STORAGE OF POTATOES IN VARIOUS WAREHOUSES

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ANNOTATION

This article describes the methods of storing potatoes, the losses that occur during storage, the processes that take place in the tubers, the factors affecting their storage and quality, and their analysis.

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Potatoes are stored in different ways. Structures or buildings where fresh fruits and vegetables, as well as seeds and potatoes are stored, are called fruit and vegetable warehouses. They are temporary and permanent. Temporary storage includes fences, trenches, piles, etc. Permanent warehouses are made of concrete or brick in the form of a right angle with one floor above the ground or deeper (1.5-2 m) from the ground.

Fruit and vegetable warehouses are divided into the following groups depending on the methods of product storage:

1. There is natural ventilation warehouses.
2. Warehouses cooled by outside air with the help of a fan.
3. Artificial cooling coolers .
4. Coolers with controlled atmosphere.
5. Ice room and ice warehouses.

The variety of root crops and their storage for different purposes, the natural conditions of the area where the product is grown, the material and technical capabilities of the farm require the storage of different types of products.

When choosing a method of storage of products grown on the farm, a certain storage method and technological regime should be tested. You should also consider the shelf life of the product. The construction of warehouses for vegetable storage with a specific technological regime and the possibility of extensive mechanization ensure high-quality storage of products and reduction of rapid spoilage.

In Uzbekistan, many products are stored in field conditions. In the following years, great importance is attached to the construction of stationary warehouses on farms.

Permanent warehouses. Construction of mechanized and automated warehouses is of great importance in the development of storage technology for root crops.

Permanent (stationary) warehouses differ from each other according to the type, location, size, storage system, placement of products and a number of other characteristics of root crops. Permanent warehouses are adapted for storage of potatoes, root vegetables, onions, cabbage and fruits depending on the type of root crops. These products have different storage conditions and it is not recommended to store them in one warehouse.

Permanent warehouses are divided into small, medium and large types according to their capacity. Small warehouses have a capacity of up to 100-200 tons, medium warehouses up to 10 thousand tons, large warehouses up to 30 thousand tons. Large capacity warehouses are more cost-effective than smaller ones in terms of construction and cost-effectiveness. At the same time, the cost of storing products will be low.

When planning warehouses, traffic movement and depth should be taken into account. All warehouses under construction should be constructed in such a way that cars enter from one side and exit from the other.

Groundwater is taken into account when determining the depth of the reservoirs . In this case, underground water should be below 2 meters .

A typical basement is dug from dry soil to a depth of 1 meter. The top is closed, the sides are covered with boards or bricks. Inside, along the walls are installed slats. Depending on the length of the basement, one ventilation pipe with a thickness of 10x10 cm is installed every 3.5 meters. Sorted fruits are stored in boxes or placed in baskets.

Sometimes the depth of the cellar is 1.5 meters, the width is 4 meters, and the length can vary depending on the type of fruit stored. Its upper part is closed, the walls are covered with bricks and ventilation ducts are installed. Here you can store the product in the box and chest .

the ground are single-story brick structures, the walls and ceilings of which are covered with boards made of bark, thatch, reeds, and other materials. Warehouses are equipped with special pipes for ventilation. The floor is made of boards and spaces are left between them. Covered holes are made through the floor to ventilate the room with outside air. Warehouses are also built with two floors. In this case, its first floor will consist of a basement, and the second will consist of a ground floor. They combine the advantages of underground and surface storage.

Thanks to the ventilation system in the warehouses, the necessary conditions for storing products have been created. The warehouse ventilation system will be natural and artificial. The artificial ventilation system also includes active ventilation.

With natural ventilation, air moves according to the law of heat convention. Warm air expands, contracts, and rises, while cold, dense air sinks. The difference between the air inside the warehouse and the air outside depends on the speed of air movement. To increase the efficiency of natural ventilation, the warehouse is ventilated at a convenient time of the day. On the other hand, in cold weather, the warehouse openings are closed to prevent the product from getting cold.

Different types of fans are mainly used in mechanical ventilation. In this case, the product storage mode can be controlled to a certain extent. Air is supplied to the warehouses through air intake and air exhaust ducts to the fans. Warehouses equipped with artificial ventilation are often large capacity will be

Air is evenly distributed throughout the warehouses through underground air ducts . Products are stored here in boxes, containers and other containers. In this case, the product should be placed in such a way that the air suction power of the fans allows cooling of all the placed products. At the same time, it should be possible to mechanize the loading and unloading of products.

With active ventilation, the air flow is strong and passes through each grain of the product. As a result, the same temperature, humidity and air content are achieved at all points of product storage. In this case, the efficiency of product cooling, heating and drying increases several times. The processes of self-heating and sweating of the product are stopped. All vegetables, potatoes and fruits can be stored under conditions of active ventilation. In our conditions, it is necessary to provide active ventilation by giving cold air . Compressor cooling devices are often used to get cold air . When building a warehouse with active ventilation, it is necessary to provide an air cooling device. Only then, moderate conditions can be created for storing root vegetables in warehouses. As a result, the efficiency of food storage increases and quality storage is ensured.

Refrigerators . Storing potatoes in refrigerators is one of the promising methods. The same conditions can be created at different times of the year. Product shelf life is significantly increased and product losses are reduced.

Although the construction of refrigerators requires large costs and materials, they quickly pay for themselves. Therefore, special attention should be paid to the construction of refrigerators for storing root vegetables in farms.

They consist of temperature-controlled warehouses, product storage rooms, machine room and auxiliary buildings. Refrigerated warehouses are single-story warehouses built above the ground and can be up to 6 m high. Product capacity depends on the height of the compartment. Modern refrigerators can hold 700-800 kg of products per square meter .

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