

METHODS OF REGULAR STORAGE OF VARIETY HASHAKI BEETS “UZBEKISTAN-83” AND “HOSILDOR”

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Abstract

If it is preferable to keep beets dry in livestock farms, beets can be stored in crates or thermally insulated warehouses. Storage in deep excavations is less recommended, as these storage conditions are often not very beneficial. There are a number of challenges that this process creates, such as storage, unloading of beets, difficulty in loading machines, and new designs require high investment, so this article provides information on ways to save beets in a cheap and high-quality manner.

Keywords: storage, kagat, benefit, beet, pit, trench, soil, fertility, dry matter, moisture.

Introduction

Hashaki beet is important in animal husbandry, in the diet of livestock, especially dairy cattle, because it is characterized by a large amount of carbohydrates. Its nutritional value is determined by the carbohydrates, nitrogen-free extracts, mineral salts and vitamins. Beetroot is one of the main juicy feeds in livestock farming in the autumn-winter season. In addition, by adding beets to the diet of livestock, their digestion of coarse and concentrated feed is improved. So, beet roots are very important in improving milk production in cattle.

Hashaki beet is more common around the Mediterranean Sea, in Asia, the Caucasus, India, France, as well as Great Britain and Scandinavian countries.

Literature Review

Feed carbohydrates are important for the digestion and use of nutrients and minerals by dairy cows. In many scientific studies, N.V. Kurilov, R. T. Ayrepetov, A. S. Solun and others, A. P. Krotov, A. V. Kniga, I. A. Zimnovich, Ye. S. Vorobev and others S. V. Martinov, G. V. Provatorov, L. K. Ernst and others, A. P. Kalashnikov and others, S. N. Khokhrin, K. K. Karibayev, D. Q. Yuldashev, K. Dolga, A. Goombe et al, P. Mandebvu, C. Ballard et al., L.M. Trevaskis, W.J. Fulkerson, Hall, C. Larson et al., R. Nekrasov, M. Varenikov et al. effects of carbohydrates on the productivity of livestock, quality of products, absorption and digestion of nutrients are highlighted.

Research Methodology

During the period of scientific research, research was carried out as follows:

- measurement of nutrients and their residues during two days of food requirement;
- milk production of cows - measuring the amount of milk produced by each cow by carrying out



control milking every 10 days;

- study of milk quality indicators at the beginning, middle and end of the experiments, fat, density, dry matter, skimmed dry milk residue, sugar in the milk of 10 cows of the groups based on the standard requirements of LLC "Zamona Rano" LLC laboratory and "Laktan" milk analyzer;

Analysis and Result

Beet tubers should be harvested from the field before the air temperature drops to 7 °C. After the harvest of Hashaki beets, the tubers are sent to farms for storage. Warehouses with storage conditions for root crops are used. These warehouses are specially equipped, it is necessary to have a ventilation system and to control that the temperature is maintained at a constant level of 1-2 °C. If it is planned to store them on the boards, then it is necessary to place them in higher areas and the selected places should be dry. The optimal dimensions for these boards are as follows: height - 1.5 m, width - 3 m, length - up to 30 m. It is advisable to cover the burts with straw or soil. Before the beginning of the winter season, the thickness of such a coating should be at least 60 cm.

