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Types of corn grown in Uzbekistan and their peculiarities

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Annotation: This article describes some species of corn of the cereal family, including varieties grown in Uzbekistan and their characteristics, ways to increase their productivity through intensive methods and their importance in agriculture.

Keywords: Oats (Sorghum Pers.), Grain oats (S. cernuum), broom oats (S. technicum), oats (Sudanese, S. almum), Kattabosh , Chillaki, Uzbekistan 5, Sangzor, Uzbekistan 18, Deafness, Intensive, homotypic, heterotypic, parenchymal tissue, invasive type.

Decree of the President of the Republic of Uzbekistan "On measures to protect the rights and legitimate interests of farmers, dehkan farms and landowners, to radically improve the system of efficient use of agricultural land" to address such problems and in order to fulfill the tasks set out in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021. (Control of execution of this resolution to assign to the Deputy Prime Minister of the Republic of Uzbekistan for development of agrarian and food industries Sh.M. Ganiev and the Minister of Agriculture of the Republic of Uzbekistan JA Khodjayev This Regulation determines the procedure for monitoring on agricultural lands and arable lands. The following basic concepts are used in this Regulation:

Agricultural crops - technical crops (cotton, hemp, cannabis, tobacco, broom), cereals (wheat, barley, corn for grain, white corn, rice, millet, oats) , rye), vegetables (tomatoes, cucumbers, onions, carrots, cabbage, eggplant, peppers, garlic, beets, radishes, turnips, greens), melons (melons, watermelons, pumpkins), potatoes, oilseeds (sunflower, soybeans, groundnuts, sesame, flax, sorghum), legumes (peas, beans, mosh), fodder crops (for alfalfa, corn silage, hashish beets, annual grasses (rapeseed, perco, triticale, sudanka), berry crops (strawberries, raspberries) and others.

Sorghum (Sorghum Pers.) Is a group of annual and perennial plants, cereals and fodder crops belonging to the family of cereals. There are about 50 wild and cultivated species of corn. Grain corn (S. cernuum; white corn, coconut corn, gaolyan, etc.), sweet corn (S. saccharatum), durra (S. durra), broom corn (S. technicum), herbaceous corn (S. sudanense). , S. almum) are more common. Homeland - Central Africa. The root network of corn is a poplar root, the main part of which develops in the plowed layer of the soil, and some roots penetrate to a depth of 2.5 m. The stem is a straw stem, 0.5–7 m tall, on average 2–3 m, and the inside of the stem is filled with porous parenchymal tissue. The stem is collected (1-8). The leaves are broad, 10-25. The inflorescence is 15-60 cm long, with 2 spikes at the ends of the lateral branches, one of which bears fruit. Corn is pollinated from the outside. The grain is small and without shell, round, ovoid. Color white or yellow. 1000 grains weigh 20-70 grams. The grain does not have a dormant period and can be sown after harvest.

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Oats are an important cereal crop, the grain is used for food. Cereals are used to make cereals, flour, alcohol, and starch, to make bread, and to be used as fodder for cattle and poultry. The blue mass is ensiled. The grain is nutritious, contains 65-75% starch, 10-15% protein (lysine), up to 3.5% fat. 100 kg of oats is equivalent to 119 feed units. There are 23.5 nutrients in 100 kg of green mass, 22 in silage and 49.2 in hay. Stem juice contains 10-15% of sugar and produces molasses.

Broomsticks and brushes are made from broomsticks. Oats are also grown as a secondary crop. It is an annual plant. Resistant to drought and heat. Tolerates drought in soil and air. Tolerates temperatures of 30-40 °. Light-loving, short-day plant. Not demanding to soil, but grows well in porous soils. Resistant to salt, grows slowly at the beginning of the growing season. The field is plowed to a depth of 28-30 cm with a plow. If the soil is dry, it is irrigated before plowing and 10-15 tons of manure, 50-60 kg of phosphorus and 40-50 kg of potassium are applied per hectare. In spring (April-May), when the temperature is 13-15 °, it is planted in wide rows (60-70 cm between rows). Seed sowing rate is 5-10 kg / ha, sowing depth is 3-5 cm, seedling thickness is 70-100 thousand bushes per hectare. 2-3 treatments are performed between the rows. Sown seeds germinate in 10-15 days, accumulate in 25-30 days, enter the tube wrapping period in 40-50 days, germination period lasts 55-65 days, flowering begins 5-6 days after germination.

Varieties: In Uzbekistan, 3 types of corn (groups of grain corn, sweet corn and broom corn) are grown mainly in the irrigated saline lands of the Republic of Karakalpakstan, Khorezm, Bukhara regions, Fergana and Mirzachol. Kattabosh, Chillaki, Uzbekistan 5, Sangzor, Uzbekistan 18, Karlik (Pastak) and other varieties are planted on irrigated lands.

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Pests of corn: lice, caterpillars, nightshades, stem moth, caradrina, diseases, powdery mildew, stem and root rot, bacteriosis.

Origin of the variety: a selection variety of the Scientific and Production Center "Altyn Bashak" of the Republic of Karakalpakstan. Variety authors: Massino IV Yedenbayev variety of medium height, 150-175 cm, broom erect, large, ovoid. One broom weighs 180-189 g. The variety ripens quickly, the vegetation period is 129-131 days. The variety is resistant to salt and drought. Suitable for mechanical harvesting. Average yield: 61.4 s / ha. Protein content is 11.2%, grain yield is 79.4-80.0%..

