

MEDICINAL PLANTS ARE THE MOST IMPORTANT PART OF THE NATURAL WEALTH OF UZBEKISTAN

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Abstract. *The article contains information about the resolutions of the President of the Republic of Uzbekistan, the Research Institute of Plant Genetic Resources, the Department of Medicinal Plant Breeding, Seed Production and Agricultural Technology, on medicinal plants, on the enrichment of the national gene pool with medicinal seeds, on the study of the natural resources of Uzbekistan using scientific research conducted on throughout the centuries. At present, in order to study the morphobiological and economic features and properties of medicinal plants, methods of their reproduction and the main elements of agricultural cultivation are being developed.*

Keywords: *medicinal plants, collection, enzymes, phytoncides, starch, proteins, polysaccharides, glutathione, pharmacological, lipids, Assurbanipal's library, alkaloids, flavonoids, saponins, coumarins.*

Decree of the President of the Republic of Uzbekistan PQ-4670 dated April 10, 2020 "On measures for the protection, cultivation, processing and rational use of available resources of medicinal plants growing in the wild", Decree of the President of the Republic of Uzbekistan Uzbekistan dated May 20, 2022 "Medicinal plants" on on the basis of Decree No. PF-139 "On measures to create an additional value chain by supporting the efficient use of the raw material base, processing, and attention to medicinal plants for improving human health, health is rapidly developing, their varieties are being cultivated, and plantations are being created.

There are about 570,000 plant species in the world today, of which 6,200 species are in use. The nature of Uzbekistan stands out in the world for its uniqueness, plants, clean water, mountains, forests, minerals, soil, air and inexhaustibility. More than 4650 species of wild plants, 574 species of medicinal plants, 107 species of medicinal plants containing dyes, 571 species of medicinal plants with essential oil, more than 3600 species are wild plants have been identified. The chemical and pharmacological properties of more than 1220 plant species have been studied. They make up 42-49%. So, it is clear that the raw materials of medicinal plants have been used for centuries to restore human health. In folk medicine, medicinal plants are mainly dried: grass, shoot, root, rhizome, tuber, bulb, bark, leaf, flower, bud, fruit (seed), stem, juice, paste, essential oils. Medicinal plants are characterized by two types, i.e. depending on their active substances and pharmacological parameters.

1. Active substances include: alkaloids, glycosides, essential oils, vitamins, various macro- and microelements, aromatherapy, etc.;

2. Pharmacological indications: Sedative, analgesic, hypnotic, on the cardiovascular system, acting, stimulating the central nervous system, lowering blood pressure, increasing blood pressure and various other diseases;

The active substances of medicinal plants are based on the presence of flavonoids, coumarins, astringents and mucous substances, essential oils, vitamins, dyes, enzymes,

phytoncides, starch, proteins, polysaccharides, nitrogenous substances, fatty acids and other compounds.

It should be noted that no area can develop independently without relying on the achievements of other sciences. In turn, agrotechnology for growing medicinal plants, plant science, botany, agrochemistry, soil science, plant physiology, plant biochemistry, and biotechnology are important processes. , chemistry, he can achieve his goals only by relying on the achievements of physics, geology, geography, paleontology and other sciences.

In Central Asia, a unique oriental folk medicine has been formed for centuries. It is based on thousands of years of experience in the use of medicinal plants. Medicinal plants and their raw materials are considered the main means of traditional medicine. Medicinal plants are plants used to treat human and animal diseases and prevent these diseases.

Ancient inscriptions written on clay tablets in the Sumerian state of 5000 BC. and read by German scientists in 1956, also contained information on how to prepare medicinal ointments from medicinal plants.

According to H. Kholmatov, OA Akhmedov, during the time of the ancient Greek ruler Hippocrates (460-477 BC), 236 medicinal plants were used. Hippocrates left the words “plant” and “thorn.” In the library of Ashurbanipal (668 BC), 22,000 tables were found written on ceramic tablets, 33 of which contain information about medicinal plants and products prepared on their basis. Egyptian papyri (3000 BC), an example of ancient Chinese medicine, "The Law of Herbs and Roots" (written and used 2800 BC) Ancient sources that have come down to us, there are ways to use medicinal plants and preparation of medicinal ointments based on them.

