NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 9, ISSUE 1, Jan. -2023

REGARDING DETERMINATION OF MILLET GRAIN ENZYME

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Abstract
Tariq is one of the most common grain crops in Uzbekistan. Cereal made from its grain is famous for its taste and richness. Bread made from millet is small in size and hardens quickly. Millet waste (from processing) is a good feed for cattle. This article describes in detail the biological properties of millet grain as well as the determination of its enzyme.

Keywords: millet, plants, fodder, farming, biological properties, enzyme, soil fertility, etc.

The grain is fed whole or milled to poultry and pigs. Tariq's starch turns into sugar more quickly than that of rice. When millet groats are cooked in milk, its nutritional and biological properties increase. The science of agriculture faces the problems of good crop care and additional nutrition, soil fertility and its restoration. One of the main tasks of agriculture is to increase grain production. At the same time, this science includes tillage, weed control, crop rotation, and farming systems to improve soil fertility and produce high-quality crops. gives knowledge about Cereal crops provide the main food product for humans, i.e. grain. Cereal crops occupy the main place among agricultural crops. This group includes wheat, barley, rye, triticale, oats, millet, corn, oats, rice, and sorghum. The plants of this group are mainly of food, fodder, technical and agrotechnical importance. In terms of cultivated area, these crops occupy the first place among all agricultural crops on earth and make up 70% of the entire cultivated area. A cereal grain plant. This group includes corn, sorghum, rice, millet and sorghum. The grain of these crops does not have a longitudinal grain. During the germination period, only one primary shoot root appears. The flower cluster is in the form of a peduncle or a stalk.
All of these are spring crops, heat-demanding, cold-resistant, drought-resistant (except for rice), short-day plants. Maize and oats are used as fodder crops. As fodder crops, barley, sorghum, triticale, rye, sorghum, and corn are grown. Cereals are annual herbaceous plants with common morphological characters. The root is well-developed umbellate and penetrates the ground 100-120 cm and deeper. However, the main part of the root is located in the arable layer of the earth. Roots are of two types:

secondary or primary and primary or secondary roots. The rhizome is formed during seed germination. The main roots appear later, from the underground joints of the stem. In addition, in high-stalked cereal plants (corn, oats), roots also appear from the above-ground joints of the stem. These are called taproots or aerial roots.

In Uzbekistan, millet is grown as a main and repeated crop. It is of great importance in growing two grain crops in one year. In particular, the low planting rate, quick ripening, and short-day plant increase its value. It can also be used in the repair of thinned grain fields. It gives a high yield in the dry, hot climate of Central Asia. Among grain crops, it stands out for its tolerance to drought and heat. Resistant to diseases and pests. History. Millet was cultivated 4-5 thousand years ago. The center of origin and formation is East and Central Asia. Archeological finds have proven that it has been cultivated in the territories of the current Uzbekistan and Kazakhstan since ancient times. In 2004, the cultivated area of millet in world agriculture was 33.8 million ha, the yield was 7.9 s/ha, and the total yield was 27.6 million tons. It is widely cultivated in China, Afghanistan, Turkey and Europe. It is also grown in the eastern states of the USA and in Africa. Millet occupies large areas in Russia, Ukraine and the North Caucasus. Millet yields 25-40 s/ha in irrigated lands and 7-15 s/ha in dryland. When grown in Angiz, the grain yield reaches 20-30 s/h. There are two distinct types of millet: common millet (Panicum miliaceum L.) and common millet (Setaria italica L.). A common millet ball is a tuber, a spike-shaped tuber in the host. The guest's Italian millet (S. italica) is divided into two subspecies: S. italica maxima A1 - a tall, well-developed plant with a long growing season and S. italica mocharium Al. — is relatively low in height, the vegetation period is divided into short periods. In Italian millet or zona, the length of the furrows reaches 15-30 cm. It is widespread in Uzbekistan, Kazakhstan, and the Caucasus and is grown for grain and green mass. Mogor is mainly grown for grain, sometimes for hay or green fodder. The most common type is common millet. Common millet (Panicum miliaceum L.) is an annual crop. It has 5 subtypes: scattered, scattered, narrow (bent), semi-com or oval and com. The weight of 1000 grains of millet is 5-10 g. Flower flakes make up 15-25% of grain. When the seed turns blue, it forms 1 root and the epicotyl is developed. The height of the stem is 75-100 cm. Stems are formed from the node of formation, and branches form (branches) from the above-ground joints of the stem. It forms 5-20 stalks in one plant. Therefore, even when it is planted in wide rows, the number of stems per 1 m2 does not decrease. The root system is a taproot, 105 cm deep into the soil, 115 cm around. The number of lateral roots reaches 120. The level of development of the root system depends on the variety and the agrotechnics used. Secondary roots are formed from the joint of the plant. The increase in root mass mainly continues from budding to fruiting. When the surface layer of the soil dries out, joint roots are not formed, the plant develops poorly. Millet with only tuberous roots is semi-recumbent.

