



THE ORIGIN OF "BEETROOT" AND THEIR USEFUL SIDES AND ASPECTS

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ABSTRACT

Beta group species mastered the formation of rhizomes and the accumulation of sugar reserves in them, and beets prevent anemia. The pectin contained in it cleanses the body of various toxins that cause premature aging. Vitamin C in its composition strengthens human immunity and increases resistance to various diseases. Magnesium and betaine contained in beets lower arterial blood pressure in the human body, facilitate digestion, and prevent colon cancer. Improves blood circulation in the brain and improves memory.

Introduction: In world agriculture, sugar beet covers about 8 million hectares. It is grown in large quantities in Ukraine, Russia, China, Poland, France, Great Britain, Germany, Italy, as well as in Belgium, Belarus, Japan, Hungary, Turkey and Georgia.

Up to 80% of the world's beet sugar is produced in European countries. Wild beets have been used as food since ancient times. It was cultivated in the Mediterranean islands in the 2nd-1st millennium BC. Farmers discovered the economic benefits of wild beet covered with weeds and cultivated it, initially using only the leaves for food, namely as a salad. Even in the 2nd millennium BC, the Assyrians, Babylonians, and Persians knew beetroot as a vegetable and medicinal plant. They were still around in Europe around 500 BC In Asia, they tried root vegetables, which turned out to be more nutritious and tasty. Soon, Europeans began to treat beets primarily as root crops. Thus, Theophrastus writes in his "Studies on Plants the root of the beetroot is thick and fleshy, it has a sweet and pleasant taste, so that some people eat it raw."

The first rhizome forms of beets (according to Theophrastus) are well known in the IV century BC. At the beginning of our era, the cultural forms of common root beet appeared.

Beets have been known in Russia since the 10th-11th centuries. Information about him is given in Svyatoslav's book "Izbornik". It is believed that the beet started its glorious journey through Russia from the Kiev principality. From here he penetrated to Novgorod and Moscow lands, Lithuania and Poland. Along with turnips and cabbage, beets became widespread in Russia. In the 16th and 17th centuries, the beetroot was completely Russified, and the Russians began to consider it a local plant. Beet was known in Western Europe in XIII-XIV centuries. In the 16th century, it was divided into soup beets and hashaki beets. In the 18th



century, sugar beets were derived from fodder beet hybrids. From the end of the 19th century, its species spread to all continents [Karpuk. pp. 299-301].

In 1747, the German chemist A.S. Marggraf discovered sucrose in the beet root and suggested using this vegetable for sugar production. Before that, sugar was produced mainly from sugarcane and it was very expensive (but, to be fair, it should be said that a hundred years before Margrave, the Turks knew how to boil beetroot syrup and make a dessert from it) [Karpuk. pp. 299-301; Vavilov 200 pages].

The Beta beet family of the Chenopodiaceae family is represented by annual, biennial and perennial species. The beet (Beta vulgaris L.) genus includes several subspecies, including ssp. vulgaris L. It is a polymorphic subspecies that combines all cultivated biennial and annual forms of beetroot. Ўз навбатида, бу кенжа тур кичик турларга бўлинади:

- sugar beet (v. saccharifera);
- fodder beet (v. crassa);
- beetroot (v. esculenta);
- beet with leaves or Swiss chard (v. cicla).

Beta туркуми турлари илдизмеваларни шакллантириши ва унда шакар захираларини тўплашни ўзлаштирди.

Cultivated sugar beet is a hybrid plant obtained as a result of self-crossing of leaf and root forms of beet and improved as a result of long-term selection [Karpuk p. 302].

Fodder beet (*Beta vulgaris L. v. crassa*) belongs to the same species as sugar beet, so the morphological and biological characteristics of these plants are very similar.

The neck of the fodder beet is more colorful than that of the sugar beet, and can be white-green, yellow, pink, orange, and purple [Karpuk p. 312; Vavilov page 242].

Currently, beets are a two-year crop. According to most scientific observations, its homeland is the Mediterranean Sea. It was used as a vegetable plant in irrigated lands 2000-1500 years ago.

According to Kh. Ataboeva (2000), beet roots were used in mountainous areas of Asia, approximately 1000 years before our era. It was brought to Central Asia, the Caucasus, Siberia and other countries in the VIII-XII centuries.

By the 18th and 19th centuries, beet roots were cultivated for fodder, sugar and food. Sugar beet is a moderate climate plant, which is distributed in Canada, Denmark, Sweden, Germany, France, Ukraine, Russia, Latvia, Belarus, Turkey, Japan, Afghanistan. Sugar beet is planted on 7.9 mln. Sugar beet was brought to Uzbekistan at the beginning of the 20th century, and it was planted mainly for the production of raw materials for sugar factories, and not planted in large areas. [Ataboeva 2000. p. 194].

Sugar beet is one of the most important technical crops. Sugar beet roots contain 16-22% sucrose. The yield of beet tubers is 400-500 t/ha and the sugar content can be 7-8 t/ha or more.

Sugar beet roots contain 75% water and 25% dry matter, of which: beet sugar - 16-22%, fiber - 4-5%, nitrogenous substances - 1-1.5%, fats - 0.01%, ash elements - is 0.5-0.8%.

Sugar beet is a valuable fodder crop. In the process of processing sugar beet tubers at the plant, waste of great economic value - pulp and molasses - is obtained. The dry matter of



molasses (molasses) contains about 60% sugar, about 15% nitrogen-free extractives and 8-9% ash elements.

Molasses is used to make alcohol, nutritional yeast, lactic acid, citric acid.

Bagasse (watered and compressed beet chips) contains about 15% dry matter, including: nitrogen-free extractives - 10%, fiber - 3%, ash - 0.7%, fat - 0.1%, protein - 1, 2%

Sugar beet left in the field during harvest, both fresh and dried, is used for animal feed. Sugar beet tubers are 2.2 times more nutritious than beetroot because they contain twice as much dry matter. Sugar beet serves as a good predecessor crop for a number of agricultural plants. The inclusion of sugar beet in crop rotation is of great agrotechnical importance, as it helps to increase the yield of the following crops due to deep tillage, application of large amounts of fertilizers, control of weeds and pests in its crops [Karpuk. pp. 299-301; Vavilov 200 pages].

Beetroot soup prevents anemia. The pectin contained in it cleanses the body of various toxins that cause premature aging. Vitamin C in its composition strengthens human immunity and increases resistance to various diseases. Magnesium and betaine contained in beets lower arterial blood pressure in the human body, facilitate digestion, and prevent colon cancer. Improves blood circulation in the brain and improves memory. Beetroot juice is good for iodine deficiency. Betaine in beetroot is extremely beneficial for the liver, and its content of iron and zinc is second to none. Betaine is a unique biologically active compound that helps in the assimilation of protein foods. Therefore, nutritionists recommend eating meat together with beet salad [Cultivation of beets: 2021. p. 9-10].

Conclusion

In conclusion, the beet plant is one of the very useful plants for human health. Cultivation is not at all difficult for people. Some species of this plant are somewhat resistant to the disease. Productivity is high compared to other root crops.

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