

# DISTRIBUTION, DESCRIPTION AND AGRICULTURAL TECHNOLOGY OF ROSEMARY OFFICINALIS - RASMORIN PHARMACY - (ROZMARINUS OFFICINALIS L.)

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**Abstract.** Decree of the President of the Republic of Uzbekistan PD No 4901 dated November 26, 2020 “On measures to expand the scope of scientific research on the cultivation and processing of medicinal plants, the development of their seed production”, “Additional information on the development of folk medicine in the Republic of Uzbekistan” PD No 4668 dated April 10, “On measures for the protection, cultivation, processing and rational use of available resources of medicinal plants growing in the wild” PD No 4670 dated April 10, 2020. Based on the Decree No. PD-139 dated May 20, 2022 “On measures to create value chains by supporting the effective use of the raw material base of medicinal plants, processing” the relevance of the topic, distribution, description and agrotechnics of medicinal plants are studied in the article.

**Keywords:** medicinal rosemary, common sedum, blackberry, heteroauxin, introduction.

**Introduction.** Plant propagation. It grows naturally in Africa (Algeria, Libya, Morocco, Tunisia), Turkey, Cyprus, the northern part of Europe, the countries of the former Yugoslavia, Greece, Italy, Portugal, Spain, France. In most cases, it is found in soils with a high content of lime, on dry rocks, on the southern slopes of mountains, in places where the sun shines well.

Description of the plant. Medicinal rosemary is an evergreen shrub growing up to 50-100 cm tall. The stem is erect, branched, and the young branches are four-sided. The root system develops well and penetrates the soil up to 3-4 m. The length of the leaves is 4 cm, the width is 0.3 cm, they are oblong-pencil-shaped, without a band or with a short band, and they are opposite on the stem. The flowers are two-lipped, small, pale purple.

The seed is ovoid, brown, smooth surface, 2-2.5 mm long, 1-1.5 mm wide. The fruit is round-smooth, brown nut-shaped. The weight of 1000 seeds is 1.2-1.4 g.

**Agrotechnical activities.** In order to establish a plantation of the medicinal rosemary plant, it is necessary to prepare seedlings. In our conditions, the plant does not give seeds. Therefore, it is propagated vegetatively from cuttings. For the treatment of immature (not yet wooded) cuttings, a low level of growth agent mixture is used, for mature cuttings, a medium level, and for wooded cuttings, a high level of growth agent mixture is used. It is recommended to prepare the solution in two stages. First, a dry solution-thick mixture is prepared, then a working solution with the appropriate mixture is prepared. To prepare a dry solution, 1 g of growth material is dissolved in 50 ml 96% alcohol in a glass container, then 1 l of distilled water is added. In this case, a dry solution with a 0.1% mixture is formed in the volume of 1 l, which is stored in a cool place. A working solution with a suitable mixture is created by adding potable water to the dry solution. For example, to prepare 1 liter of working solution with a mixture of 50 mg/l, it is necessary to take 50 ml of dry solution. To prepare 8 liters of solution with a mixture of 25 mg/l, 200 ml of dry solution is required, the total amount of working solution reaches 8 liters. Also, the use of heteroauxin (in the absence of a fogging device) in the preparation of cuttings increases the root

system and plant growth by 10-15%. Treatment with a small amount of manganese solution also accelerates rooting and reduces rotting in the soil. Cuttings are cut from woody stems in July-August, 15-20 cm long.

The cuttings, wrapped in a damp cloth, are tied in groups of 25 and placed together in a tub or any glass, enameled, stainless steel container. The solution layer should be no more than 3-3.5 cm and no less than 1.5-2 cm. Cuttings are processed at 1700-1700, left overnight, washed thoroughly in drinking water in the morning and planted.

For rooting, such cuttings should be pinned to specially prepared substrates in greenhouses. Soil fertilized with rotted manure in the greenhouse (at the rate of 2 buckets per 1 m<sup>2</sup>) and thoroughly crushed, leveled, and covered with river sand 15 cm thick is the optimal environment for planting. Cuttings are planted obliquely to a depth of 5-10 cm. It is watered 4 times a day, every three hours. 20-30 days after planting the cuttings, swelling of the rooting points will appear.

