

CULTIVATION AND USE OF MEDICINAL LAVENDER (LAVANDULA ANGUSTIFOLIA OFFICINALIS L.) PLANT

Ilhom Makhmudovich Rasulov

Philosophy Doctor on Agricultural Sciences, Associate Professor

<https://doi.org/10.5281/zenodo.8048265>

Abstract. Presidential Decree PD-4901 of the the Republic of Uzbekistan dated November 26, 2020 “On measures to expand the scope of scientific research on the cultivation and processing of medicinal plants, and the development of their seed production”, Presidential Decree PD-46701 of the the Republic of Uzbekistan “On measures for the protection, cultivation, processing and rational use of available resources of medicinal plants growing in the wild” dated April 10, 2020, “On effective use of raw material base of medicinal plants, measures to create value chain by supporting processing ” on the basis of the decree No. PD-139, the relevance of the topic, distribution, description and agrotechnics of the medicinal lavender plant are published in the article.

Keywords: medicinal lavender, FWC (field wet capacity), soil fertility, crop rotation, organic fertilizer, mineral fertilizer, linalool, linalyl acetate, cosmetic, perfumery, immunomodulating, pharmaceutical, aromatherapy, rheumatic, diuretic.

Introduction. Pursuant to the decree of the President of Uzbekistan dated April 10, 2020 No. PQ-4670 “On measures for the protection of medicinal plants growing in the wild, cultivated cultivation, processing and rational use of available resources”, the Research Institute of Plant Genetic Resources, Selection of Medicinal Plants According to the 2023 work plan of the department of seed production and agrotechnics, it is planned to plant in a large collection nursery, and Medicinal lavender (*Lavandula angustifolia-officinalis* L.) will be propagated from seeds and vegetatively. Mainly adapted to grow in fertile soils and open areas. Since the plant is perennial, permanent places are planned and pruned. Medicinal lavender (*Lavandula angustifolia-officinalis* L.) is not recommended for planting in crop rotation fields, as this medicinal plant has the characteristic of yielding in one place for 15-20 years.

In autumn, 15-20 t of organic fertilizer and 30-40 kg of mineral fertilizer (superphosphate) are applied to the land where the medicinal lavender plant is planted, and the land is plowed to a depth of 25-28 cm. Propagation from plant seeds is the most effective method. The most optimal time for sowing is the first ten days of November. The seed (2-3 cm) is planted in a pit. If it is planned to plant the medicinal lavender plant in early spring, it is necessary to plant it in frost. Before planting, the land is cleared of various weed residues and leveled with a shovel. When the air temperature reaches 10-15 C⁰, a 70 cm width of egate is taken and the seeds are sown. Before the seeds sown in early spring germinate, the soil should have a FWC of 70%

Medicinal lavender (*Lavandula angustifolia-officinalis* L.) plants require 4-6 kg of seeds per hectare. In the Research Institute of Plant Genetic Resources (RIPLR) collection nursery, carob planting is carried out at the rate of seeds that can be used for one hectare of the total area. Medicinal lavender seeds fully germinate in 7-10 days, depending on soil fertility. The first true leaves appear after 10-15 days, and the plant spacing is softened by cultivation and weeding. 2-3 young shoots of medicinal lavender are left at a distance of 25-30 cm from each bush. Plants usually bloom after the 3rd year. Before the flowering phase, the plant is watered twice, and after

watering, the interplants are softened to a depth of 8-10 cm by cultivation, or a small mulching is carried out in a small collection nursery.

Plants bloom in early July. Fertilization starts from the planing phase, and before watering, 50 kg of nitrogen and 30 kg of potassium fertilizers are applied per hectare. Feeding plants with diluted manure juice gives good results. Fields planted with lavender should be watered after every 2-3 waterings. The second feeding is carried out in the flowering phase (40-50 kg of nitrogen and 20 kg of phosphorus fertilizer per hectare). There are 16-25 flowers in one flower. The flowers open in the morning and are pollinated by bees and butterflies. During the growing season, medicinal lavender is watered 9-12 times, taking into account air temperature and soil moisture. The raw material of the plant is the spiky ball. Their raw materials are collected in the phase of horizontal flowering (when the length of the flowers is 30 cm). The raw material is chopped into the required sizes and spread on the racks. Dried raw materials are placed in special bags. Medicinal lavender plant grows well in warm climates that do not suffer from sudden changes in air temperature.

