



TECHNOLOGY OF GROWING AND PROCESSING OF MEDICINAL PLANTS

Davlatova Sayyora

Teacher of the Department of "Automation and Control" of TDMAU:

sayyavlatova@gmail.com

+998500040200

Umbarova Mukhlisa Mukhiddin qizi

Student of TDMAU:

mukhlisaumarova@gmail.com, +998 91 584 83 06

<https://doi.org/10.5281/zenodo.14271744>

Keywords: Medicinal plants, heritage, Avicenna, Cardamom, Black ginger Chile, Aloe, Plant selection, vegetarianism, apricot, method,

ANNOTATION: This article discusses the wealth of food and plant life endowed with nature and the role of the heritage left by our ancestors in folk medicine and modern medicine.

Medicinal plants, their cultivation, processing, and proper use are the demands of this era. Nowadays, science and technology have advanced to such an extent that they are making progress in agriculture, medicine, folk medicine, and various other fields. The role of modern technologies that facilitate these works and the spiritual heritage left to us by our ancestors is incomparable. In particular, the works of our grandfather Abu Ali Ibn Sina are recommended as the main reference in both medicine and folk medicine. Ibn Sina (Avicenna) provided information about many medicinal plants through his famous work "The Canons of Medicine" (Al-Qanun fi al Tibb). This work had a great influence on the development of medicine at that time and created a scientific idea about many medicinal plants. Some of the medicinal plants that Ibn Sina used and recommended were:

1. Lavender - used for mild nervous system disorders, headaches, and mild colds.
2. Cardamom - used to treat stomach and intestinal problems, as well as to improve the functioning of the heart and nervous system.
3. Ginger - used to improve the digestive system and digestion, and was also used against inflammation.
4. Black Ginger (Chile) - used to improve blood circulation and against colds.
5. Rosemary - used to enhance memory and mental performance, and to calm the nervous system.
6. Aloe Vera - used for skin diseases, wounds, and inflammation.

Ibn Sina's scientific approach to medicinal plants was based on the study of natural medicines, which often used a combination of plants and minerals. He based his approach to the use of plants in medicine on scientific and practical methods of healing.

Medicinal plant cultivation technology includes special methods and techniques for using the therapeutic properties of plants. The main stages of this technology are as follows:

1. Selection of plants

When selecting medicinal plants, their healing properties, suitability for climatic conditions and ease of harvesting are taken into account. Typically, plants are used as natural medicines and are selected based on their chemical composition (for example, alkaloids, flavonoids, terpenoids).



2. Soil preparation

Medicinal plants need clean and fertile soil for good growth. When preparing the soil:

- Check the pH level of the soil
- Enrich with the necessary mineral and organic fertilizers.
- It is necessary to choose a soil with good water permeability.

3. Planting crops

Medicinal plants are mostly planted by the following methods:

- Propagation: Through seedlings or seeds
- Vegetative propagation: These are mainly carried out using roots and shoots.

4. Watering and care

Medicinal plants usually require gentle and constant watering.

It may also be necessary to use chemical and biological protection against pests. When caring for plants, it is necessary to pay attention to the root system, leaves and flower beds.

5. Collection and storage of plants

In order not to affect the chemical composition of medicinal plants when collecting them, the following rules should be observed:

- Choose the right time for collection (when the leaves or flowers are newly opened and their activity is high)
- Protect the plants from external conditions, use drying or other storage methods.

6. Drying and processing It is important to properly dry and store the medicinal parts of plants (for example, leaves, roots, flowers). Natural or artificial methods are used for drying, but they help preserve the active substances of the plant. Extracts and other preparations are also prepared from medicinal plants.

7. Quality control.

Quality control is important in the production of medicinal plants. The chemical composition of plants, methods of pest control and storage conditions should be regularly checked.

These technologies are necessary to make the cultivation of medicinal plants effective and safe. At each stage, attention should be paid to environmental cleanliness and a scientifically based approach.

We are surrounded by medicinal plants, healing benefits. But we do not know how to use them for what purpose, and this is our biggest shortcoming. As an example, I would like to bring to your attention some information about the benefits of our country and their beneficial properties:

Apricot

Apricot (*Prunus armeniaca*) is a very useful fruit, which has many positive health properties. Below are some of the beneficial aspects of apricot:

1. Source of vitamins and minerals: Apricot is a rich source of vitamin A, vitamin C, vitamin K, and B vitamins. Vitamin A is necessary for eye health, and vitamin C is necessary for strengthening the immune system.

2. Antioxidants: The carotenoids, flavonoids, and polyphenols present in apricot protect cells from free radicals and help reduce inflammation.

3. Tone and Skin Health: The vitamin A in apricots helps in skin renewal and keeps it healthy. It also reduces skin inflammation.



4. **Digestive Support:** Apricots are high in fiber, which improves digestion and normalizes bowel movements. This helps prevent constipation.