By this time, the amount of daily watering is reduced to 2 times (morning and evening). In October, the amount of watering is reduced to 1 (in the morning). Then it is watered once a week until the seedling is ready. Cuttings are ready seedlings in greenhouses in early spring. Before the ready seedlings are planted in the plantation, the field is plowed to a depth of 25-30 cm, leveled, mulched and rows are drawn at an interval of 60-70 cm.

**2. Common hop - (*Humulus lupulus* L.,)** Distribution of the plant. Naturally, it is found in the main Europe, in the upper reaches of the Dnieper, in the Crimea, the Caucasus and Central Asia, in the Tien-Shan mountain ranges. It is a new introduced plant in the flora of Uzbekistan. Currently, mulberry species are grown as the main agricultural crop in the USA, the Czech Republic, Slovakia, Poland, Ukraine, the Caucasus, and the Crimea. In Russian cities such as Penza, Ryazan, Altai, Kazan, it is grown as an ornamental plant in gardens and avenues. Professor B. Tokhtaev introduced this plant to the laboratory of the introduction of medicinal plants of the Tashkent Botanical Garden in 1964. Currently, scientific research is being conducted in the field of collecting and building a collection of eco-forms of common mullein in Uzbekistan. Cultivation and cultivation of medicinal plants and agrotechnical activities.

1. Field preparation. In order to establish plantations of ordinary maple, the field is plowed in the fall to a depth of 20-25 cm. Then, in the spring, the field is plowed again, mulched, and 90 cm (for irrigation) rows are drawn at 4 meter intervals. The next step is to install 3.5-meter high concrete supports at a distance of 8-10 meters in the rows taken at a distance of 90 cm in order to build the plants of the plant in the future. 4 rows of soft wires are attached to them.

2. Planting the plant. The plant is propagated vegetatively. At the beginning of April, when the above-ground part of the plant reaches 5-10 cm, the rhizomes are dug up, 10-15 cm long cuttings are made from them, and the cuttings are planted in the prepared rows at a distance of 50 cm between the bushes and watered. The plant grows very quickly. In 30-40 days, they are attached to the wires of the first line. During the growth, the plant is watered 7-8 times, and 2 times the rows are softened and cleaned of weeds. In June, the plant enters the budding phase. In June-July, the initial domes appear in 30-40 days

During these domes are made. Productivity per hectare is 0.8-1 centner in the first growing year, 2.5-3 centners in 2-3 years, and 5-6 centners in subsequent years.

**Suggestions:** This medicinal plant can be planted in typical gray soil and medium saline soil zones.

**3. Black sugar-currant chyornaya-(Ribes Nigum L.,)** Distribution of the plant. Naturally, it is found in the forests of the European part of the CIS countries, in the plains and mountains of western, eastern and southern Siberia. It is a forest plant. Black blackberry can be found along streams, lakes, rivers, ditches, in meadows, in broad-leaved, needle-leaved and mixed forest plains in moist, humus-rich soils.

Description of the plant. A shrub 1-2 meters tall. Red currant differs in fragrant leaves and black fruits. Barglarii 3-5 petals, blooms in May-June. The fruit ripens in July-August. Leaves and fruits are used.

**Agrotechnical activities.** Blackcurrant is a plant rich in vitamins with the composition of its fruit. The plant occupies a large place in horticulture. To reproduce the plant in culture, cuttings are made mainly from their stems.

Cuttings are cut from mature branches 25-40 cm long, and small seedlings are separated from a large bush. After the plant comes into fruition, its fruiting branches are worn out for years. In order to increase the productivity, black currant fruit branches are cut. This event is a method of increasing fruit branches, increasing plant productivity and improving quality, and is adopted in horticulture. Also, plant seed propagation is used only in breeding research. Cultivation and cultivation of medicinal plants. Productivity reaches 2-3 centners per hectare in 2-3 years, 8-10 centners in 4-7 years. Productivity increases with the growth of plant bushes, and the productivity of plants older than 15 years is 25-30 centners.

**Suggestions.** Black berry (*Ribes Nigum L.*) is currently being cultivated in the Fergana Valley, Tashkent, Samarkand and Surkhandarya regions of Uzbekistan. To establish plantations of this plant, it is recommended to plant the hilly hills with irrigation networks, the lower parts of the hills on the banks of streams and canals.

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