

STUDYING THE COMPOSITION OF HIGH-WATER PLANTS AND DETERMINING THE EFFECTIVENESS OF USING RAW MATERIALS

Norboboeva Risolat Botirovna
Tashkent Institute of Pharmaceutical Sciences, Tashkent,
Republic of Uzbekistan
E-mail: norboboeva2015@mail.ru.

Niyozov Xasan Niyoz o'g'li
Tashkent Chemical-Technological Institute

Norqulova Feruza Eshpo'latovna
Tashkent Chemical-Technological Institute

Nurmuxamedova Vazira Zaxriddinovna
Tashkent Chemical-Technological Institute
xasan.niyozov@mail.ru tel:+998977711688

Abstract

In recent years, the country has been consistent with the conservation of medicinal plants, the use of natural resources wisely, the establishment and recycling of plantations for medicinal plants reforms are being implemented.

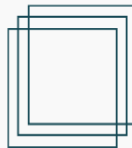
Keywords: medicinal plants, pharmaceuticals, agrotechnology, farmer, forestry, farmer, ecological, fodder, food, medicine, introduction, *Azolla caroliniana*

Of course, the inadequacy of growing medicinal plants indicates that the extent to which pharmaceutical industries contribute to medicinal plants can only be met by cultivating these plants. So far, however, the agriculture of medicinal plants has specialized in the cultivation of medicinal plants in our country, making it individual for each plant, each region, It is not designed as a negotiated manual for their farms in farms in the form of farms, forestry, farmers and other property.

Additionally, the lack of perfect development of medicinal plant cultivation methods and the lack of scientific research have led to the pharmaceutical industry's quality, affordable and ecological well-being. The issue of providing pure raw materials remains a pressing problem.

In recent years, the country has been consistent with the conservation of medicinal plants, the use of natural resources wisely, the establishment and recycling of plantations for medicinal plants reforms are being implemented.

On measures to protect, culturally cultivate, recycle, and use existing resources wisely, the Republic of Uzbekistan Resolution PQ-4670 was adopted by the President. This decision prohibits conducting a number of scientific research on the cultivation and use of medicinal plants as medicines.

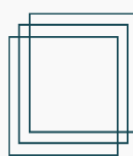


The world of plants has long been known as fodder, food, medicine in the animal kingdom and in the life of humans. For many years, the use of medicinal plants in folk medicine as a variety of tinctures and ointments, the effects of various anthropogenic factors on the reduction of plant species and some species causes plants to completely disappear or decrease. Today, as is the case all over the earth, research is under way to preserve biodiversity in the world and to address issues related to its decline. The basis of drug preparations is hom-ingredients derived from medicinal plants. Medical personnel surgically harvested a smooth or harvested a smooth or harvested egg from her, placed it in a man whose carbida it's getting shorter. Therefore, the study of the cultural breeding of medicinal plants, the study of biomorphological, ecophysical properties, and the development of scientific-based cultivation technologies has important significance.

The rapid development of the pharmaceutical industry in the Republic of Uzbekistan is contributing to a sharp increase in the demand for medicinal plant raw materials. Of course, insufficient reserves of growing medicinal plants, the pharmaceutical industry is only satisfying the extent to which companies are raw by cultivating these plants indicates that it is possible. As in the rest of the world, because of the high demand for medicinal plants in our country, there are ways to introduce, cultivate, and grow unique medicinal plants for our country's pharmaceutical industry, the development of agrotechnology, the amount of biofuels contained in them is being studied.

The use of high-water plant raw materials that grow shielded on a rare surface of water introduced into U.S. conditions has several advantages over medicinal plants growing in other types of fertile soil areas and is characterized by a lack of cultivation efficiency. Because aquatic plants do not require fertile soil, individual agrotechnology and fertilizer. It also allows you to quickly and quickly prepare raw materials, that is, biomass. In this regard, it is superior to medicinal plants grown in traditional ways and economically economical.

One of the most promising plants that has been introduced is *Azolla caroliniana* Willd. Today, it is well adapted to the conditions of Uzbekistan in Tashkent, Syrdarya. The region consisted mostly of natural and artificial reservoirs in the fergana and Navoi region. Effective work on the cultivation of eco-friendly food by growing it along with paralysis and fish in countries such as Vietnam, Burma, India, Philippines is being carried out. In recent years, aquatic plants belonging to the *Azolla* category have become objects of scientific research. Of course, there are six types of *Azollas*, many developed countries have been introduced into climate, ways to grow them, their yields, the amount of biofuels contained in them, Many research results based on fields of application, genetkasi and genome edits are being published. The study of *the Azolla caroliniana* genome by CHet fifty scientists has been rapidly developing over the past few years and research is under way to incorporate it into the Arabidopsis and paralysis genome [1], [2]. Ways to grow *Azolla caroliniana* biomass, usage sectors and application technologies have been developed [3], [4].



Toxicological analysis of *Azolla caroliniana* biomass found no residues of pesticides (DDT, GXSG) of aldrin or heptochlor. Natural and artificially grown azolla biomass has been found to contain no cadmium or margumush. A flotoxin and pathogenic microflora were not found [5]. Toxicological analysis shows that the composition of azolla biomass grown in laboratory and field conditions is toxic.

