

**PACKING OF GOODS AS A LOGISTICAL SYSTEM ELEMENT OF DAIRY INDUSTRY OF THE EAEU MEMBER-COUNTRIES****STARYTSYNA HANNA, SAMOYLOVA HANNA***Polotsk State University, Belarus*

*The annotation: the article is devoted to the package as a logistical system element of dairy companies - the EAEU members and also to the developing of a complex of events for perfection of the package at a dairy factory. It has been shown that a package plays an important role in logistics and fulfills a number of functions: protection, storage, warehousing, transportation, manipulation, information and utilization. As a result of the analyses of the activity and packages of two dairy companies, recommendations for improvement of packages for JSC "Lepel dairy and cannery factory" based on the experience of JSC "Savushkin product" have been developed. "Lepel dairy and cannery factory" should use polyethylene terephthalate bottles, Tetra Brick Aseptic or Tetra Pack for packing milk, kefir, ryazhenka and drinkable yoghurt; they should use Multivak for packing cottage cheese.*

A package can be a source or a complex of means, which must protect the goods and save them from losses during transportation, storage, warehousing, transshipment and other operations.

The main function of a package is protection of products. It must provide safety of a product during the whole way of transportation. Destruction or damage of goods can bring losses, which are not comparable to the cost of a package. Warehousing, transportation and manipulation functions determine the aptitude of packed goods for mechanization and automation processes, that is why packages must have a standard size, which makes it easier to warehouse and form cargo packages in the future. Correct information, placed on a package, makes it easy and helps to store the goods rightly, manipulate and manage merchandising. Utilization functions of packaging are also connected with logistical processes, because reuse and utilization of a used package is also applicable to the departments of logistics [1].

The degree of importance of each of the above mentioned functions depends on a particular product to a considerable degree. There are two main types of packages. Firstly, it is the inner or consumer's package, which is being developed for consumers and consists of the materials of a marketing and stimulating kind. The consumer's package must be comfortable to use, attractive, compact, have protective functions. Secondly, an outer or industrial package, which has been developed to protect products and its materials must be more comfortable for handling [2].

JSC "Lepel dairy and cannery factory", which is a representative of a Vitebsk concern "Meat and dairy products" and an active participant of economic integration processes of the EAEU, has been chosen as an object for analysis and perfection of the package of goods, which is an element of logistical system of the factories of dairy industry.

The dairy factory in the town of Lepel was founded in April of 1951. Now it consists of the following branches: JSC "Dokshitsy dairy factory", JSC "Beshenkovichi dairy factory", JSC "Tolochin butter and cheese dairy factory" and APB "Zaozerje" [3].

JSC "Lepel dairy and cannery factory" is one of the biggest producers of whole and non-fat dried milk and butter in Vitebsk region. Milk and dairy products of the factory are the winners of a lot of contests and professional exhibitions. The factory is a reliable partner and works with 14 countries of the world. The production is exported to Russia, The Ukraine and Moldova [4].

JSC "Lepel dairy and cannery factory" uses the following types of package for their dried dairy products: customer-size package which is a combined package (laminated plastic); for sold by weight products paper four-layer bags with a polyethylene insert are used. This type of package is provided by JSC Paper factory "Red star".

To pack milk, ryazhenka, kefir, sour cream, butter and cottage cheese polyethylene cover is used, which is ordered by the dairy and cannery factory from JSC Borisov factory of polyethylene package "POLYMIZ" and JSC "NAFTAN". Besides polyethylene cover, pure-pack is used at a factory to pack milk, sour cream is packed into polystyrene and cottage cheese is packed into lean cover and polyethylene containers.

Butter of customer-size package is packed into aluminum backed foil at the factory. This type of package is provided to the factory by PRUPC "Heritage of Frantisk Skorina". Sold by weight products are packed into pasteboard boxes. To pack ice-cream into cups and cones polyethylene package is used, and for sold by weight ice-cream polyethylene packets are used. To pack cheese of JSC "Lepel dairy and cannery factory" flow-pack BDF 6050 FSW – (gas environment) is used.

For logistics a package is a complex of means providing harmonization of a standard series of consumer pack, industrial packaging of a module, freight units package and load-carrying ability of vehicles during

physical distribution. A food package is more effective and practical than a package for non-food items. It doesn't have so many advertising functions, but they impose on a food package much more requirements from the viewpoint of protection from the environmental agents. At the same time safety of products in logistical chain is provided by keeping special conditions of storage and transportation.

Dairy subcomplex is one of the most important elements of a production structure of agrarian-industrial complex of the Republic of Belarus. An important place of the dairy subcomplex is determined by high value of its final products in the food structure of the population of the Republic. Milk takes the first place among all cattle-breeding products because of its nutrition advantages.

The Republic of Belarus has an export potential of cattle-breeding products that is why besides the distribution of products inside the country a great part of the products is exported. As for JSC "Savushkin product", its production is exported to 20 countries. They are Azerbaijan, Uzbekistan, the UAE, Jordan, Singapore, South Korea, the countries of the EU. Last year the first supplies to China and Hong Kong were made. Russia and Kazakhstan, which are the EAEU member-countries, are also among them, which provides free transportation of products among the countries.

