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On the Importance, Origin, and Distribution of the Oat Plant

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Annotation: Oats are considered to be the oldest crop, and in the wild they have been found since ancient times in a mixture with wheat and barley. Oat grain contains on average 13.3% protein, 4.7% oil, 40.1% starch, 13.2% tissue, 4.0% ash and 11.0% water. The amount of protein varies depending on the geographic region and high humidity. Cereals mainly contain B vitamins. Vitamin B1 (thiamine) - 4.5-8.0 mg / kg. All types of cereals and flour are made from oats.

Keywords: protein, oil, % starch, ash, thiamine, Avena sativa L. (sown oats), Avena byzantini S. Kosh (Byzantine oats).

Oats belong to the genus Avena L., and their stems are either scaly or densely hairy. There are many species of oats (about 70), including annual and perennial, cultivated and wild species. Of the species of oats, 11 are of practical importance. The oats cultivated in our country belong to two species: Avena sativa L. (sowing oats) and Avena byzantini S. Kosh (Byzantine oats).

Oat grains contain an average of 13.3% protein, 4.7% oil, 40.1% starch, 13.2% fiber, 4.0% ash and 11.0% water. The protein content varies depending on the geographical region and high humidity. The grain contains mainly B vitamins. Vitamin B1 (thiamine) is 4.5-8.0 mg/kg. Various cereals and flour are made from oat grains. To obtain groats, the grain is first separated from the husk. These affect the quality of the grain. The endosperm of oat grains is rich in lipids, therefore it is considered high-calorie and nutritious. Oat flour is used to bake bread by mixing it with wheat or rye flour. Oat flour is an old food, it is used as a dietary food and for young children. Oats are mainly considered the most valuable fodder crop. Oat grain, straw, hulls, stalks, and silage are widely used in many

countries of the world. In Australia, oats are grown for sheep. When there is a lot of rainfall, they grow well and are harvested several times. Oat grain and straw or stalk mass are often used as nutritious feed for livestock.

Also, food products such as biscuits, cereals and coffee are made from the grain. These products are rich in easily digestible protein, fat, starch and vitamins, and are of great importance as a healing food for young children. Oat straw and chaff are valuable in animal husbandry due to their good nutritional value compared to other cereal crops. Oats are very effective when sown in a mixture with vetch. Oats can be sown at different times and get a rich harvest (especially as fodder in animal husbandry). This allows providing livestock with nutritious green fodder in the irrigated lands of Uzbekistan.

Oats are considered an ancient crop and have been found in the wild in a mixture with wheat and barley crops since ancient times. Due to their resistance to external conditions, the population began to grow their cultivated varieties. There is historical information that oat cultivation was known in Europe 1500-1700 BC. It is known that it began to be cultivated in the territories of the current 2 Commonwealth of Independent States from the 7th century. The area of oat cultivation in world agriculture is 17.2 million hectares, and this crop is widely grown in Western Europe, the USA and Canada. The average grain yield of oats in the world is about 19.2 t / ha. Productivity. In Uzbekistan, oats are grown for grain and green mass, and in terms of area they take the second place after barley. In the irrigated lands of our republic, it is possible to get a rich harvest from oats. This is shown by the work experience of scientific organizations, State variety testing plots and advanced grain growers and livestock breeders. For example, in State variety testing plots, the average grain yield of some oat varieties is 70 t / ha, and the amount of protein per hectare is slightly higher than that of barley. The vegetative growth period of oats is 110-120 days, the plant height is 94-120 cm, the length of the stalk is 18-26 cm, the number of stems in the bush is 2-6, the number of leaves is 4-5, the number of branches in the stalk is 4-7, the number of joints is 4-5, the weight of one stalk is 2-6 grams, the weight of 1000 grains is 47-49 grams.

A high yield of oats largely depends on the preparation of the land. The field where the seeds are sown should be plowed in the fall and cleaned of weed residues. After harvesting, if the field where oats are sown as a repeated crop is cleared of straw, the seed is sown to a depth of 5-7 cm, if the field is not well cleared of weed residues, the sowing depth should be set at 10-12 cm. The rates of fertilizer application during tillage and before sowing depend on the cultivated area and soil characteristics. The rates of mineral fertilizer application are given in the form of N45-60 P60-90 K50-60 kg. Increasing the dose of phosphorus fertilizers helps to increase the survival rate of plants. Determining the rates of fertilizer application to increase yield involves using data from the agrochemical passport of the field. Increasing the dose of phosphorus fertilizers helps to increase the survival rate of oats. Excessive nitrogen application can cause the plant to become stunted, so reducing nitrogen by 50 percent after earing and increasing phosphorus and potassium by 20-30 percent, respectively, is a good idea. In particular, oats are distinguished from other agricultural crops by the fact that they leave a large amount of green mass.

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