In the 15th century in ancient China, medicinal plants such as ginseng, lemongrass, licorice root and rhubarb were in great demand, and these plants were widely cultivated under cultural conditions. The mathematician Pythagoras also worked with medicinal plants. . Theophrastus, a student of Aristotle (in the 4th century BC, is considered the “father of botany.” His scientific work “Investigations of Plants” has not lost its significance even now. The world-renowned scientists of Central Asia in the field of medicinal plants are Abu Rayhan Beruni (973-1048 .) This was recorded in the title "Saidon" (1041-1048), which provided information about 750 species of medicinal plants. Abu Ali ibn Sina (Avitsina) (980-1037) was a major sponsor. The scientific work of Ibn Sinoni "Kitab al-qanun fit-tib" contains information about the medicinal properties and methods of using 476 plants. He has been working on this book for over 20 years. The 5-volume scientific work "Al-Kanun" ("Laws of Medicine") contains information for human health on more than 500 medicinal plants and more than 40 medicines prepared from them. The Laws of Medicine was printed 16 times in Latin. It has been widely used in medical practice by European peoples for centuries. The great scientist used herbal ointments to improve the health of people in the world of medicine.

The great systematist Carl Linnaeus (1707-1778) highly appreciated the work and merits of the scientist for human health. A precious plant was named after him "Avicenna". Ibn Baitar, an Arab judge who lived in Spain, provides information on about 1400 medicines and methods of treatment with them. Muhammad Husseini, who lived in the 15th century, wrote a work called "Treasures of Medicines", which also contains information about methods of treatment using about 2000 medicinal plants. Traditional medicine developed in the Middle Ages, its representatives were called healers. Physicians were educated and experienced men of their time in medical practice. Educated doctors were called people's judges. During this period, such well-

known judges as Abbas al-Zahrawi, Abu Bakir al-Razi, Najibuddin Samarkandi, Avaz tabib, Ilaki, Qumri, Khurasani, Khorezmi, Mahmud Hakim Yaypani, studied medicinal plants and , realizing that this is important, he began to study such areas as medical botany, pharmacology.

His students O.S. Sodikov, S.Yu. Yunusov, N.K. Abubakirov founded a school of biochemical study of medicinal plants in our republic. Among the scientists who have conducted a lot of scientific research on the search for medicinal plants rich in glycosides, alkaloids, flavonoids, saponins, coumarins and other biologically active substances growing in various climatic and soil conditions of our republic, studying their composition, determining the possibilities of their use in medicine: A.A. Akhmedov, H.K. Kholmatov, V.A. Karimov, A.Sh. Shomakhmudov, M.N. Nabiev, V.G. Shalnev, A.Ya. Ibragimov, Z.P. Pakudina, A.S. Sodikov, K.Kh. Khodzhimatov, O.K. Khodzhimatov, Kh.Kh. Kholmatov, I.A. Khaorlamov worked tirelessly in the field of growing medicinal plants and treating human health. In 1956, the Institute of Chemistry was established plant substances. . They began to study the biochemistry of medicinal plants. In 1968, 512 alkaloids were scientifically recommended, and by 1981, 1096 alkaloids had been studied. 466 of them were isolated from plants scattered throughout the territory of the former Soviet Union.

Scientists from the laboratory "Chemistry of Alkaloids" of the Institute "Chemistry of Plant Substances" of the Academy of Sciences of Uzbekistan isolated a total of 688 alkaloids from medicinal plants and determined the chemical structure of 338 of them. the only source of medicine for man for 1000 years and played an important role in maintaining his health. We must never forget this. It is necessary to introduce it into the minds of young people. Since the 50s of the 20th century, the field of chemistry of synthetic synthesis has greatly developed. Interest in synthetic medicinal plants has increased worldwide. Currently, 700 species of 182,000 flowering plants growing wild in the world are cultivated. Man uses more than 3,000 cultivated and wild plants for food purposes. Research Institute of Plant Genetic Resources, Department of Medicinal Plant Breeding, Seed Production and Agrotechnics, one of the main factors of which is the cultivation of good uncomplicated, effective, medicinal plants and the use of available resources to provide the population with medicines and other natural healing products. and serves diligently.

