

Cultivation technology and medicinal properties of the medicinal chamomile (*Matricaria chamomilla* L.) plant

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Abstract. The article provides information on the biomorphological and systematic analysis of the chamomile medicinal plant, its role in medicine and folk medicine, and the technology of cultivation.

Key word: Medicinal chamomile, biological properties, inflorescence, productivity, geographical distribution, agrotechnical measures, raw materials, essential oil.

After gaining independence, the pharmaceutical industry of the Republic of Uzbekistan began to develop rapidly. Currently, the number of such enterprises is more than 70. For this reason, it is necessary to adequately supply this industry with raw materials of medicinal plants. Next, if we take into account that approximately 50% of the drugs of the pharmaceutical industry are made from raw materials of medicinal plants, the cultivation of medicinal plants, it is difficult to imagine how important the development of agrotechnics for their cultivation has become. The importance of using the raw materials of medicinal plants for pharmaceutical, partly for food needs, as well as for improving human health and the environment is growing rapidly. t plant. The stem is erect, branched, hollow inside. The leaf is divided twice, the segments are thin linear, with a sharp tip. The stem and branches are finished with flowers gathered in a basket with long bands (green chamomile has short bands). The flowers on the edge of the basket are white, tongue-shaped, and those in the middle are bisexual, yellow, tube-shaped. The fruit is a brown-green pistachio. It blooms from May to autumn.

Geographic distribution. Medicinal chamomile is widespread, it grows mainly in settlements, fields (as a weed), roadsides. It is found mainly in the south of the Japanese part of Russia, the Caucasus, Crimea, Ukraine, the southern regions of Siberia and Central Asia. Green chamomile is widespread in Europe, Western Siberia and the East. The product is made mainly in the south of Ukraine (Crimea, Kherson, Nikolaev, Odessa regions), to a lesser extent in the Krasnodar Territory, Rostov Region, the Republic of Moldova and other places. Chamomile reproduces very quickly. Both chamomiles are grown in Ukraine, Belarus and elsewhere due to high demand.

Appearance of the product. The finished product consists of flowers collected in a basket. Medicinal chamomile is a basket with a diameter of 4-8 mm, hemispherical, and the leaves of the wrapper are located like cherepisa. There are 12-18 white tongue-shaped flowers on the edge of the basket. The flowers in the middle are yellow, bisexual, tube-shaped, without a calyx, the corolla is five-lobed, the paternity is 5, the maternal node is one-digit, located below. The basket of green chamomile is smaller and consists of green tubular flowers. The calyx is in the form of a thin veil, the corolla has four teeth. The inflorescence of the basket is conical, hairless and hollow. *Matricaria Leucanthemum vulgare* Lam. Anthems types) are different. Both types of chamomile have a sweet and spicy taste.

Chemical composition. The flowers collected in the basket contain 0.22-0.8% essential oil, anin, quesimetritrin, quercitin, luteolin and other (35 compounds) flavanoids, matricarin and matricin from the lactones of the guaianolide group, polyine lactones with heterocyclic rings, proxamazulen, coumarins (umbelli - feron, herniarin), dioxycoumarin, carotene, vitamin C, mucilage and other substances. According to XI DF, the composition of common chamomile flower should contain 0.3%, and green chamomile should contain 0.2% essential oil. . The essential oil is a blue liquid containing 1.64-8.99% of hamazulene, up to 20% of sesquiterpene alcohols, cadinene, tricyclic alcohol, bisabolene and its oxides, caprylic, nonyl, isoverric acids and other terpenes and sesquiterpenes. The total amount of sesquiterpenes in the essential oil is up to 50%. Hamazulene is the main active ingredient of essential oil.

Cultivation technology. Information about the influence of various factors on the growth, development, and productivity of chamomile in our country is now being formed. Among the countries that know the