Roots make up 20% of the total biomass during sprouting-shooting, 34% during shoot-shooting, and 30% during shoot-shooting. After fertilizing, the root development slows down, stops at the time of flowering. Aerial roots are formed from the lower joints of the stem. They increase the plant's resistance to drought and dormancy. The assimilation property of the millet root system is less than that of oats and barley. Therefore, it gives a high yield on newly developed lands. Biological properties. Millet seeds germinate at 8-10 °C and absorb 25% of water by weight to swell. At 8 °C, seeds germinate in 10-15 days, at 15 °C in 4-5 days, at 20-25 °C in 3 days. When the soil temperature is 12-15 °C, the seeds will germinate after 5-7 days. The optimum temperature is 20-30 °C, at a very high temperature of 40 °C the seeds stop germinating. Grass is damaged at -2-3 °C, it dies at 3 °C. The total active temperature during

the growth period is 1800-2100 °C. Millet is resistant to high temperatures, 38-40 °C keeps the activity of leaf stomata well. In winter wheat, the cessation of activity of stomata is observed after 15-25 hours at 38-40 °C, and in oats after 4-5 hours. The ripening of the umgla in Rowagi begins from top to bottom, from the edge to the center. Therefore, when the seeds ripen at the end of the pod, those in the middle are in the phase of wax ripening, and those at the bottom are in the stage of milk ripening. The vegetation period is from 60 to 115 days, depending on the varieties and growing conditions. Millet is a heat-loving plant. In cool and rainy weather, protein in grain reaches 11%, in drought years it reaches 17%. Moisture requirement. One of the most important features of millet is its low demand for moisture compared to other crops, and its resistance to drought. Its transpiration coefficient is 200-250. Due to the good drainage system of millet, it is very resistant to heat and soil drought. Especially the curved and rounded dense forms are resistant to drought. This is the resistance of the crop to drought, its resistance to long-term wilting and dehydration of its tissues. In drought, unrooted grasses go into a state of death (anabiosis), but when it rains or is irrigated, they take root again and start growing rapidly.

It is very drought tolerant from germination to budding. The most demanding (critical) period is from the tuber phase to fertilization. The more the plant is supplied with moisture and nutrients during this period, the higher the productivity. It effectively uses the rains of the end of summer and the beginning of autumn. Light requirements - high, if it is planted with furrows from north to south, it increases productivity by 6-10%. When it is planted densely or when it is polluted by weeds, the growing season can be extended. The growing period is shortened by 15-20 days when planting in the garden. Millet is not very demanding on the soil, but has an impact on productivity. The absorption capacity of the root system is higher than that of wheat, but less than that of oats. Millet can be planted in light loamy soils and heavy clay soils. 0 in Uzbekistan, it gives a good yield in the weed-free, organic matter-rich, grassland, and newly opened reserves and wastelands. Optimal soil environment is 6.5-7.5. The most demanding period for fertilizers is 30-45 days after germination (before fertilization). It is especially demanding on nitrogenous fertilizers. Common millet is divided into five subtypes: 1) scattered - the axis of the tuber is straight and long, the branches are strongly deviated from the axis, 2) scattered - the axis of the tuber is straight and long, the side branches are not much separated, 3) dense - the axis is long, bent, the side branches are attached to the central axis, 4) oval - the trunk is short, dense, the lower branches are separated, 5) comovate - the trunk is short, straight, dense, without pads. The type of millet sprinkled with manure has low resistance to drought and is not very heat-loving. Very fast. The grain is relatively small, and the yield of groats is low. Millet is heat-loving, drought-resistant, strongly developed (the grain is large, the yield of groats is high. Subspecies are divided into the following varieties depending on the separation of the grain from the husk, the color of the flower scales, and the presence or absence of anthocyanin pigment in the spikelets. boiinadi: itellinum, flavum, album, densum, etc.

Millet is not suitable for chronic planting in one field. This is due to the fact that it grows slowly during the initial development period, and therefore it is contaminated with weeds and is damaged by fusarium, helminthosporiosis, bacteriosis, and scab diseases. Planting millet after corn is not recommended. The reason is that both crops are heavily damaged by the corn moth. Millet gives a high yield on newly developed gray and protected lands. Tillage for millet is carried out in accordance with the requirements of the regional farming system. The main attention is focused on the maximum

destruction of weeds, keeping moisture in the soil, smoothing and softening the ground. Millet fields are plowed in autumn. The earlier the fall plowing is done, the greater the yield. In the conditions of Uzbekistan, the soil is plowed to a depth of 28-30 cm.[5] Usually, if the field is contaminated with weeds, it is worked with cultivators or discs before plowing. If rhizome weeds appear, disking can be repeated. Magnesium, iron, boron, manganese, zinc, molybdenum, and copper are important micronutrients in millet nutrition.

