

THE ROLE OF TOP WATER PLANTS IN WASTEWATER TREATMENT

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Abstract:

In this article, waste water is treated using biological methods and reuse of water at the same time. Consideration is given to the use of aquatic plants and their importance in water purification

Keyword

wastewater, small ryaska, physical - mechanical, "Lemna minor L.", hectare, vegetative, yield, biogenic, from salts, photosynthesis, bacteria

Today, on a global scale, environmental problems related to the perfect use of water resources, the prevention of pollution of water bodies with various wastes, and the increasing level of re-pollution of fresh water as a result of the ever-expanding production have their impact on the environment and public health. showing its effect. Therefore, water coming out of residential areas, industrial and agricultural enterprises into natural and artificial water bodies is directly turning into wastewater without treatment. At this point, great attention is being paid to the further improvement of the methods of effective treatment of waste water and the creation of a system of effective use of such water and its implementation.

In order to prevent the pollution of water bodies, industrial and communal-household enterprises treat wastewater before discharging it into rivers and other water bodies. Currently, physical-mechanical, physico-chemical and biological methods are used for their cleaning. Among them, the biological method is considered the most effective method for wastewater treatment. In practice, the method of neutralizing sour waters in a slurry or lime milk tank is also widely used, and as a result, neutralized water flows out of it. 20-30 percent of the total volume of wastewater falling into open water basins in the republic is communal-household wastewater. The remaining part, i.e. 70-80 percent, corresponds to industrial wastewater [1; 21-b].

In our republic, wastewater formed in the centers of densely populated districts and cities is connected to treatment facilities through centralized sewage. Controlling the disposal of waste produced by enterprises, organizations and people into water bodies is carried out on the basis of the Law of the Republic of Uzbekistan "On Water and Water Use" [2; 38-39 p]. Nowadays, as a result of increasing number of people, the environment is being polluted. There is a concept among our people that "water becomes clean after turning it seven times". It has been studied that the neutralization of various wastewaters and wastes can be carried out naturally if nature is at its norm. "Lemna minor L." It was studied that as a result of biological cleaning with the help of aquatic plants and irrigation of the Bukhara-6 variety

of cotton, its productivity was 32.3 quintals per hectare, and the profitability level was 16.0% [3; 78-79-b]

The length of the leaf of small ryaska is 2 - 4.5 mm, the width is 2 - 3 mm. Since this plant is a photoautotroph, they develop actively in mineral environments. For the development of small ryaska activity, the temperature should be around 28-32°C and the light should be around 20-60 thousand lux. Small ryaska plant has been found to develop in low temperature and shady places. The active development of the small ryaska plant in water bodies storing organic matter has been studied. Small ryaska plant reproduces vegetatively. Every two days, a new root emerges from the leaf stem, and a new small shoot is formed from it. In order to reproduce the small ryaska plant, scientific research works were carried out in laboratory, semi-production and production conditions [2; 83-b]. 27 In order to reduce its negative consequences in the years of severe water shortage and in areas where river water is difficult to reach, ditch waters with moderate mineralization (3-5 g/l) are treated with "Lemna minor L." It was studied that as a result of biological cleaning with the help of aquatic plants and irrigation of the Bukhara-6 variety of cotton, its productivity was 32.3 quintals per hectare, and the profitability level was 16.0% [3; p. 78-79].

Plants brought from tropical and subtropical countries with high biofiltration properties, such as pistia, azolla and eichhornia, were used in the treatment of wastewater in biological ponds in the conditions of Khorezm region. It has been studied that the following results can be achieved by growing these plants in wastewater. High water plants remove waste water from biogenic salts, i.e.: - ammonia, nitrite, nitrate, purification from sulfates and chlorides; - as a result of photosynthesis, the amount of oxygen in water increases several times; - purification of wastewater from disease-causing bacteria that cause diseases of the intestine and other organs; - retention and purification of suspended substances in water; - the decrease in the amount of substances insoluble in water has been studied [4; 8-10-b]

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