

**MEDICINAL CALENDULA (CALLENDULA OFFICINALIS L.)
CULTIVATION AND MEDICINAL PROPERTIES.**

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Abstract: This article discusses the agrotechnology, bioecology, medicinal properties and cultivation of calendula officinalis in the light gray soils of Andijan region and its use in folk medicine.

Key words: medicinal plant bioecology, medicine, agrotechnics, seeds, fertilizers, medicinal properties, folk medicine, ecologically clean, bath, primochka.

Introduction. The World Health Organization identifies the main components of traditional medicine as follows: treatment with herbal medicines and other natural remedies; acupuncture and manual therapy. Traditional medicine in the health care system is already playing an important role in a number of countries around the world, especially in Asia. Our folk medicine has deep secular roots dating back to the time of Abu Ali ibn Sina. Today, the system of folk medicine is legalized in the Republic.

Our country is rich in medicinal plants. 750 species of more than 4.3 thousand plants belonging to the local flora are medicinal, of which 112 species are registered for use in scientific medicine, of which 70 species are actively used in the pharmaceutical industry.

In 2019, \$ 48 million worth of processed medicinal plant products were exported. In this regard, the Resolution of the President of the Republic of Uzbekistan dated April 10, 2020 "On measures to protect, cultivate, process and rationally use available resources of wild medicinal plants" is very relevant. This

Resolution identifies the need to further develop the cultivation and processing of medicinal plants, increase the export potential of the industry, as well as the integration of education, science and production processes in this area. From May 1, 2020, the creation of clusters for the cultivation, storage, primary or deep processing of medicinal plants, as well as the specialization of areas for the cultivation of medicinal plants is planned. The tasks set for the clusters will enable the clusters to create, manufacture and replace drugs imported and used in various folk medicine, health care through the cultivation, storage, primary and deep processing of medicinal plants. . The tasks set by the resolution for clusters for the sale of finished products from June 1 this year will create a new industry called "Medicinal Plants".

Literature review. Of the more than 4,300 species of plants belonging to the local flora, 750 species are medicinal, of which 112 species are registered for use in scientific medicine, of which 70 species are actively used in the pharmaceutical industry.

In 2019, \$ 48 million worth of processed medicinal plant products were exported. At the same time, the analysis shows the need to create a value chain through the protection of medicinal plants, the organization of their plantations, processing.

Research Methodology. In order to create a favorable environment for the further development of cultivation and processing of medicinal plants, increase the export potential of the industry, as well as the integration of educational, scientific and production processes: 'simlik (*calendula officinalis*) - *Amaranthaceae*. An annual herbaceous plant, 30-50 (sometimes 60) cm tall. Root-branched arrow root. Stems hard, erect, branched from the base, angular, the upper part is covered with glandular hairs. The leaves are simple, banded, elongated, inverted ovate, sessile, arranged at the base. The leaves on the upper part of the stem are bandless, ovoid or lanceolate. The flowers are in a basket. Mevasi-pistachio. It ripens from July. It blooms from June to late autumn. Before sowing the seeds in the early spring, level the soil, remove weeds, sow

the seeds to a depth of 2-3 cm when the soil temperature is 20-22°C and consume 10-12 kg of seeds per hectare.

Seeds are sown with row spacing at 60 cm intervals, and the seeds germinate after 7-8 days. When it sprouts, the stalks are on fire and leaves 1-2 plants in each nest at a distance of 15-20 cm between rows. The product contains 7.6-7.8 mg% carotene, 0.02-0.4% ether oil, 0.33-0.88% flavanoids, 3.44% resins, up to 4% mucus, 10.4-11.2% additives, up to 19% bitter substance-calendula, 6.84% applepentadecyl and small amounts of salicylic acid, triterpene diols and alkaloids were detected



a) Nail flower



b) Nail flower seeds

Useful properties of nail polish in medicine. In folk medicine, tinctures made from the flower baskets of the plant are used to treat diseases of the liver, spleen, stomach and intestines. When a person burns his body, the tincture is applied to various wounds - abscesses, scabs, eye sores, rashes, a bath, primochka, compresses.

Nail preparations are widely used in scientific medicine. Various tinctures, tablets, emulsions made from it are used in the treatment of a number of diseases. The product is part of the drug KN, which is used in some cancers.

Analysis and results. Prior to planting, the soil was plowed to a depth of 25-30 cm, with 20-30 tons of local fertilizer per hectare and 70% of the annual

norm of phosphorus fertilizer applied before planting in the fall. In the early spring, before planting, the soil was leveled, weeded and planted to a depth of 2-3 cm. After germination, 30 kg of N and P fertilizers per hectare were applied. The second fertilization process was 40 kg N and 30 kg K fertilizer per hectare during the growing season.

The last feeding was completed by applying 40 kg N and 30 kg P per hectare when the plant was in full bloom. When the nails are planted in the fall, the grass appears in April. Each bush has 3-4 leaves. As the warm autumn lasts, some of the seeds sprout and spend the winter in the form of balls. They often do not catch a cold. Winter seedlings begin to bloom in 35-40 days, ie in early May.

Harvesting and drying of cloves. Harvesting of the nail pollen begins as soon as it begins to bloom. The newly opened buds are first collected in the ashes. Due to the frequent opening of flower baskets, they are collected every 3 days and in the evening on the 4th day.

Inflorescences collected from the plant should not be stored in baskets and collections for more than 3 hours to prevent overheating and deterioration of uupg quality. Collected products in special dryers (SPK), x, ako (151 GG-400, 600) dryers up to 40-5 ° C dried. The product of 4 lakomilakuritmlgam is stored in special paper bags of 20 kg without staining. The shelf life of the product in dry warehouses should not exceed zero.

Conclusions and Recommendations

1. In April, when the technology of growing clover in irrigated areas is planted on the basis of experiments, the grasses appear.
2. In the cultivation of the nail plant, when the warm autumn lasts, some of the seeds sprout and spend the winter in the form of leaves.
3. Clove plants are often not affected by cold. Winter seedlings begin to bloom in 35-40 days, ie in early May.

Books:

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