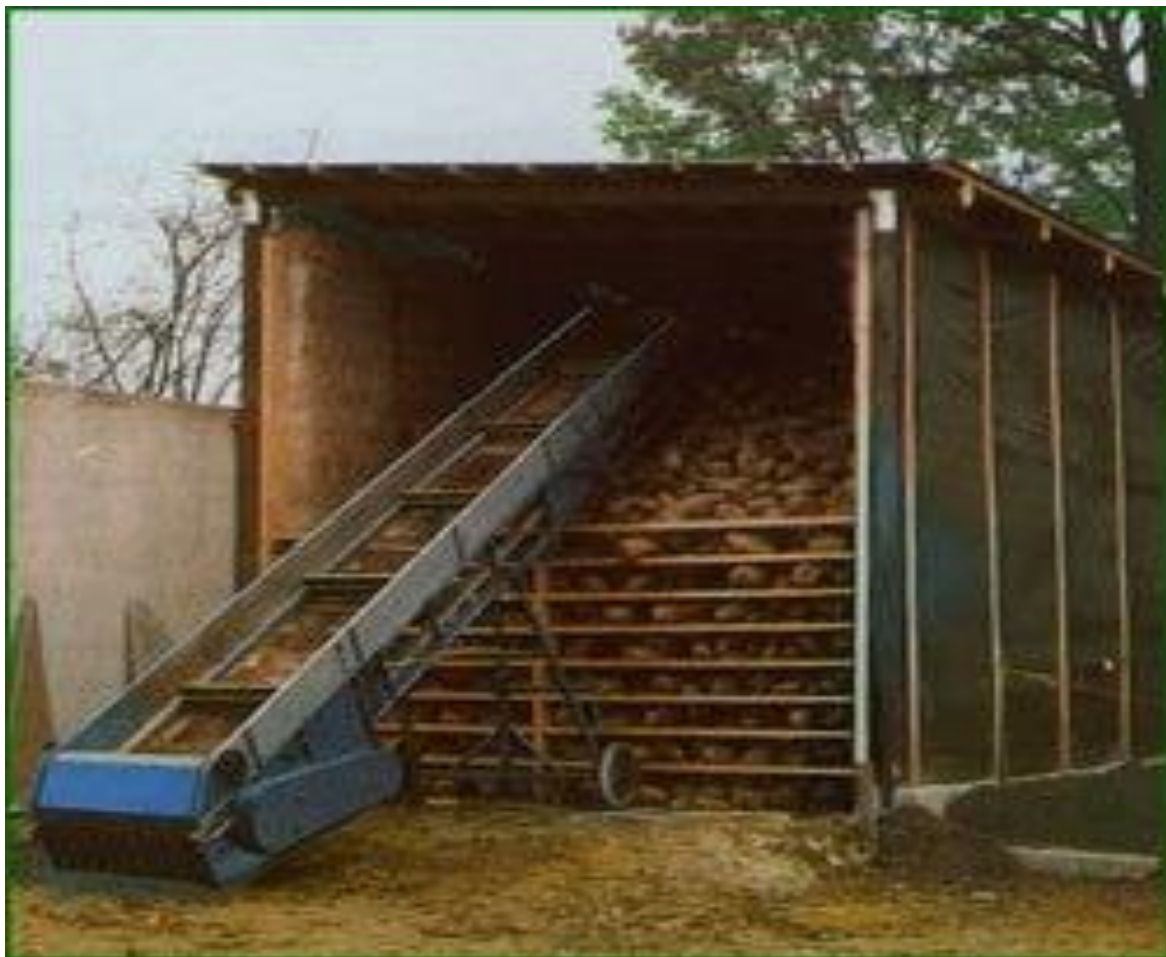


The process of preparation for storage of root fruits of Uzbekistan-83 variety of beetroot, created in our republic.

Storage sheds for beetroot can be built in beet fields or in households. Field-built crates do not require any construction costs and save money and time during harvest through the shortest



transport routes. We can achieve high efficiency by reducing the work time and costs for covering and transporting beetroots, limiting the built-up cags in households and farms. Beet storage warehouses should be built near farms or houses. The crates must be strong for permanent storage, the main purpose of which is to create an efficient method of loading and unloading beets. At the same time, in order not to open the cover of beets every day and to maintain a constant air temperature, it should have an intermediate warehouse for a small number of livestock. At the same time, it is necessary to increase the height of the boxes in order to keep beets in small areas in apartments. For this reason, heat-insulating walls of kagat are used and they can be created in different ways. The temperature of warehouses should be between 0-4°C for storing beet roots. The edges of the beetroot are covered with a 10 mm film. Before the onset of frost, the gharams are covered with 20 to 30 cm thick straw, depending on the air temperature, and earth is covered around them to protect them from the wind. In particular, heat insulation should be closed at a height of 1-1.5 m, it is considered that the beetroot should be protected from the cold and additionally stored with heat.



The best storage method for dry beets is warehouse storage, which is more cost-effective but more efficient. For this, straw is used for heat insulation along the walls. It does not need a surface coating. The external coating is suitable only depending on the climatic changes and for the surface of the tiles.





