

**BIOCHEMICAL COMPOSITION OF SESAMUM INDICUM AND  
PANICUM L , ITS USEFUL PROPERTIES, HIGH-YIELDING VARIETIES**

**Choriyev Jahongir Olimjon o'g'li**

**Student of Denov Institute of Entrepreneurship and Pedagogy,  
Department of Biology**

**Abstract:** Currently, like many plants, sesame and millet are cultivated. These two products have high efficiency indicators and are enriched with mineral salts and vitamins that are important for the human body. information will be provided.

**Key words:** Sesame, millet, vitamin, varieties, nutritional value, vegetable oil, vegetable grain

Sesame is one of the oil crops grown in Uzbekistan. Many people are familiar with its cultivation and agrotechnics. Oil is mainly collected in its seeds. introduced, it is cultivated in the countries of Central Asia. Sesame cultivation is cultivated in 2 different conditions. It is grown in irrigated and dry land and the yield is 2-2.5 t/ha and 1-1.5 t/ha. Its productivity is mainly in irrigated land It is good on gray soils. It is widely cultivated in India, Pakistan, Mexico, and Africa. Sesame seeds are widely used.



# INTERNATIONAL SCIENTIFIC-PRACTICAL CONFERENCE ON "MODERN EDUCATION: PROBLEMS AND SOLUTIONS"

Sesamum  
1-figure.Sesame indicum

Its stalks are used for making silage. Its pulp contains 40% protein and 8% oil. Its seeds grow mainly in pods, pods are 4 cm long and 9 cm wide. 25-100 plants per plant. There are 70-80 seeds in one pod. The seeds are mostly small, black, white, brown, egg-shaped. Length 2.5-4 mm, width 1.7-1.9 mm, 1000 The weight of each seed is 3-5 grams. The relevance of the article is that even if the sesame seeds grown in our country are grown in small areas, it is possible to get an abundant harvest. With this harvest, we can export not only the domestic market. Sesame grown in the region is exported. It is exported to countries such as Azerbaijan, Germany, the Republic of Belarus, Iraq, Kazakhstan, Kyrgyzstan, Lebanon, Mongolia, and Tajikistan. Sesame is mainly an annual and perennial plant, and its Sesame oil is widely used for many purposes, especially in medicine. Specific work on its cultivation has not been carried out in the Surkhandarya region. In hot regions, 3 varieties included in the state register have been planted and grown. Common or Indian sesame seeds are golden colored seeds most popular in eastern countries. It is actively used in cooking, including the confectionery industry. In addition, everyone knows the healing oil from this sesame (by pomace). Black sesame seeds are the same, but without the shell. They are distinguished by their distinct taste and aroma. Black sesame is very popular in the Far East, including China. The black color described below is very high in calories. 100 g of this product contains about 580 energy units. Half of this composition is fat. By the way, it contains organic saturated and polyunsaturated acids. Unrefined sesame is often used to treat various diseases, in particular: With gastritis, such a product is taken in the amount of a large spoon 2 times a day, washed down with plain water. If you are surprised by a stomach ache, then you need to drink a large spoonful of sesame oil and the discomfort will disappear immediately. Due to the content of B vitamins, as well as amino acids, magnesium and antioxidants, sesame is very useful for the nervous system. By using it, you



can overcome stress, get rid of insomnia and improve general well-being. For the heart, it is often used not in sesame seeds, but in its oil. The reason for this is that this particular component contains substances that regulate the level of blood pressure, and also strengthens the heart muscle. Due to the presence of phosphorus, zinc, phospholipids and B vitamins, sesame and sesame oil have a good effect on brain activity. By using this product every day, you can prevent the development of Alzheimer's disease and multiple sclerosis. Black sesame oil is actively used in pharmacological production. It is used in the production of gypsum and emulsion. As for traditional medicine, such a product is often used to prevent and treat many diseases. It is known that it improves blood coagulation, and also has a laxative effect, and therefore it is often used for inflammation of hemorrhoids. It is impossible not to say that it is actively used in cosmetology. It is used as a moisturizer and emollient. It has anti-inflammatory properties and increases cell renewal. Sesame oil is also used to remove makeup from the face and during massage. Tashkentsky-122 High-yielding variety. It is 150 cm tall when planted in irrigated districts and 100 cm in conditionally irrigated districts. The weight of 1000 seeds is 3-3.5 g. Medium variety. The growing period is 109-125 days in irrigated lands. The average productivity of irrigated: 8-9.5 s per hectare, the amount of oil in the seeds is 56-61%. It has been acclimatized throughout the Republic since 1942. It is recommended for planting in all regions of our country.