Entered the State Register of the Republic in 2010. Recommended planting areas: Republic of Karakalpakstan and Khorezm region.

Internationally grown varieties of corn.

The plant is recognized as an invasive species in Indonesia, Thailand, the Philippines, a number of U.S. states, Cuba, Nicaragua, Chile, Colombia, Peru, New Zealand, and a number of islands in the Pacific Ocean.

Worldwide, 55.6 million tons of corn were harvested in 2010 and 63.9 million tons in 2016. The average yield was 1.37 tons per hectare. The most productive farms were Jordan, where yields reached 12.7 tons per hectare. The largest corn grower in the United States averaged 4.5 tons per hectare.

1. Guinea corn sorghum (Sorghum guineense Stapf., Jakuschev.) - the largest variety of varieties is observed in the neighboring countries of the Gulf of Guinea, including the countries of Western Equatorial Africa, located south of the Sahara Desert .

2. Kaffir grain corn - Sorghum caffrorum Beauv. Jakuschev. - Characteristic for regions south of South Africa at 10 ° C. sh, where the highest varietal diversity. The most common species in the territory of the former USSR.

3. Negro grain corn (Sorghum bantuorum Jakuschev.) - the largest variety found in Central and Eastern Equatorial Africa. Negro corn is not widely used in the CIS.

4. Grain corn (Sorghum durra Forsk., Jakuschev.) - the main distribution area in Northeast Africa, the Middle East, Arabia, India and Pakistan, where it is grown for the longest time. The main representatives are durra, jugara, milo. Depending on the shape and structure of the spikelets, films, and grains, the following subtypes have been identified: Ethiopian corn (S.durra ssp. Aethiopicum Jakuschev.); Nubian corn (S.durra ssp. Nubicum Jakuschev.); Arabian corn (S.durra. ssp. arabicum Jakuschev.). A statue of Ye Huacheng, founder of the Jinmen distillery, in front of his native factory, where Jinmen kaoliang vodka is still produced.

5. Chinese grain oats (Sorghum chinense Jakuschev.) - or a cold-resistant and early-ripening species compared to kaolian. It differs in the reddish-brown color of the grain. Distributed in Korea, China, Japan. The abundance of tannins that give the grain a bitter taste prevents it from spreading. It is used in breeding programs for hybrids to withstand frost, early maturity and resistance to certain diseases and pests. By the nature of the endosperm, it is divided into karyopsis.

- **Sugar corn** (Sorghum saccuratum Jakuschev) is a universal crop that can be used for feed, food and biofuel production. 220-500 quintals of stem biomass and 25-50 quintals, and sometimes up to 100 quintals of grain can be obtained from one hectare of crop. The juice can contain up to 20% sugar. 100 kg of sugar corn green mass contains 24-25 feed units. The stem contains 14-15% sugar. Roll-pressed sweet corn juice contains no less sugar than sugar cane juice, but in addition to sucrose, it contains significant amounts of glucose, fructose, and soluble starch. Soluble starch prevents crystallization, so molasses or syrup with a solids content of about 75% is obtained from sweet corn juice, not crystallized sugar. The yield of such juice is about 20% of the mass of the stem.
- **Grassy corn**: It combines many wild-growing annual and perennial forms, two of which are cultivated.
- **Sudan grass** (Sorghum sudanense Jakuschev) is one of the most valuable annual grasses, widely grown in different soil and climatic conditions. Cultivated since 1909. When crossed with some varieties of corn grain, corn-Sudan hybrids are obtained, which in many respects outperform their parent forms. Sudan grass and its hybrids with corn oats grow well after mowing and grazing livestock.

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• **Generous oats** (Sorghum almum Parodi) - Cultivated in South India by crossing humai with guinea oats. It differs from Sudanese grass by its short, crowded rhizomes, late ripening, plant strength, bacteriosis resistance, and habitat.

Technical sorghum Sorghum technical, or broom (Sorghum technikus (Koern.) Rozchev.) Stems 110-120 cm in length with panicles and dry core without stems. Used to make brooms, brushes, brooms.

According to The Plant List website, the genus includes the following species:

Homotipik:

- Andropogon avenaceus Kunth, 1816.
- Andropogon halepensis (L.) Brot.1804.
- Andropogon halepensis var. Genuinus Stapf, 1896.
- Andropogon halepense (L.) Hack.1889.
- There is Andropogon corn. halepense (L.) Hack. 1889..
- Blumenbachia halepensis (L.) Koeler, 1802.
- Rhaphis halepensis (L.) Roberti, 1954.

Heterotypic:

- Andropogon crupina Kunth, 1829
- Andropogon decolorans (Vild.) Kunth, 1816.
- Holcus decolorans Willd., 1806.
- Holcus exiguus Forssk. , 1775.
- Sorghum crupina Link, 1827.
- Sorghum decolorans (Willd.) Roem. & Shult. , 1816.
- Sorghum dubium K. Koch, 1848
- Sorghum schreberi Ten. , 1835, et al.

The list above includes the names of the scientists who created and researched the new variety.

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