The biography of joint-stock company "Savushkin product" began in 1939, when Brest dairy plant was put into operation. Now the factory has 3 production branches. They are in Kamenets, Pinsk and Stolin [5].

JSC "Savushkin product" is a leader of dairy branch in Belarus. The factory produces more than 200 kinds of products. The company owns five dairy breeds: "Savushkin", "Brest-Litovsk", "Optimal", "Laskovoe leto", "SuperKid" and one juice brand is "Nastojashij" [6].

JSC "Savushkin product" uses polyethylene terephthalate bottles to pack milk, kefir, ryazhenka, drinkable yoghurt, whey and cultured milk drinks. Moreover, milk is packed into Tetra Brick Aseptic and cultured milk is packed into Tetra Pack and Tetra Pack midi. For packing sour cream and yoghurt polypropylene boxes and cups are used at the factory. Two types of packages for cottage cheese are used at the factory: a polyethylene packet, Multivac, a polypropylene cup, a dual-chamber polypropylene cup and a pack of multi-layer plastic. Cheese is packed into polyethylene package and a pack of multi-layer plastic, but butter is packed into foil.

The main suppliers of the materials for JSC "Savushkin product" are:

- the suppliers of packages are "Polymiz", Borisov, "The World of Package", Minsk;
- the supplier of foil is "Flexogaf", Minsk;
- the supplier of labels is "Uniflex", Minsk.

Due to the fact, that the Republic of Belarus has not got producers of some packing material and food supplements, they are imported directly from manufacturers. The main manufacturers are CJSC "Tetra Pack", Russia; LLC "Agrana Frut Ukraine", package producing factory «Greiner» Sp.z.o.o., Poland, CJSC "Lisiplast", Lithuania.

The types of packages of analogous products of JSC "Lepel dairy and cannery factory" and JSC "Savushkin product" are presented in table 1.

Table 1 – Types of analogous products of JSC "Lepel dairy and cannery factory" and JSC "Savushkin product"

Name of the product	Type of package of JSC "Lepel dairy and cannery factory"	Type of package of JSC "Savushkin product"
Milk, kefir, ryazhenka, drinkable yoghurt	Pure-pack	Polyethylene terephthalate bottles
	Polyethylene package	Tetra Brick Aseptic
		Tetra Pack
Sour cream, yoghurt	Polystyrene cups	Polypropylene cups
Cottage cheese, curds	Lean Covers	polyethylene packet
	Polyethylene containers	Polypropylene cups
		A pack of multi-layer plastic
		Multivac
Butter	Aluminum backed foil	Aluminum backed foil
Cheese	Flow-pack	Polyethylene layer
		A pack of multi-layer plastic

Source: own development.

As follows from the analysis that have been made, JSC "Savushkin product" has better characteristics of products and packages and also is one of the main rivals of JSC "Lepel dairy and cannery factory". The package of JSC "Savushkin product" has better mechanical strength, aesthetic and ergonomic qualities and also increases the shelf life of the products.

"Lepelka" exports mainly dried milk and butter, as these products have the longest shelf life. As for the other dairy products, their shelf life lasts from a few days to a few weeks, but "Savushkin product" has much

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longer shelf life. Such long shelf life is provided due to a high level of purification of the ingredients, following the technological processes and using high quality modern packages. "Lepelka" on the contrary chooses more economical types of packages, than "Savushkin product", as most of the products are sold inside the country.

If "Lepel dairy and cannery factory" plans to widen its export, the factory should change the package for the one, which will save the freshness of its products better and will be more convenient to transport, store and consume.

So, polyethylene terephthalate bottles will be the best variant for "Lepel dairy and cannery factory" to pack milk, kefir, ryazhenka and drinkable yoghurt. They can also use Tetra Brick Aseptic, which differs from Tetra Pack and Pure-pack by a more convenient lid, which provides better ergonomic qualities.

Curds are packed into polyethylene containers at the factory, which have good characteristics and don't need any improvement. As for the packages for cottage cheese, lean cover should be changed for a stronger, a more convenient and waterproof package, as for example multi-layer plastic or Multivak.

The other packages of JSC "Lepel dairy and cannery factory" have a similar position at the market to packages of JSC "Savushkin product".

To strengthen its positions at the market and increase competitiveness of its products, JSC "Lepel dairy and cannery factory" should practice bench marketing, which is a process of comparison of products, services or processes of one company with other companies, which will help to improve the work of the factory. In this case to improve the work of JSC "Lepel dairy and cannery factory" it is necessary:

- to pay more attention to the processing of the ingredients, choosing other methods of purification and also follow the technological processes, which will help to increase shelf life;

- to widen export: the factory should improve the package to save the products fresh and make it more convenient to transport, store and consume (polyethylene terephthalate bottles will be the best variant of package for milk, kefir, ryazhenka and drinkable yoghurt; they can also use Tetra Brick Aseptic and Tetra Pack, which is similar to Pure-pack, but have more convenient lids, which give them better ergonomic qualities);

- to import some packing materials as they are not produced in the Republic of Belarus;

Improvement of the package of JSC "Lepel dairy and cannery factory" will help the factory to attract more customers, widen the markets and also to find new partners within the EAEU member-countries.

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