Sadaf has been included in the state register since 2019. It is recommended for planting in the Tashkent region of our country.

Black Prince Originator of the variety: Selection variety of the Research Institute of Plant Science of Uzbekistan. Origin of the variety: Collection sample k-84 (Uzbekistan) created by individual selection. Authors of the variety: Amanova M., Rustamov A. Regions recommended for planting: since 2012, it has been included in the State Register for planting on irrigated lands in the Republic. The average height of the plant is 120-150 cm. The average vegetation period is 110-120 days. The average weight of 1000 seeds is 2.6-3.0 g, the seeds are black.



Resistant to grain spillage. Average yield: 17.6 s/ha. The amount of fat in the grain is 63%, protein is 24%. During the test period, there were no cases of damage by agricultural diseases and insects. Recommended for planting in all regions of our country. Oil is obtained from sesame seeds produced from these varieties.

Sesame oil is one of the most useful and light oils. Sesame oil contains fatty acids, it has anti-inflammatory, antibacterial, antioxidant, blood sugar lowering, blood pressure regulating, anti-atherosclerosis, anti-depressant and DNA cell protecting properties. Sesame oil is very rich in useful vitamins. Useful properties of sesame oil: -Anti-inflammatory, anti-viral and anti-bacterial; - Moisturizes dry skin, has rejuvenating, cell regenerating properties; -Helps heal wounds; - Protects against oncological diseases; - Protects against ultraviolet rays - Against rheumatism; - Against atherosclerosis; - Blood pressure regulator; - Very useful for massage treatments - Removes slag and toxins from the body; - Cholesterol regulator. Uses of sesame oil in facial care: Sesame oil has many useful properties. Sesame oil is applied to the skin of the face and massaged. This treatment moisturizes the facial skin, removes fine wrinkles, prevents the appearance of deep wrinkles, makes the facial skin clear, soft and smooth. Protects from ultraviolet rays, protects the skin from sunburn and pigment spots. It tightens the skin of the face and the skin around the eyes. It can be used for acne and skin rashes by adding a few drops of sesame oil to the cream. This treatment eliminates facial skin problems, prevents inflammation, and helps cut and injured skin to heal quickly. Also, sesame oil is very convenient for the delicate skin care of babies, it prevents and treats various types of skin rashes that occur after diapers. Sesame oil for massage treatments: Warmed sesame oil is applied to the body and massaged. This treatment eliminates facial skin problems, prevents inflammation, and helps cut and injured skin to heal quickly. Also, sesame oil is very convenient for the delicate skin care of babies, it prevents and treats various types of skin rashes that occur after diapers. Sesame oil for massage treatments: Warmed sesame oil is applied to the body and massaged. This treatment rids the body of toxins. We



know that the organ that collects the most toxins in the body is the skin. As a result of lifestyle, daily use of chemicals, the skin collects many toxins and acts as a shell for the whole body. Sesame oil cleanses the body of toxins. Massage procedures using sesame oil improve blood circulation in the body and ensure healthy skin.

Tariq is an annual grain crop belonging to the family of spikelets. The root is tuberous and reaches a depth of 150 cm. The stem is a stalk (20-150 cm). The grain is shell-shaped, round, oval or elongated, white, yellow, reddish, brown in color, weight of 1000 grains is 4-9 g. Millet is heat-loving, drought- and salt-resistant plant. The seed germinates when the temperature is 8-10 °C, the grass starts to turn green at 12-15 °C. The growing season is 60-100 days.



*2-figure. Panicum L,*

Grain contains 10-15% protein, 50% carbohydrate, 3.8% fat. It is used to extract alcohol from grain and make boza. Whitened grain (juice) is a tasty and nutritious food. Millet flour is often added to rye flour in baking. Diseases: black moth, bacteriosis. Pests: millet fly, stem borer, etc.

Sowing period and scheme: On irrigated land, sorghum is sown as a repeat crop in June and early July in a 45×15 or 60×15 cm scheme. The planting depth is 4-5 cm. 1.2-1.6 kg of seeds are used for 10 hectares of land. Currently, 1 variety of millet is grown in Uzbekistan. Today, millet products grown in our country are exported to countries such as Azerbaijan, Afghanistan, Iraq, Iran, Korea, Kyrgyzstan, Pakistan, Tajikistan, and Turkey.

