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THE ROLE, DISTRIBUTION AND IMPORTANCE OF ALGAE IN NATURE

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ABSTRACT

The article provides information about the importance of algae and the algal flora of the water bodies of Central Asia, including Uzbekistan, and the types of algae sections identified in them.

KEYWORDS

Water bodies, soil, algaflora, algae, importance, sections of algae, euglenophyte, diatom, red, brown, green, blue-green, physiologically active substances, chlorella, spirulina, vitamins, fisheries, plankton

INTRODUCTION

Biological diversity is one of the important features of the Earth's biosphere. In order to prevent and stop damage to biodiversity, we need to strengthen our knowledge about living organisms, especially algae, and their composition. Algae are widespread in nature and grow in various ecological conditions of the earth: water (rivers, lakes, seas, oceans), soil, barren lands and rocks, snow and ice bases, tree barks. Algae easily

adapt to the environment, that's why they are distributed in all geographical regions and regions of the Earth. They grow in the deep places of lakes and seas where other plants do not grow, in caves, under snow and ice, and in hot springs.

THE MAIN RESULTS AND FINDINGS

The importance of algae in nature and human life is endless and diverse. A lot of biomass is produced from algae. Since the chemical composition of this biomass is different, it plays a big role in the life of people and animals. In particular, the life of fish is closely related to algae. Plankton algae that grow in water are of great importance in the nutrition of aquatic animals. That is why plankton organisms are of particular importance in the organization of fisheries.

Also, some algae grow too quickly, causing water "blooms" that have a negative effect on aquatic animals.

Algae can have a negative effect on the one hand, and a positive effect on the other. For example, representatives of euglenophytes, diatoms, and golden-colored algae, together with heterotrophic organisms, take an active part in cleaning polluted rivers, streams, and lakes.

Algae, a source of food and oxygen in rivers, lakes and seas, are habitats for many invertebrates and spawning and spawning grounds for fish.

In addition to providing oxygen to aquatic organisms, algae are important in the biological treatment of polluted water. Their massive increase in water also leads to biological pollution.

Algae are widely used in various fields of the national economy.

Algae is also a source of vitamins (thiamine, riboflavin, folate, nicotine and ascorbic acid), trace elements and a number of physiologically active substances. Vitamins contained in 100 g of chlorella algae meet a person's need for them in 1 night. Due to this, it is recommended to have algae in their food for patients with cardiovascular and stomach diseases.

Algae are also known as food and are no less popular agricultural products. The percentage of protein in their content is high (up to 70%). Algae belonging to 170 species (81 red, 54 brown, 25 green, 8 blue-green) growing in freshwater basins and seas have been found to be consumed by humans. Porphyra, Laminaria, Gelidium, Macrocystis, Undaria, Rhodymenia, Monostroma, Ulva, enteromorpha, Chondria are specially bred for these purposes. Among them, Porphyra is grown in large quantities in special reservoirs.

From microalgae More than 500 tons of chlorella are used annually for food purposes in Malaysia and the Philippines.

In Mexico and a number of other countries, the blue-green algae Spirulina is specially bred to obtain 2000 tons of biomass per year, and 5-10% of its powder is added to bakery products and used for other purposes.

Algae is widely used as a feed additive in animal husbandry. In the 80s of the last century, the profit obtained due to the use of algae in animal husbandry and cocoon breeding in our republic was 290 mln. consisted of soums.

When chlorella was added to livestock feed, a number of positive changes were observed.

Soil algae are also important in increasing soil fertility by accumulating organic matter, improving its physico-chemical properties and microbiological activity. Suvotiar has also been proven to have a positive effect on the activity of higher plants.

Algae growing on the soil increases soil fertility. Algae is also used as a bioindicator to determine the suitability of lands where industrial waste has been removed.

Flacocolloids obtained from marine algae (agar, agaroid, agarose, carrageenin, agropectin), alginic acid and its salts - alginates, mannitol, sorbitol, etc. are important raw materials for various industries. Phycocolloids are the most necessary raw materials for the food, pharmaceutical, chemical, microbiological, textile, paper-cellulose, and perfume industries. Agar substance is used in large quantities for scientific purposes (bacteriology, applied mycology and algology) and sanitary-epidemiology. Alginates are used in the production of glue, varnish, paint, plastic, artificial fibers, and in food (making ice cream, fruit juice, bakery products).

Most representatives of algae act as biological indicators. Depending on the type of algae, the level of pollution and purity of water is determined. That is, some indicator species live in dirty waters, and some live only in clean waters.

Depending on the distribution of indicator - saprobic algae, it is possible to determine the level of pollution of the water basin in this area.

According to the analysis of the literature, the algae flora of the water bodies of Central Asia, including Uzbekistan, has been studied by many scientific researchers. Margilonsoy, Shahimardonsoy, rivers in the Central Tianshan Mountains in the Fergana Valley, i.e. the tributaries of the Syrdarya, Karadarya, Norin Darya, Shahrikhansoy and their tributaries, mountain lakes, in the lakes of the foothills of the Amudarya, channels in the Fergana Valley, i.e. Big Fergana and northern Fergana, Big Chuy, collectors and cisterns in Mirzachol, in the Kattakurgan, Bukhtarma reservoirs, sholipoyas, biological treatment and fishing ponds, in the reservoir of the "Kalgan-Chirchik" fishery, in the Chordara reservoir, in the southern reservoirs of the Kyrgyz Republic, in the Bozsuv canal and Chirchik river basin water networks.

CONCLUSION

In conclusion, it can be said that the importance of algae in nature and human life is endless and diverse. Algae are widely used in various fields of the national economy. In particular, the life of fish is closely related to algae. Plankton algae that grow in water are of great importance in the nutrition of aquatic animals. That is why plankton organisms are of particular importance in the organization of fisheries. In addition, it plays a very important role in the preparation of medicines and pharmaceuticals. Therefore, the number of algae species should be determined and researched.

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