WAYS TO ENRICH, PROTECT, CULTIVATE AND RATIONALLY USE THE GENE POOL OF MEDICINAL PLANTS

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Abstract: the article provides valuable information on methods of enrichment, protection, cultural cultivation and rational use of the gene pool of medicinal plants with an in-depth analysis.

Key words: medicinal plants, gene pool, enrichment, protection, cultivation, useg.

Cultivation of medicinal plants in countries of the world, conservation and enrichment of the existing gene pool, restoration of natural reserves of medicinal plants and reproduction in cultural form is one of the most important directions, and in turn, it is the main tool for the reproduction of natural preparations.

38-45% of drugs used in medical practice are preparations obtained from plants. Since the territory of Uzbekistan consists of different climatic zones, its flora is very rich. It has more than 4,000 plant species, of which about 600 species are medicinal plants.

Decision No. PQ-4670 of President Shavkat Mirziyoev of April 4, 2020 "On measures for the protection, cultivation, processing and rational use of available resources of medicinal plants growing in the wild" and the adoption of decisions No. PQ-4901 dated 26.11.2020 on "Measures to expand the scope of scientific research on the cultivation and processing of medicinal plants, and the development of their seed production" serves as a road map for finding solutions to the problems that have arisen above.

In many foreign countries, including the Republic of Uzbekistan, there is a sharp increase in the demand for medicinal plant raw materials. It should be noted that due to the limited resources of naturally growing and introduced medicinal plants, the pharmaceutical industry's demand for medicinal plant raw materials can be met mainly by growing medicinal plants.

One of the urgent problems of the present day is the selection of promising medicinal plants for the activities of farms engaged in the selection of medicinal plants, seed production and cultivation of agrotechnical raw materials, creation of agrotechnologies of their cultivation and production.

In order to select promising species of endemic and introduced medicinal plants and to develop agrotechnics for their cultivation and propagation, our republic should have a rich gene pool of medicinal plants in our flora and imported from abroad. In all developed countries, great attention is paid to the creation of the world gene pool of useful and medicinal plants and their enrichment with new samples. Because the gene pool of plants guarantees

the food safety of the future generation and is the only ecologically clean source of natural plants that are part of medicines.

Scientific Research Institute of Plant Genetic Resources of Uzbekistan, established in 2022, the main task of the Department of Selection, Seeding and Agrotechnology of Medicinal Plants is to study medicinal plants related to the genotype of endemic and introduced medicinal plants of our republic with agricultural crops, to enrich the gene pool, to preserve, on the basis of a comprehensive study of nutritive, medicinal and economic characteristics, suitable for different soil and climatic conditions of the Republic. It consists of creating primary sources for the selection process of medicinal plants from types and varieties of plants that are resistant to stress factors, drought, heat, soil salinity, diseases and pests, accelerated, high-yielding, able to meet the requirements of the world standard, conduct variety testing, and develop agrotechnology for the cultivation of promising types and varieties.

The main directions of scientific and research work carried out in the department of selection, seed production and agrotechnology of medicinal plants are as follows:

- to study and expand the types of medicinal plants by means of nature protection, to increase their size, to organize, to collect new types (varieties) of medicinal plants with scientific institutions and businessmen of the world and to actively participate in the study of problems important for health care and economy of the republic;
- in order to preserve the genetic integrity of the gene pool of plants, to develop the selection, seeding and agrotechnology of medicinal plants, to find seeds, plant them in the fields of the institute's experimental farm, and study their reproduction;
- improvement of methods of keeping genetic resources of medicinal plants alive;
- selection of primary sources for selection based on a comprehensive study of the gene pool of medicinal plants;
- conduct fundamental research on cultivation, geographic distribution, agrotechnology, phylogeny of medicinal plants;
- collection of seeds of medicinal plant species, creation of living collections, development of agrotechnology for their reproduction.

Enriching the collection of seeds collected from medicinal plants is a new direction, so it is important to study measures for the effective use of this gene pool. More than 50 species of medicinal plants approved by our state should be carried out in scientific research.

At the same time, among the medicinal plant species in the experimental field of the institute are medicinal lubustok (*Levisticum officinále*), forest button (*Malva silvestris*), medicinal marigold (*Salendula offcinalis* L.), medicinal chamomile (*Chamomilla - Matricaria recutita* L.), cornflower (*Centaurea cyanus* L.), medicinal lemon (*Melissa officinalis* L.), medicinal valerian (asorun — *Valeriana officinalis* L), Tibetan godji, (*Lyctum barbarum*), Rosella (*Hibiscus sabdariffa*), gazanda (*Urtica dioica* L.), Arnica chamberson (*Oenothera bennes*) and Osilnik are cultivated.

In our department, researchers are carrying out scientific studies on agrotechnologies of allocating initial sources for the selection process in order to create new varieties of medicinal marigold (*Salendula offcinalis* L.).

Medicinal marigold (*Salendula offcinalis* L.) belongs to the *Asteraceae* family. Annual, herbaceous plant, 30-50 cm tall. A branched arrow root. The stem is hard, erect, branched from the base, pointed, and the upper part is covered with glandular hairs. The leaves are

simple, banded, oblong-ovate, serrate, arranged in a row on the stem. The leaves on the upper part of the stem are sessile, egg-shaped or lanceolate, yellow or orange in color, and the flowers are collected in baskets. The inflorescence is flat, slightly concave and hairless. There are 25-250 tongue-shaped flowers on the edge of the basket, 2-3 rows, and 2-3 teeth in the upper part. The flowers in the middle of the basket are tubular, five-toothed. It blooms from June until late autumn, and the fruit is harvested from July.

Marigold is a typical mesophytic plant suitable for gray soils, plains, demanding water, and can grow on saline soils, and is distributed in all irrigated areas of our Republic.

Carnation flowers contain 7.6-7.8 mg/% carotene, 0.62% essential oil, flavonoids, coumarins, saponins, acids, 10.4%-11.2% additives and other substances.

In herbal medicine, preparations (infusion, decoction) made from the flowers of the clove plant are used for headache, fever, bleeding, gastrointestinal diseases (gastritis, ulcers), treatment of burns and other diseases. At the same time, the mouth and throat are rinsed with flower tincture and nastoyka when the mucous membrane of the mouth is inflamed (stomatitis, gingivitis, pharyngitis). Because the compounds contained in the flower of the plant have antiseptic and anti-inflammatory effects.

For this purpose, the mouth and throat are rinsed 4-5 times a day with herbal tincture or tincture (1 teaspoon of herbal tincture in 1 glass of water), and the ointment is applied to the surface.

Based on these decisions, it is of great importance to form the gene pool of existing medicinal plants, to keep them alive, and to increase their species and varieties. Taking into account that medicinal plants are used for food consumption and their fruits, roots, leaves and flowers are the main means of protecting human health, it is one of the most important issues to attract medicinal plant species and varieties samples from abroad and from the regions of our country to the collections and to conclude agreements with clusters, agro-firms, farmers-farms in order to expand the range of medicinal plants in the regions of our Republic, to introduce species and varieties with high nutritional value and medicinal properties into production. is one.

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