One of the important factors is the choice of land area and tillage for growing medicinal plants. For the cultural cultivation of medicinal plants, it is necessary to choose land plots with different planting conditions, soil structure and composition, humic substances, soil fertility must be at the required level.

It is important to choose the right place for planting medicinal plants. To select a site, agrochemical, hydrological, entomological characteristics are carefully studied, after which the management makes a decision. It is necessary to grow medicinal plants on irrigated lands in conditions of high agricultural background, on slopes and open areas, near the irrigation network.

For the organization of genetic resources, sowing, collection and agricultural technology of medicinal plants, the following requirements must be met:

1. Suitability of the place for establishing a plantation;
2. It is necessary to have a fertile gray soil, light mechanical content;
3. The field should be open, well ventilated, slightly sloping to the west, northwest, north and northeast;
4. Recommended for planting on soils not affected by pests and fungal diseases;

5. The plantation must be located in close proximity to residential areas and organizations to which seedlings are delivered;

6. It is necessary that the fertility of the soil be within the required limits, the depth of groundwater must be at least 1-1.5 m.

Medicinal plants are the most important part of the natural wealth of Uzbekistan. The protection of plant resources and their rational use is an urgent problem at the international level. Climate change and human misuse of natural plants lead to the loss of the ulul. The combination of global climate change and other environmental problems and human activities can lead to an unfavorable state of existing ecosystems, especially in arid regions of most of the territory of the Republic of Uzbekistan. Planting in irrigated areas should be carried out on light-colored soils and in places where the amount of humus in the upper soil layer is at least 2%.

The effect of medicinal plants on the body depends on the amount of chemical compounds in its composition. These compounds accumulate in different parts of the plant at different times. The period of action and quality of the drug falls on the beginning of their flowering and sowing. Medicinal substances accumulate in the buds, leaves or stems of some plants, in the flowers or fruits of some plants, in the roots or bark of some plants.

Therefore, harvested mainly biologically active substances of plants. Roots, rhizomes, bulbs and tubers are usually harvested in late autumn when the plant is dormant, or in early spring before the plant wakes up. The fruits and seeds of the plant are harvested as they ripen, because at this time they are rich in active substances. The product of freshly harvested medicinal plants contains moisture (up to 85% in the above-ground organs, up to 45% in the roots). If this moisture is not lost (during drying), the plant rots, medicinal substances are destroyed and become useless. More than medicinal plants in our research: tea tree, sweet licorice (also known as sweet licorice, liquorice, buyan), wormwood, yantok, peppermint, kikot, gulhairi officinalis, walnut, chag-jag, zubturum, frankincense, sachartki, toghraykhan, scattered siklincha, kakiot, olmasot, carver, marmarak, kovul, kavrak, etc. The services of the Institute of Chemistry of Plant Substances of the Academy of Sciences of Uzbekistan in the search for medicinal plants and the extraction of alkaloids from them are great. More than 4,000 different plant organs were studied at the institute in order to obtain alkaloids, and about 1,000 natural compounds were isolated from them. Based on this, more than 20 valuable drugs, such as stysin and galantamine, were created and introduced into medicine. Researchers of the Botanical Institute of the Academy of Sciences of the Republic of Uzbekistan and the Laboratory of Essential Oils and Dye Plants of the Botanical Garden, together with specialists, have developed the Bile Drive, made from raw materials of medicinal plants, which are environmentally friendly. and highly effective in the treatment of jaundice (hepatitis), the most common infectious disease in Central Asia. They created a collection of Hojimats.

Raw materials of wild-growing medicinal plants are processed mainly by the Republican State Joint-Stock Concern "Uzfarmsoat", publishing houses and farms of the production association "Shifobakhsh" of the Ministry of Agriculture of Uzbekistan, research is underway. carried out to protect human health.

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