medicinal properties of chamomile, Russia and other foreign countries have conducted several studies in different soil and climate conditions and developed cultivation technologies. Chamomile is planted as a main crop in the spring and as a repeat crop after grain in 60x15, 60x10, 60x8, 70x15, 70x10, 70x8 schemes, depending on the purpose of sowing and the agrobiological characteristics of the variety, as well as soil and climatic conditions. Chamomile seeds germinate at +6-7°C, but the optimal temperature for germination is +20-25°C. If there is not enough moisture after sowing, the seeds may not germinate for a long time. At this time, the areas where the seeds were planted are watered frequently. 6-10 lateral leaves hang on each sprout in 20-40 days after sprouting (when humidity and air temperature are normal). Seedlings planted in the fall will winter in this case. From seedlings planted in early spring, 7-9 lateral leaves hang in the first ten days of April. The early arrival of spring in the period of March-April As a result of the rapid growth and enlargement of the leaves at the beginning of the shoot, the stem hangs and branches in the middle of the plant. If the plant is well supplied with moisture, as a result of rising air temperature, the first flowers will open in the first ten days of May. In general, the first flower opens in 30-50 days from the seeds sown in spring. Observations show that flowers can open in 10-12 days from buds that have just appeared on plant stems. Undoubtedly, air temperature, soil moisture and soil nutrients play an important role in this. Depending on the temperature of the day and soil moisture, one basket on the plant can remain open for 5-6 days. It was observed that the flowers bloom well when the air temperature is on average 19-21°C. An increase in temperature above 30°C has a negative effect on the opening of flowers and causes their wilting. Light is also important in the opening of flowers. Clear air without clouds helps the flowers to open quickly. Chamomile is a light-loving, moisture-loving plant, therefore it is desirable to grow it in open and fertile lands. Before sowing chamomile seeds, 20-25 tons of local agite and superphosphate are added to each hectare of land, and the soil is plowed to a depth of 25-30 cm. For plant growth and development, there must be enough mineral substances in the soil. It is advisable to plant chamomile for 2-3 years, and then plant other medicinal or agricultural plants instead. Otherwise, the productivity of the amniotic fluid will decrease year by year. Since chamomile is a spring-summer plant, in July and August, it is possible to plant evening crops in the fields freed from it, and get an additional harvest from them. Areas where chamomile is planted are considered suitable if the light falls as well as possible, there are no trees and fertile soil. Taking into account that weeds increase during the period of growth of seedlings, cultivation at a depth of 4-6 cm will cause the disappearance of weeds. Plowing the plant quickly after harvesting helps to clear the area of weeds and turn plant residues into organic matter under the soil. Chamomile plant is widely cultivated as a medicinal plant in European countries and the territories of the Russian Federation, so the biology and fertilizing system of this plant are studied. Since medicinal plant science is the youngest field in Uzbekistan, studying the biology and fertilizing system of chamomile plant, like many promising medicinal plants, is of scientific importance. The soil for planting chamomile should have an average mechanical composition, and a very low level of salinity. Planted areas are plowed in autumn with 25-30 tons of organic fertilizer and 70% of the 1-year norm of phosphorus fertilizer per hectare. During the growth and development of chamomile twice: once during the emergence of buds (in the first ten days of March), and the second during the budding period (in the third ten days of April), nitrogen fertilizers are applied at the rate of 30-40 kg per hectare. 'gites are given. Nitrogen fertilizers are given before watering the plant. When the plant is well fed with nitrogen, phosphorus and organic fertilizers, it is observed that the number of chamomile flowers increases by 1.5-3.0 centners per hectare. Depending on the amount of factors organized in the experiment, the duration of the experiment and the diversity of the soil climate conditions, they are divided into one-factor, multi-factor, short-term, multi-year and others. In experiments under production conditions, an agrotechnical measure or variety is evaluated from the point of view of increasing productivity and improving the quality of the crop. Our experience is one of such experiences. At present, it is necessary to cultivate universal plants with high yield, adaptable to various factors of climate change, popular in the world market, medicinal and high biomass. At the same time, it is one of the important issues to find types of crops that give high value and high-quality yield in a short period of time for effective use of irrigated land. Chamomile is one of such valuable plants. Information about the influence of various factors on the growth, development, and productivity of chamomile in our country is now being formed. A number of studies have been conducted and cultivation technologies have been developed in foreign countries on the growth, development and productivity of different varieties of this plant, and the effect of planting depth and

duration on plant productivity, the effect of mineral fertilizers on the productivity of medicinal chamomile in different soil and climate conditions.

Usage. Chamomile is anti-inflammatory, anti-microbial, anti-allergic and anti-ulcer. has a healing effect. Therefore, its medicinal preparations are used in the treatment of medico-intestinal (intestinal obstruction and diarrhea) and gynecological diseases, as well as antiperspirants. In addition, chamomile flower is used as an emollient, antiseptic and anti-inflammatory agent (mouthwash, throat rinse, medicinal bath and enema). is the affected part. Hamazulen has sedative properties and anti-inflammatory, anti-allergic and anti-inflammatory properties. Apigenin, apinin and gerniarins also act against intestinal adhesions.

Medicinal preparations. A tincture is prepared from chamomile flowers. Baskets are used in stomach diseases, gargling, and are also part of soothing teas.

Conclusion: My conclusion in this article is that the importance of the Chamomile plant in agriculture and national economy, as well as satisfying the needs of cosmetology, in addition to its importance in the field of medicine, is studied and applied in practice.

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