

**O‘ZBEKISTON RESPUBLIKASI OLIY TA’LIM, FAN VA
INNOVATSIYALAR VAZIRLIGI**

BUXORO MUHANDISLIK-TEXNOLOGIYA INSTITUTI



“Insonga e’tibor va sifatli ta’lim yili”ga bag‘ishlangan

professor-o‘qituvchilar, ilmiy izlanuvchilar,
magistrlar va talabalarning
ilmiy-amaliy anjumani

TEZISLAR TO‘PLAMI

(2023 yil 15-16 may)



BUXORO – 2023

CHARACTERISTICS OF GERMINATED GRAINS AND SEEDS

B.T. Muxamadiyev, Sh.U. Mirzayeva, M.N. Hafizova

Grains are a storehouse of useful substances balanced by nature itself. Moreover, germinated seeds are not only natural food, but also a life-giving product, as they represent not only the youngest, but also the most rapid stage in the development of grains. Thanks to this, the most useful substances are transferred to the human body, which will be discussed below. Once in the digestive tract, they cause resonance, transferring the energy of youth and development. And, despite the fact that a person continues to eat improperly, without limiting the usual set of products (smoked sausage, fatty cheeses, country cottage cheese) to a special diet, does not attach importance to physical exercises, wheat germ still gives a noticeable healing effect, helps to take the first step on path to a healthy lifestyle.

Cereals, cereals are considered by nutritionists to be an excellent food necessary for any person who cares about their health. Such products are of particular value for the diet of baby food and pregnant women, as it has been proven that cereals are very rich in vitamins and microelements. As you know, whole grains contain not only a wide range of various vitamins and minerals, they are also rich in fiber, and all together are simply necessary for good nutrition.

The vitamin and chemical composition of germinated cereals can be determined as follows:

1) rich content of vitamin E, necessary for maintaining:

- sexual function
- the functioning of nerve and muscle cells,
- functioning of liver cells;

2) vitamins of group B, necessary for the normal functioning of the nervous, cardiovascular systems, muscles and the organ of vision;

3) fiber, which allows you to remove toxins from the body, as well as stimulating intestinal motility;

4) the presence of rare trace elements necessary for the prevention of chronic nervous exhaustion, such as chromium and lithium;

5) the content of potassium, which serves to:

- maintaining acid-base balance,
- prevention of muscle wasting and giving them elasticity,
- strengthening the heart muscle;

6) iron is also present in the grains, which, in combination with vitamin C, has a positive effect on red blood cells.

Sprouted grains and seeds are a cult food not only for vegetarians. It is known that sprouts do not specifically treat one disease, but heal and rejuvenate the entire body as a whole. It is impossible even to compare the usefulness of a simple germinated grain with any advertised supernova miracle pills and newfangled balms.

For daily use, sprouted seeds can be dried, ground into flour and added to various dishes. It would be better if, in order not to heat the seeds, add flour from them to an already prepared dish, and thereby protect the vitamins from destruction.

Sprouts are an excellent remedy for protecting the body from pathogenic bacteria and radiation, heal the skin and hair, strengthen teeth and nails, and normalize the activity of the intestines and liver. Talking about the benefits of the full set of proteins contained in sprouts can be very long.

It has been proven that proteins are the main building material necessary for the formation of cells. The use of vegetable proteins in food, among other things, lowers the amount of cholesterol in the blood by 2-3 times. It has been proven that sprouts contain chlorophyll, which is similar in structure to the hemoglobin of our blood. In a healthy body, it will act prophylactically, strengthening the body.

GRAIN GERMINATION METHODS

B.T. Muxamadiyev, Sh.U. Mirzayeva, M.N. Hafizova

Turning to the main question of how to germinate grains, let us once again recall the enormous benefits of this product. It is not in vain that sprouted grains and seeds are very popular with doctors both as a remedy for many diseases, and as a general strengthening drug that increases the body's performance, its resistance to harmful influences and pathogens. This raw material is extremely valuable for the prevention of diseases, especially in conditions of unfavorable environmental conditions.

For germination, the use of wheat, peas, beans, corn, and millet is known. Sprouted, they are used with any fried, boiled, steamed, raw food prepared in any way.

According to recent studies, today it is possible to use germinated seeds of almost all types of cereal crops for therapeutic and prophylactic purposes, in addition, legumes and vegetables. Data have also appeared on the use of nuts for sprouting. Information has been obtained that a good effect is observed when using germinated seeds of hazel, radish, clover, alfalfa, cabbage, watercress, fenugreek and many other plants. Exceptions include seeds of some crops unsuitable for germination: cucumber, watermelon, zucchini, squash, pepper, chokeberry, nightshade representatives - potatoes, eggplant, tomato, and some other representatives of the flora.

If you did not find germinated grains and seeds on sale, you can do everything yourself, right on the windowsill. This advantage allows you to use fresh, and therefore the most life-giving, seedlings for a whole year.

An easier way to grow cereal sprouts is to grow sprouts without interruption. To do this, place the grain on wet gauze or in tea strainers placed in glasses of water. At the same time, it is necessary to "plant" the grains every day, so that when the first crop "ripens", the next one will be on the way in the next 3–4 days. Sprouted grains can be stored in the refrigerator for no more than 2-3 days, while it is imperative to spray the napkins covering them.

The most common and the following method of germinating grains:

- 1) place grains (seeds) in a container with water. Floating must be removed, settled to the bottom, fresh are edible;
- 2) line the bottom of several flat plates with paper towels. Then put the grains on napkins so that one not very thick layer is obtained;
- 3) after that, pour enough water into the plates so that it covers the seeds a little. Cover the plates with lids and wait for the grains to sprout. (Rectangular pieces of glass or plexiglass can be used as lids.) Do not use a tight-fitting lid to keep the seedlings constantly exposed to air. After 2-3 days, you can harvest.