They accelerate the activity of enzymes, biochemical processes in the plant, strengthen the synthesis of proteins, carbohydrates, amino acids, and vitamins. Millet is very sensitive to organic and mineral fertilizers. In order to increase the efficiency of organic and mineral fertilizers, the agrochemical and phytosanitary condition of the fields is checked, and relevant passports are drawn up. When 20 t of rotted manure is applied per hectare, 10 s of additional grain yield was obtained. Millet increases yield dramatically when nitrophoska is applied. The main part of the annual norm of phosphorus and potash fertilizers is given in the fall before plowing the land. The main part of nitrogenous fertilizers is given by cultivation before planting, 15-20 kg/ha in the fields planted in wide rows with the first treatment between the rows. Foliar feeding of millet with nitrogen during grain filling (5-10 kg/ha) increases the protein content of grain. Cereal crops are of great economic and production importance in the national economy of the Republic of Uzbekistan. Cereal crops play an important role in meeting the food needs of the population, providing livestock with concentrate and coarse fodder, and raw materials for some industries. Increasing grain production is one of the main problems in agriculture, in particular, increasing the production of millet and similar grains, meeting the demand for grain of the country's population, the national economy, and increasing the grain yield of the republic. is important in the network.

MILLET (Panicum L.) is a group of annual plants belonging to the spike family; grain crop. Homeland China and Mongolia. Widespread in Asia, America, Africa. Afghanistan, India, Jan. It is planted on large areas in Europe, Russia, Georgia, Armenia, Kazakhstan. There are about 500 species. T. is a plant cultivated since ancient times. Asia, Europe and the West. Cultivated in America (since 3000 BC), it has been cultivated in China for 5000 years. In Uzbekistan, 1 type - ordinary Tariq (P. miliaceum L) is often planted for grain on spring lands. Depending on the shape of the ordinary Tariq furrow, it is divided into sub-types: flat, round, narrow, oval, semi-round and round. The root is tuberous and reaches a depth of 150 cm. The stem is a stalk (20-150 cm). The leaves are lanceolate, hairy or hairless, green or reddish. 18-65 cm. The flower is bisexual. The grain is shelly, round, oval or elongated, white, yellow, reddish, brown in color; 1000 pieces weigh 4-9 g. T. is a heat-loving, drought- and salt-resistant plant. The seed germinates when the temperature is 8-10°, the grass starts turning green at 12-15°. The growing season is 60-100 (120) days. Apr. to dry lands. end of - beginning of May, April in irrigated lands. in the end, it is sown as a repeat crop at the end of June - beginning of July. Millet grain contains 10-15% protein, 50% carbohydrate, 3.8% oil. It is used to extract alcohol from the grain, make boza, make juice, cereal, and flour. Oklan grain (juice) is a tasty and nutritious food product. Millet flour is often added to rye flour in baking. Tariq's Saratov 853 variety is grown in Uzbekistan.

The stem is straw-like, hollow, and 0.5-7 m tall. The stem has 5-25 joints. The height of the stem varies depending on the type and variety of the plant. The leaf is a simple, ribbon-shaped leaf, consisting of a leaf sheath and a leaf sheath: there are two leaf lobes at the junction of the leaf sheath with the leaf sheath and a leaf blade inside. The stem prevents water from getting between the stem and the leaf

sheath. Leaf lobes formed on both sides of the leaf sheath help to keep the leaf sheath on the stem. Bouquet. The inflorescence of cereal plants is spike-shaped in wheat, barley, rye, oat, sorghum, millet, broom-shaped in rice, and in corn, the inflorescence is two types: broom-shaped and cob-shaped. Fruit. Grain consists of three parts - two layers of husk, endosperm and bran. The outer part of the seed coat is called the fruit coat, it consists of two layers and is formed from the walls of the nodule. The two parts of the coat are called the seed coat, which also consists of two layers, which develop from the two coats of the seed pod. In addition to the parts mentioned in the husked grain, it consists of the shell that surrounds the grain, and the shell consists of the flower husk. In this case, the flower shell is combined with the grain. After sowing, the seeds of cereal plants go through certain stages of development until they form new seeds, that is, during the entire period of plant growth. During the development periods, a morphological change occurs in the plant and new organs appear and are formed. Cereal crops go through developmental stages such as grass formation, tillering, tillering, heading or fruiting, flowering and ripening. If at least 10% of the plant passes into a certain period, it is the beginning of this period, and if it is 75%, it is the complete entry into this period. The beginning and passage of the development periods of plants are carried out on the basis of observations in natural, i.e., field conditions. And in laboratory conditions, in order to determine each development period, the seed is poured in laboratory conditions and its germination is observed. Below is a description of these stages of development, the appearance of various organs and the different signs of periods.

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