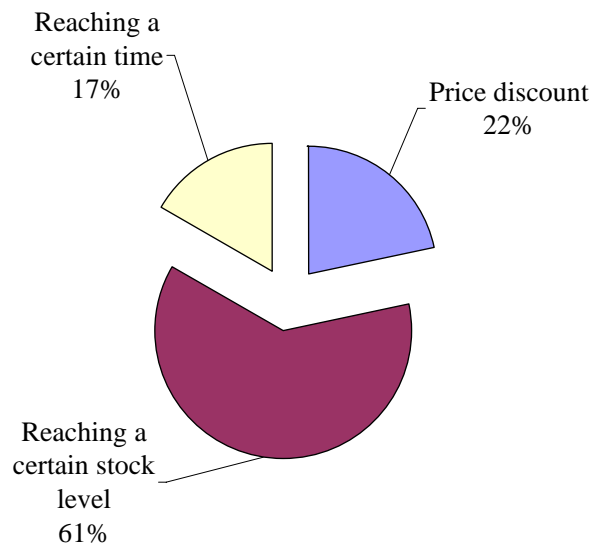


Figure 2. Factors Influencing Ordering Time

Then we asked about the factors influencing the ordering quantity. There are two main factors that determine the stock quantity, such as a fixed stock quantity determined in advance and a varying quantity necessary for reaching a certain, maximal stock level (Figure 3.). Price discount is not a significant factor in this case.

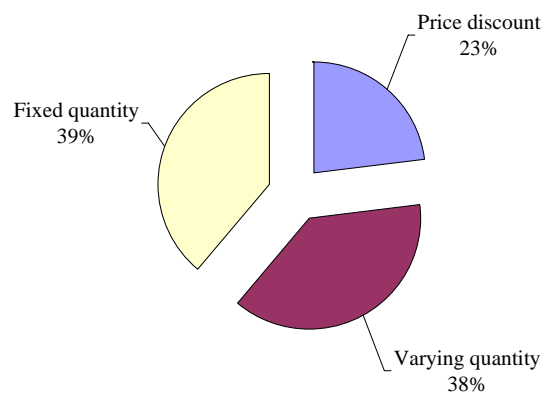


Figure 3. Factors Influencing Stock Quantity

It happens that a greater quantity is ordered than the usual. The reasons were scored from 1 to 5 in Figure 4.

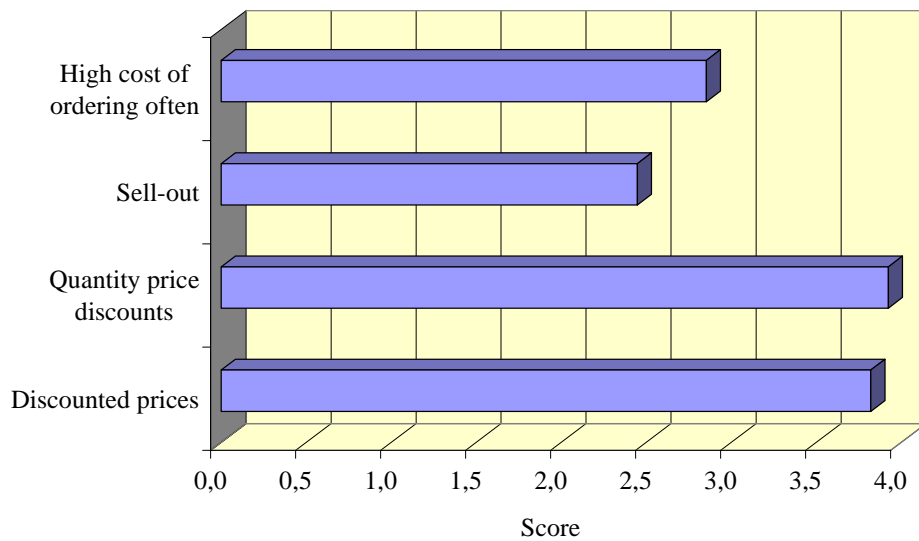


Figure 4. Reasons for Ordering Bigger Quantity

In general, the enterprises control the inventory continuously by bar-codes and Radio Frequency Identification. Sometimes they control it only at several times. However, none of the asked ventures uses the ABC classification method.

Unfortunately, very few enterprises determine the rotation speed of inventory that is how many times the inventory recovers from the revenue. Though it is an essential efficiency indicator in inventory management, the entrepreneurs are not aware of this.

CONCLUSIONS

According to our results, inventory management is rather a theoretical issue as it turned out that agricultural enterprises are hardly aware of methods, costs, special indicators relating to inventory management. They hardly use any computer program for evaluating or registering the inventory, and are not familiar with the ABC classification at all. They register the stock at average purchase price and mainly both in quantity and value at the place of the production. The ventures tend to determine the stock at a certain moment. The quality problem is the factor which is the most significant uncertainty condition in inventory management. The ordering time is different; it happens if the stock level reaches a determined minimal stock level. The ordering quantity is either fixed or varying. Due to the economy of scale, entrepreneurs tend to order larger quantity than the usual if there is a price discount for bigger quantity. Education, extension service, research results can help farmers and entrepreneurs in getting acquainted with the up-to-date knowledge on inventory management.

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