

# QUALITY MANAGEMENT OF DOMESTIC DAIRY ENTERPRISES BASED ON HACCP PRINCIPLES

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*The paper investigates the introduction of a quality management system based on the HACCP principles in the dairy industry. The benefits and costs on implementing HACCP system for dairy enterprises are determined in the article.*

**Keywords:** *quality management, quality management system, security products, dairy industry, enterprises, HACCP, food safety*

Problems of quality control of the dairy industry become especially important after Ukraine's accession to the WTO, resulting in increased requirements for products produced by these companies. Traditionally dairy industry is considered important sector of the food industry, because it provides the population of such vital foods like milk, milk products, butter. Food industry needs special attention in quality management because of what products are produced by food enterprises depends not only competitive position on the market, its image and profits, but also health of the population.

Statistics show that Ukraine in comparison with other European Union countries, significantly inferior to the production of this product only France and Germany, and is at the same level with Italy and the Netherlands [4].

However, if you analyze the quality of the products produced by domestic manufacturers of dairy products, it does not reach that level, which comes to the international market. First of all, this is due to the poor quality of raw materials, which generally comes to dairy enterprises of households that use manual labor. The second important reason for the low quality milk business is the lack of these enterprises an effective quality management system and product safety. The quality control system, which is formed on the basis of HACCP principles will allow companies to minimize risks associated with the quality and safety of products,

enter international markets and increase sales. Problems implementing HACCP actively explored both foreign and local researchers. Among foreign publications there are the papers of L. Unnevehr and M. Satin which research the cost and benefits of implementing HACCP from its implementation. Among Ukrainian researchers there are the works of L. Styrenko, N. Klyuvadenko, V. Terletska. However, the implementation of the management system of food safety activities in domestic food industry is slow. This leads to the need for additional study of the system, identify the costs and benefits of its implementation, impact on quality of products and the company.

In May 2012, draft amendments to several laws of Ukraine concerning the quality and safety of food. According to these changes, the system of food safety HACCP becomes mandatory for all market participants. In Ukraine, the application of the HACCP system is mandatory for all companies involved in the manufacture or introduction of the food. This is required by the Law of Ukraine "On the safety and quality of food", "On baby food." However, most enterprises of the dairy industry have not yet implemented a quality management system and HACCP Food Safety System [1].

According to European legislation, the entities that operate in the production, processing and distribution of food, placed full responsibility for the quality and safety of the products they manufacture or supply on the market. Since 2005, the implementation of HACCP has become mandatory for all food producers in the EU, and hence the requirement for companies importing food products in the EU.

HACCP "Hazard Analysis and Critical Control Points (Hazard Analysis and Critical Control Points)" is a system of evaluation and control of hazards of raw materials, processes and finished products, which aims to provide high quality and food safety. Implementation of HACCP system does not mean that the company has completely abandon previous methods and means of quality control. It requires the integration of existing procedures for quality management plan by HACCP, use

of which is compatible with the principles of universal management TQM and ISO 9000.

Implementation of HACCP system for domestic dairy industry has its costs and has its advantages (Table 1).

**Benefits and costs of implementation of food safety system based on HACCP**

The benefits of implementing HACCP	Costs on implementing HACCP
<ul style="list-style-type: none"><li>- Entering new markets</li><li>- Better access to the international market</li><li>- Growth of sales</li><li>- Improving the quality and safety of products</li><li>- Increase customer satisfaction</li><li>- Strengthening the credibility of enterprise</li><li>- Increased staff motivation</li><li>- Improving the financial and economic situation of the company</li></ul>	<ul style="list-style-type: none"><li>- Costs on the developing the implementing plan</li><li>- Costs for the purchase of monitoring and laboratory equipment</li><li>- Costs associated with staff training</li><li>- Purchase additional sanitary equipment</li><li>- Costs on corrective actions related to support systems</li></ul>

After analyzing the benefits of implementing HACCP, it should be emphasized that the main benefit of implementing HACCP is access to new markets. Expert in the dairy industry claims that the overall implementation of HACCP could double its sales in this market [3].

However, experts say the pressure from the supermarkets on their suppliers to strengthen food safety in the production and implementation of their HACCP. Trading network "Metro Cash & Carry Ukraine" and "Fozzy Group" have already begun HACCP require their suppliers of dairy products [3].

Another important reason for implementing HACCP is sales growth because of the establishment of higher product prices and increasing its sales. Similarly,

better access to international markets is one of the main advantages of the introduction of food safety management based on HACCP.

In Ukraine, as in other countries, the cost of software prerequisites is the largest item of expenditure for the implementation of HACCP. On average for the company, which is engaged in dairy, the expected total cost of these programs is about 250 000 (\$ 31,250) [3]. Certainly, these costs can be much greater if the company needs major construction or reconstruction of buildings and purchase of modern laboratory equipment. Developing and implementing HACCP consists of several low-cost measures, such as developing documentation, team building HACCP and conduct regular meetings and staff training. The expected cost of these measures is about 45 000 - 50 000 (\$ 5600 - \$ 6350).

Experience in implementation of food safety management indicates that the main obstacles of the implementation process is to develop a system that will actually work in a real production environment, because such a system would require a change in the work culture, psychological climate of the staff.

Thus, the HACCP system can be applied throughout the food chain from the primary producer to the final consumer. Besides enhancing food safety, other benefits in applying HACCP include more effective use of resources and more timely response to food safety problems. In addition, the application of the HACCP system can aid inspection by food control regulatory authorities and promote international trade by increasing buyer confidence in food safety.

The emergence of international standards ISO 22000 provides the same requirements to the level of food safety for all participants in the international food market. Therefore, the introduction of HACCP on the dairy industry will enhance the competitive position of domestic enterprises in the international market and increase the level of food security in the country.

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