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FEATURES OF LOGISTIC PROCEDURES FOR DISPOSAL OF PACKAGING IN BELARUS

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Abstract: The article discusses the need to develop new successful products in order to meet the rapidly changing global market and maintain competitiveness, is a major challenge for modern manufacturers. In view of the fact that much attention is paid to the state of integrity upon receipt of the goods, an important role is given to the choice of packaging, which, on the contrary, largely ensures the safety of the goods during transportation.

Keywords: logistics, logistic procedures, packaging, Belarus, recycling.

Currently, there is a big problem with the disposal of numerous wastes. Pollution has a detrimental effect on the ecology of the country, and this is primarily due to human activity. The problem of accumulation and disposal of waste is an acute environmental issue, because without proper attention, waste rots and accumulates in huge quantities, negatively affecting the environment.

Utilization is the process of changing various wastes until they are completely destroyed, or their processing for use as secondary raw materials.

The more garbage is recycled, the more useful raw materials are formed, that helps to save primary natural resources. Mankind is actively searching for new methods of recycling, as they help to obtain useful materials for various industries. Scientists around the world are working on efficient ways to recycle raw materials. This not only reduces the negative impact on nature, but also allows us to significantly save resources, since the process is less expensive than the primary extraction and processing of the material.

Packaging is made from various materials, including: paper and cardboard, glass, metal, polymer, fabric, wood and multilayer materials.

There are three main areas in waste management:

1. Recycling – reuse of waste in production. For example, cut old asphalt is crushed and turned into asphalt chips, which are again sent to the road surface. Old car tires undergo rubber vulcanization – as a result, consumer properties are restored, new tires will be ready for use.

2. Recycling is the recovery of waste, as a result, materials can be used again in production. For example, broken glass is sent for remelting, as a result of which the resulting mass is ready for the production of new glass products. Widespread plastic bottles are recycled and turned into crushed granules, which are then used to make plastic bags, clothes and more.

3. Recovery is the process of extracting useful components from waste, ready for further use. For example, old car tires are separated into waste rubber and metal cord. Rubber is crushed and turned into crumb rubber to make tiles and coatings, and steel cord

is added to concrete to produce reinforced concrete products with increased strength. Recovery makes it possible to obtain valuable raw materials, which are in great demand among manufacturers [1].

Today, the following types of disposal are mainly used in the Republic of Belarus: storage, incineration, composting and briquetting [2].

Waste storage is understood as the content of waste in places of temporary storage, at storage facilities prior to transportation for preparation, disposal, neutralization and (or) use.

Based on the ability to send waste for use, disposal or disposal, there are:

1. Temporary storage of waste, that is, the accumulation of such waste that can be transferred for preparation, use, neutralization or disposal.

2. Long-term storage of waste, which is organized for waste that cannot be transferred for use, neutralization or disposal, since there are no appropriate facilities for use, neutralization, disposal for such waste.

In the case of temporary storage of production waste, authorized places for their storage are indicated in the instructions for handling production waste, developed, agreed upon and approved by the persons involved in waste management.

In case of long-term storage of production wastes, the authorized places for their storage are indicated in the permits for the storage of production wastes.

The burial method is used for non-combustible substances or substances, during the combustion of which harmful components are released into the air. Burial takes place at specialized landfills, which are complex engineering structures with mechanisms to combat groundwater and air pollution. Only such production wastes for which there are no objects of neutralization and there are no existing technologies for the use of these wastes can be taken out for disposal. Disposal activities are licensed by the Ministry of Natural Resources and Environmental Protection.

The incineration method is used for a number of wastes that can be destroyed as a result of interaction with fire. Incineration takes place in specially designated areas and only for waste that does not harm the atmosphere as a result of vapours and is not toxic [3].

Composting is an environmentally friendly way to return biological waste to the natural cycle. Only organic waste is subjected to such processing. An excellent raw material for composting is kitchen biological waste. Bacteria starts putrefaction. In this way, organic fertilizer is produced.