In addition, zootechnical analysis of livestock and livestock, such as chlorella, spirulina, ryaska, volcania, eyhornia, pistachio and other algae and algae, it was found that in fish breeding it can be used as a nutritious ozone layer, at the same time a plant rich in nutrients. One of the most promising plants that has been introduced is *Azolla caroliniana* Willd. Today, it is well adapted to the conditions of Uzbekistan in Tashkent, Syrdarya. The region consisted mostly of natural and artificial reservoirs in the provinces of Fargo and Nebuchadnezzar. Effective work on the cultivation of eco-friendly food by growing it along with paralysis and fish in countries such as Vietnam, Burma, India, Philippines is being carried out. In recent years, aquatic plants belonging to the *Azolla* category have become objects of scientific research. Of course, there are six species of *Azollas* that have been introduced into climatic conditions in many developed countries, including ways to grow them, crop yields, and biofuage The results of numerous studies based on the amount of substances, areas of application, genetics and genome modations are being published.

When each species is used as a raw material, special attention is given to its economic efficiency. At the same time, there were many inhabitants. In Khtoy, India and other countries, water growth, lack of demand for land and soil, rapid reproduction, and useful mkroelements are valued in terms of their wealth. Taking into account the characteristics noted above, experiments were conducted in laboratory conditions to study the amount of biofugradable substances contained in *the Azolla caroliniana* biomass.

Azolla caroliniana Willd. To study the amount of fat contained in biomass, the first seedlings were brought from the Tashkent Botanical Garden and sampled in 4 different nutrient environments for 35 days in laboratory conditions grown in spherical aquariums. *Azolla* biomass, grown in a nutrient environment made from a 5 g/l solution of *the AzcarAl* biofuel, was found to be 8.01% higher than in other variants. "*AzcarAl*" bioo'g'iti 5 g/l. And when grown in a nutritional environment made of solution, the fat content in its crop was 6.8%. "*AzcarAl*" bioo'g'iti 10 g/l. The amount of fat in the azolla biomass plant grown in a nutrient environment made of solution was 5.87% and was found to be less than in other options. The control variant found that *Azolla* biomass grown in ordinary gray water contained 5.04% fat. So when *Azolla* is grown in a variety of nutrient environments, biomass with different chemical composition is produced, *Azolla* is a growing food environment or water depends on the amount of minerals and compounds contained in it. The average amount of carotene in variants was 39 mg/kg, and the calcium content averaged 26.01.



Increasing Azollas in natural conditions requires very little money, which grows year-round in water worries. Only in the case of these species growing worries must have water throughout the year. In wet soils, they are preserved from 15 days to 1 month, and continue to multiply again with the advent of water.

Azolla is made up of 20-25% protein in dry biomass. This figure is 9-12% higher than the protein contained in cereal plants [6]. Therefore, Azolla can be viewed as a protein-collecting source. In one year, azolla accumulates from 7.2 to 9 tons of protein on the surface of the water by 1. The same protein can be seen from other plants in green water -chlorella and blue-green aquatic spirulina, but their reproduction technology is more than Azolla much more complex and requires a lot of money.

As a biofuel, this sample is used to prepare, bodiring, onions, and so on in greenhouses, as well as in the preparation of tomatoes, pencils, various flower seedlings, and recommended for use in the cultivation of fruit, scenic seedlings in the open hostel.

CONCLUSION

In order to determine the nutritional value of the protein contained in Azolla, the amount of amino acids contained in the protein was studied. Azolla contains up to 25% protein in dry biomass, which makes it possible to use it as a biofuel. To do this, Azolla's dry biomass is dried in laboratory conditions and brought to the state of the powder. The amount of gumin acids contained in the sample obtained was determined. The total amount of gumin acids contained in the samples was found to be an average of 2.72%.

List of used Literature

1. Usher KM, Bergman B, Raven JA. Exploring cyanobacterial mutualisms. *Annu Rev Ecol Evol Syst.* 2007;38:255–273.
2. Andersson JO, Andersson SG. Pseudogenes, junk DNA, and the dynamics of *Rickettsia* genomes. *Mol Biol Evol.* 2001;18:829–839.
3. Norboboeva R.B. *Azolla caroliniana* Willd. ning bioekologik xususiyatlari va sholichilikda qo'llash istiqbollari // Avtoref. diss. ... kand. biol. nauk. Tashkent. 2012. 24 s.
4. Abdyрахманова J. S. Vliyanie matochnoy kultury *Azolla saroliniana* Willd. na eyo produktivnost v usloviyax g. Osh (yugo Кыргызstana) Tezis. Zapiski molodyx uchenykh Tyrk dyynesyynyn tabigy y ilimler jana meditsina boyuncha I. el aralyk kongressi. Кыргызstan-Tyrkiya, Osh, Кыргызstan, 2019. 241 s.
5. Dosmetov A.T., Toshkent va Sirdaryo viloyatlarida tarqalgan *Azolla caroliniana* Willd. ning bioekologik xususiyatlari: Avtoref. dis. ... kand. biol. nauk. – Toshkent, 2003. – 22 s.
6. Mishustin E.N., Cherepkov N.I. Vklad biologicheskogo azota v selskoe xozyaystvo SSSR // Biologicheskaya fiksatsiya molekulyarnogo azota. Kiev: Naukova dumka. 1983. S. 7-19.