When beets are brought in from the field, cleaning and shredding equipment should be installed next to beets, as manual loading is more efficient. Hashaki beets are dug up with a shovel or a shovel, the dug roots are lifted with a part of the soil, and the soil is gently shaken, and it is advisable to harvest the crop on a cool and rainless day.

Hashaki beets dug up in the absence of precipitation are preserved well if they are slightly dried on the surface of the soil for 3-4 hours. Do not try to clean the roots by knocking them against other roots. If there is a lot of moisture during the harvesting of beets, then the process of drying beet roots is carried out at home and on farms. At the same time, beet roots are picked in one tex along the drying area and are replaced during the day. At this time, the drying process can last from several days to a week. After the drying process is completed, root vegetables must be prepared for storage.





Careful removal of the soil from the roots without damaging the skin of the beet roots, and the small amount of soil remaining in the roots, as well as the retention of rotting microorganisms found in the soil, will lead to a decrease in the productivity of the stored beets. If beets are damaged during harvesting, it is recommended to quickly use them as fodder without sending them to storage warehouses. In order to remove the ball leaves from the beet roots, it is recommended to cut them, leaving about 1 cm long leaf stems. At the same time, it is necessary to remove the side roots of the beetroot, and if the main root is longer than 5-7 cm, it should also be cut. Do not cut the roots of root crops that are not very long. When storing beet roots: beet roots are not sent to warehouses for storage if they are injured, rotten, and the root is too large. On the contrary, medium-sized and undamaged tubers should be sent for storage. There are different ways to store beet roots. It is carried out based on the economic potential of the farm. Hashaki beets are stored outdoors or indoors in households. For indoor storage, farms and residents need a dark cellar or shed, a cool room, or a refrigerator. Beet roots are stored in pits and trenches for outdoor storage, and the pits are dried. In order to keep beets well in the winter season, it is necessary to pay great attention to the optimal temperature, light and humidity aspects of warehouses or warehouses. For this, we need warehouses or special storage areas that meet all the requirements and have the following conditions:

- there should be a dark place;
- the temperature should be (0-2°C);
- humidity should be up to 90%.

Therefore, constant air circulation should be controlled in the places where beets are stored, and therefore it is necessary to store beets at a certain height from the ground on pallets. To store beet roots in sand, it is necessary to prepare the sand by calcining it in the sun or in an oven. Disinfection work is one of the beneficial conditions of the entire storage process. After heating, the sand should be completely cooled. When storing hashaki beets, it is desirable that the thickness of the sand is



at least 2 cm. It is advisable to use large plastic bags with a capacity of 30-40 kg when storing hashaki beets. After filling the plastic bags with beet roots, the mouth of the bag is kept open, because the air must circulate so that the roots do not rot.

After the roots are cleaned and ready for storage, they are sprinkled with table salt. The sprinkled table salt has an anti-microbial effect on the root vegetables and allows the root vegetables to be stored until the summer. Ash can be used instead of table salt when storing root vegetables. Peat can also be used to store beet roots. If necessary, beets can be stored on the balcony of multi-storey buildings. The balcony of multi-storey buildings is considered one of the convenient places to store beet roots. The air temperature does not freeze even in the coldest months. A box filled with sand is needed for winter storage of beet roots on the balcony of multi-story buildings, and it is advisable to store them in boxes filled with sand, because the air temperature in the box filled with sand ensures that the air temperature is above the freezing level. When stored in an insulated sand box on the balconies of multi-story buildings, the beet roots do not touch each other and air circulation is good.

If the balcony of an apartment building is not closed when storing beet roots, it is advisable to prepare a heated box for storing the roots. It is protected from frostbite by using low-voltage light bulbs for heating. One of the important conditions for beet roots to be of good quality and to be stored for a long time is to separate beet roots according to their size.

Conclusion/Recommendations

1. Based on the possibilities of the farm, negative situations in meeting the requirements of cows with nutritious and mineral substances observed in the farm ration were reduced.
2. When feeding dairy cows with complete feed, it is recommended to include 10% carbohydrate-rich beet feed in the diet in relation to the nutritional value of the feed weight.
3. The lack of carbohydrates in the winter diet of dairy cows and the protein-sugar ratio is normalized with the help of beets:

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