The collection of raw materials is carried out in July and August, always in the first half of the day, when the flowers open. Drying is done naturally by hanging small bundles of lavender. The use of hot drying methods is generally prohibited, because the plant loses all its beneficial properties. Carefully dried, packed in hermetically sealed storage containers.

The use of medicinal lavender. For human health, lavender tea is soothing, relaxing, and improves immunity, and is used in the following cases:

1. With frequent stress, aromatic drink calms the nervous system, excessive aggression can be lost. It is effective in treating depression and anxiety;
2. For any headache, lavender contains substances that eliminate spasms, so this drink is a useful medicinal plant for nerve fibers;
3. Prevents insomnia, which can be caused by both nervous diseases and simple worries during a hard day;
4. Dissolving excess fat in the human body and losing weight;
5. It has the characteristic of improving the problems related to the digestive system in an effective carminative quality.
6. It is useful for problems related to high blood pressure, which can be caused by stressful situations or diseases of the heart and blood vessels of the body;
7. With colds and flu, lavender tea has immunomodulating properties, which is important for quick recovery;
8. Lavender also has a calming effect due to its aroma, which puts a person in a calm rhythm.

Medicinal lavender is considered medicinal, and therefore, in addition to its useful properties, it also has contraindications:

1. Do not use with low blood pressure;
2. Medicinal lavender tea is not recommended during pregnancy;
3. It is not possible during lactation;
4. Basically not possible under 10 years;
5. It is not recommended in a volume of more than 0.5 liters per day, because severe pain may occur.

The most economically used part of the medicinal lavender plant is its flowers. The essential oil extracted from the flowers and stems of the plant is one of the 15 best-selling essential oils in the world. The essential oil components contain the most abundant linalool and linalyl acetate. The quality of the essential oil is determined by the linalyl acetate ratio of these components. Lavender essential oil is often used in the cosmetic and perfume industry. In addition, due to its pleasant smell, it is used in soap and other industries, in the pharmaceutical industry, in aromatherapy, with its analgesic, sedative and anti-sleep properties. It is a medicinal plant with diuretic and relieving effect for rheumatic pains.

REFERENCES

1. Ўзбекистон Республикаси Президентининг 2020 йил 10 апрелдаги “Ёввойи ҳода ўсувчи доривор ўсимликларни муҳофаза қилиш, маданий ҳолда етиштириш, қайта ишлаш ва мавжуд ресурслардан оқилона фойдаланиш чора-тадбирлари тўғрисида”ги ПҚ-4670-сонли қарори.
2. Ўзбекистон Республикаси Президентининг 2022 йил 20 майдаги ”Доривор ўсимликлар хом ашё базасидан самарали фойдаланиши, қайта ишлашни қўллаб қувватлаш орқали қўшимча қиймат занжаирини яратиш чора тадбирлари тўғрисида” ги ПФ-139-сонли фармони
3. Тўхтаев Б.Ё., Маҳкамов Т.Х., Тўлаганов А.А., Маматкаримов А.И., Махмудов А.В., Алляров М.Ў. Доривор ва озуқабоп ўсимликлар плантацияларини ташкил этиш ва хом-ашёсини тайёрлаш бўйича йўриқнома. Тошкент, 2015.-137 б.
4. Ходжиматов К.Х., Апросиди Г.С., Ходжиматов А.К. Дикорастушие целебные растения Средней Азии. – Ташкент, Изд-во мед. Лит. Им. Абу Али ибн Сино, 1995. – 112 с.
5. Холматов Ҳ.Х., Харламов И.А. Шифобахш ўсимликлардан уйда фойдаланиш. – Тошкент, Ўз СССР “Медицина” наширёти, 1985.-21 с.
6. Холмтов Ҳ.Х., Ахмедов У.А. Фармакогнозия: Тиббиёт олий ўқув 155 юуртлари талабалари учун дарслик. – Тошкент: Ибн Сино номидаги наширёт-матбаа бирлашмаси, 1995.