Varieties of millet

SARATOVSKAYA

—

853

It is zoned for planting in conditionally irrigated and dry lands of our republic. It

belongs to the subtype of millet with close (dense) grooves. It is resistant to drought, the trunk is large, short and dense, less flexible. The grain is dark red, large. 1000 grains weight 6.8 g. The grain is less spilled. The growing season is 60-105 days. When replanting, the growth period is reduced to 10-15 days. Productivity: 25-30 s/ha in irrigated lands. Recommended for planting in all regions of our country.

Cereals have long been a common dish in Russia. They cooked soup with pork, meat, fried onions, potatoes, butter or sugar. This delicious dish was considered satisfying and healthy and has survived to this day. The benefits and harms of millet porridge are in its nutritional properties. It is very high in calories, protein and vitamins. It contains iron necessary for the body, calcium that strengthens the skeleton and other useful substances. Cereal differs from other products in its low allergenicity, has a beneficial effect on the stomach, and is therefore suitable for people with gastrointestinal diseases. The benefits of millet groats are known when taking pills. It strengthens the body, frees it from toxins, restores the functioning of the stomach and intestines. It is recommended to include it in your diet for diabetes, it is useful for gout and arthrosis.

Popular cereal products are rich in protein and carbohydrates, which are necessary for the child during the growth period, and exceed buckwheat and rice in terms of protein content. Since it contains a lot of phosphorus, it is indispensable to use millet porridge to strengthen teeth. In addition, croup strengthens blood vessels and normalizes heart function. The composition of the product helps to clean and renew the skin. The benefits of millet groats are used to cleanse the whole body, it removes swelling, removes toxins. If you eat it for only 7 days, you can significantly reduce weight.

When buying a product, you should pay attention to its storage. It cannot be placed in the sun, the packaging must be dry, and the grain itself must not have an unpleasant smell. Harm of millet porridge is possible if the expiration date is



violated. The grain may turn sour and become inedible. Unfortunately, there are people who cannot consume this wonderful product. Harm of millet groats is obvious for those suffering from stomach diseases and stool problems. Do not abuse it for patients with low acidity. The harm of millet is not equal to its ability to heal our body from many diseases. It can cure the most serious abnormalities and is a terrible threat to diabetes. With a serious disease like diabetes, it is very important to carefully consider your diet. Millet is one of the most useful grains for patients with the presented disease. With this in mind, it is important to know everything about what is good for millet in type 2 diabetes and how to prepare it. Watermelon puree is recommended to be as much as possible in the diet of a person with diabetes. This is due to the fact that it contains complex carbohydrates, which ensure that the body is cleansed of toxins. In addition, millet can be used well for diabetes because it contains amino acids. It is they that become the building material used for the muscles and cells of the skin. Millet is indispensable for obese people. This is due to the lipotropic effect, that is, removing fats from the body and preventing their new formation. In addition, according to experts, millet porridge is saturated with vitamins and minerals:

Vitamin D

components B1, B2, B5, B6,

Vitamin PP

Vitamin E

retinol (vitamin A),

carotene.

It should be noted that fluorine, iron, silicon, as well as phosphorus. In addition to patients with diabetes, it is advisable to include millet in the diet for patients who have experienced cardiovascular diseases. This is due to their high potassium content. Thanks to retinol, millet porridge has an antioxidant effect - it cleanses the body of toxins, has antibiotic properties, and also binds heavy metal ions. Butchers told the whole truth about diabetes! If you drink it in the morning, diabetes will



disappear in 10 days. At the same time, the glycemic index of millet is quite high (71 units), so with a complex course of diabetes, you should consult a specialist about its continuous use.

List of used literature

1. Atabaeva H.N., Khudaikulov J.B. Plant science. "Science and technology" publishing house, Tashkent 2018
2. Atabaeva H.N., Umarova N.S. Rastenievodstvo. Textbook. TashGAU, Tashkent-2016.
3. Atabaeva H., Kadirkhojaev O. Plant science. Generation of the new century 2006.
4. Atabaeva H.N., Umarova Z. Plant science - practical, study guide T. National encyclopedia of Uzbekistan, 2004 (160 pages)
5. Mukhammadjonov M. Zokirov Z. "Cotton agrotechnics" training manual. Tashkent 1995.
6. Ibragimov O., Plant science. Text of lectures. Ferghana, FarPI-2019.
7. Ibragimov B., Plant science and cotton cultivation. Methodical instruction for practical training. Ferghana, FarPI-2020.