5. **Heart Health:** The potassium in apricots helps improve heart function and helps maintain normal blood pressure.

6. **Good mood and energy:** The magnesium and other minerals present in apricots calm the nervous system and increase overall energy levels.

7. **Apricot nuts (seeds):** Apricot nuts also have their own benefits, as they contain omega-3 fatty acids and antioxidants. These are beneficial for the heart and vascular system.

Thus, apricots are not only a delicious fruit, but also have health-promoting properties. I present the following information about the technology of growing apricots (*Prunus armeniaca*) and its consumers:

Apricot Growing Technology

The following stages and technologies should be considered for growing apricots:

1. **Soil preparation** - The most optimal soil for growing apricots is well-drained, light and enriched with organic matter. The pH level should be between 6.0–7.5.

2. **Planting seedlings** - It is preferable to propagate apricots through seedlings. The best time for planting is in spring or autumn, when the soil is warm enough. The distance between seedlings should be 3–4 meters, since the apricot tree spreads widely and upwards.

3. **Watering** - Although apricots are resistant to acute drought, they require regular watering during the growth period. The best method of irrigation is drip irrigation.

4. **Fertilization** - Apricots need moderate fertilization. Organic fertilizers or mineral fertilizers can be used, but excessive nitrogen fertilizer should not cause the plant to overgrow.

5. **Management and care** - It is important to lighten the trees and cut off excess branches to ensure that their shape and length spread upwards. This helps to obtain high-quality fruits.

6. **Protection from diseases and pests** - For the full growth and development of apricot fruit, it is necessary to work regularly with insecticides and fungicides. Countries That Love and Consume Apricots Apricots are consumed all over the world, but they are mainly famous in the following countries:

Advanced countries in apricot cultivation

➤ Turkey:

Turkey, especially the Malatya region, is a leader in apricot cultivation and is one of the largest producers of apricots in the world. In Turkey, apricots are consumed in many different forms, including dried.

➤ Uzbekistan:

Uzbekistan is one of the countries with extensive experience in apricot cultivation. In addition to fresh apricots, dried apricots are also widely used as a fruit here.

➤ Iraq and Iran:

Apricots are also grown and consumed in large quantities in these countries, especially dried apricots (often made by "drying the fruit").

➤ Kazakhstan and Tajikistan:

In Central Asian countries, there are various varieties of apricots, and the fruit is consumed both in a dried state and in a fresh state.

➤ China and India:



Apricots are also grown well in China and India, but their main consumption is as fresh fruit.

➤ France and Spain:

Apricots are very popular in Europe. In France, apricot desserts, jams and marmalades are widespread, while in Spain they are mainly consumed as fresh fruit.

Conclusion

Apricot cultivation technology is based on simple but effective care and proper agricultural techniques. Uzbekistan, Turkey, Iraq, and Central Asian countries are leaders in apricot cultivation, which is also widespread in European and Asian countries. Apricots are consumed fresh, dried or in the form of products (jam, compote, etc.).

References:

1. Materiallardan foydalanganda ComNews ga havola kerak 1999 - 2024 © ComNews.ru
2. Mirziyoyev SH.M. "Tanqidiy tahlil, qat'iy tartib-intizom va shaxsiy javobgarlik — har bir rahbar faoliyatining kundalik qoidasi bo'lishi kerak" 14 yanvar 2017 yil.
3. O'zbekiston Respublikasining ayrim qonun hujjatlariga o'zgartish va qo'shimchalar kiritish, shuningdek ayrim qonun hujjatlarini o'z kuchini yo'qotgan deb topish to'g'risida. Qonunchilik palatasi tomonidan 2017 yil 25 mayda qabul qilingan.
4. СПОСОБЫ ВЫРАЩИВАНИЯ ГАРМАЛЫ ОБЫКНОВЕННОЙ PEGANUM HARMALA L. В ЛАБОРАТОРНЫХ И ПОЛЕВЫХ УСЛОВИЯХ Ещанова Г. А. (лекарственная) — Matricaria chamomilla L. // Атлас лекарственных растений / Гл. ред. акад. Н. В. Цицин; ВИЛАР. — М.: Госмединздат, 1962. — С. 490—492. — 703 с.
5. Mirjonov Nosir Numonovich "Isiriq" dorivor o'simligi va uning lingvistik tabiat. 4. O'zbekiston milliy ensiklopediyasi, 4- jild Davlat ilmiy nashriyoti 2022 / Мировая наука
1. <https://shop.evalar.ru/encyclopedia/item/aloe-vera/>
2. <https://daryo.uz/2022/09/09/zanjabil-sharbati-nimasi-bilan-foydali-va-uni-qanday-tayyorlash-kerak>
3. <https://zira.uz/uz/2019/01/17/rozmarin-togrisda-qiziqarli-mahsulotlar/>
4. <https://www.garshinka.ru/blog/lavanda-posadka-vyraschivanie-ukhod-i-razmnozhenie>