There are many ways of grain germination, one of them is hanging germination. So, it is necessary to wash the grains, wrap in a two-layer gauze bag, hang and spray with water 5-6 times a day. After a day, the raw material will begin to swell, then after another day or two, depending on the type of grain, small sprouts will appear. The product is ready to use.

To increase the healing properties and to improve the taste sensations, cereal sprouts are often combined with raw vegetables, fruits, and berries. However, in no case should grains be consumed at the same time as medicinal plants. It is also strictly forbidden to combine the intake of this medicinal product with chemical drugs. With great care, it is necessary to approach the joint intake of wheat germ with bee products, since honey, pollen, royal jelly and even propolis can cause allergies in patients. The only thing that is possible, and in fact, even necessary, is to take therapeutic grain sprouts simultaneously with therapeutic fasting courses, the duration and type of which are selected by the doctor on an individual basis.

Sprouting legumes and other crops.

Bean sprouts are also noted for their beneficial properties. The technology of germinating seeds of legumes has both similarities with the methods already described, and its own characteristics.

MUNDARIJA:

I- SHO‘BA OZIQ-OVQAT VA KIMYOVIY TEXNOLOGIYALARDA INNOVATSIYALAR	3
1. O‘SIMLIK YOG‘LARINI DEZODORATSIYA QILISHNING DAVRIY JARAYONI TAHLILI Usmonov A.U. , t.f.n., dotsent, Afakov A.T.,M59-23 TJBAKT magistranti	4
2. EKSTRAKTSIYA JARAYONINI MODELLASHTIRISH ASOSLARI Abduraxmonov O.R., t.f.d., professor, Sodiqova P.B.,M59-23 TJBAKT magistranti	5
3. MEVALARNI VAKUM SUBLIMATSIYA USULIDA SUVSIZLANTIRISH JARAYONINI TAHLILLARI Djo`rayev X.F., t.f.d., professor, Shamsiyeva Z.Y., M59-23 TJBAKT magistranti	7
4. CHARACTERISTICS OF GERMINATED GRAINS AND SEEDS B.T. Muxamadiev, Sh.U. Mirzayeva, M.N. Hafizova	8
5. GRAIN GERMINATION METHODS B.T. Muxamadiev, Sh.U. Mirzayeva, M.N. Hafizova	9
6. СОЕВОЕ СЫРЬЯ КАК БАЗОВЫЙ КОМПОНЕНТ МОДИФИЦИРОВАННЫХ ПИЩЕВЫХ ЖИРОВ ДЛЯ МАРГАРИНОВЫХ ПРОДУКТ Ф.Н.Ашуров, в.т.н., проф. К.П.Серкаев	10
7. СОЕВОЕ СЫРЬЯ КАК БАЗОВЫХ БЕЛКОВЫХ КОМПОНЕНТ КОМБИНИРОВАННЫХ ПРОДУКТ ПИТАНИЯ (анализ производства «СулШерЖахон», г Бухара). Ж.Ш.Султонов, Ф.Б.Ашуров	11
8. ЭФФЕКТИВНОСТЬ ИСПОЛЬЗОВАНИЯ ГРАНАТОВЫХ ВЫЖИМОК В КОРМЛЕНИИ КУР – НЕСУШЕК ПРИ ДИАРЕИ НЕИНФЕКЦИОННОЙ ИТИОЛОГИИ Курбанов М.Т.	12
9. РАЗРАБОТКА КОМПЬЮТЕРНОЙ МОДЕЛИ И ИССЛЕДОВАНИЕ ПРОЦЕССА ЭКСТРАКЦИИ МАСЛИЧНОЙ ФУЗЫ НА ОСНОВЕ СИСТЕМНОГО АНАЛИЗА Садуллаев Шухрат.Нарзуллевич	13
10.ПРИМЕНЕНИЕ СВЕКОЛЬНОГО КРАСИТЕЛЯ ШамсиевР.Х ¹ ., Ботирова Н.К ² , Каримова О.Р. ³ ¹ Бухарский инженерно-технологический институт ² Бухарский техникум туризма и культура наследия ³ Профессионально-техническое училище №1 Гиждуванского района	14
11.ОСНОВНЫЕ КРАСЯЩИЕ ПИГМЕНТЫ КРАСИТЕЛЯ ИЗ ПЛОДОВ ТУТОВОГО ДЕРЕВА ШамсиевР.Х ¹ ., Ботирова Н.К ² , Аминова Н. ³ ¹ Бухарский инженерно- технологический институт ² Бухарский техникум туризма и культура наследия ³ Профессионально-техническое училище №1 Гиждуванского района	15
12.ПРИМЕНЕНИЕ КРАСИТЕЛЯ ИЗ ПЛОДОВ ТУТОВОГО ДЕРЕВА ШамсиевР.Х ¹ ., Ботирова Н.К ² , Ибрагимова Д. ³ ¹ Бухарский инженерно-технологический институт ² Бухарский техникум туризма и культура наследия ³ Профессионально-техническое училище №1 Гиждуванского района	16
13.PROSPECTS OF THE DRYING PROCESS OF SPICE PLANTS Djurayev Kh.F.Doctor of Technical Sciences, professor ¹ , djuraev_xf@mail.ru Mizomov M.S., Postgraduate student ² , muhammadmizomov@gmail.com	17