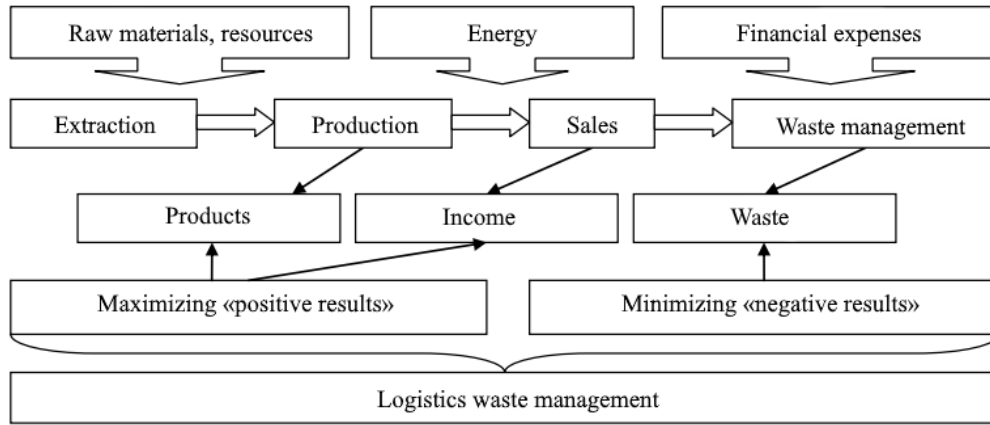
Briquetting is an innovative technique that involves the separation of debris and further shaping into briquettes. Briquetting is used to recycle trash [4].

The logistical support of the recycling process is to ensure timely and cost-effective movement of waste along all links of the return logistics chain – from sources of origin (generation) of the waste stream located within the boundaries of certain territorial entities (taxa), to the points of their acceptance and temporary storage, export to points accumulation and processing, from where the waste is subject to further redistribution to

the points of their disposal in accordance with the established technology of use (recycling, regeneration, recovery, etc.) [5].

To ensure effective management of logistics processes for the collection, processing and disposal of waste, it is important to adhere to a certain scheme. The scheme of logistical waste management is shown in Figure 1.1.

**1.1
scheme
waste**



**Figure –
General
of logistical
management**

In general terms, the logistics of waste disposal is as follows:

1. Collection and sorting by type of containers (standard, for separate collection, for bulky waste);
2. Packing in special containers (bags, containers, special packages);
3. Loading on special equipment;
4. Transportation to the place of disposal, taking into account the observance of the relevant sanitary standards and environmental safety.

Waste disposal logistics differs from other areas, especially with regard to processing properties. Other subsystems are related to manufactured goods, while waste management logistics deals with residues of all kinds. Disposal logistics includes the collection of all types of waste and subsequent transportation.

Waste is any type of garbage, such as scrap, surplus, obsolete finished products, recyclable materials, unwanted by-products and loading aids (pallets, packaging).

Waste collection takes place at the expense of special containers on the streets, near residential buildings, containers for separate waste collection. Basically, waste is collected in Belarus in three areas: plastic, glass and paper. Separate boxes for waste paper are also installed. The removal of large waste (for example, construction debris, furniture) is handled by separate companies.

Waste is collected and removed daily, after which it is transported to a waste processing plant. Special environmental companies are engaged in the removal of both general and individual types of waste. They conclude contracts for the removal and disposal of waste in the regions.

For disposal, waste is transported to special landfills specially designed for this purpose. Non-hazardous (not having the effect of neutralization) waste and waste for which there is no processing technology are received for disposal. Disposal activities are

licensed by the Ministry of Natural Resources and Environmental Protection. Many companies deal with their own waste management in ways such as incineration and composting.

An effective system of return (reverse) logistics currently allows you to comprehensively solve the problem of waste disposal in stages. Distinctive features of reverse logistics are both the object of study (waste streams) and the direction of movement of the main stream – the opposite (from consumers to producers) [6].

The main goal of recycling logistics is to eliminate delays in the continuous movement of streams (waste) and vehicles from the point of loading to the destination. It can be concluded that such a logistics procedure as an effective recycling process is undoubtedly important. Since the improvement of this process leads to an improvement in the environmental situation in the country as a whole and gives impetus to the future of green logistics in Belarus.

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