ВАЗОРАТИ МАОРИФ ВА ИЛМИ ҶУМҲУРИИ ТОҶИКИСТОН
ДОНИШКАДАИ ОМӮЗГОРИИ
ТОҶИКИСТОН ДАР ШАҲРИ ПАНҶАКЕНТ

ПАЁМИ ДОНИШКАДА
ТАФАККУРИ ТАЪРИХ
АНВОРИ ИЛМ

№1,2, 3 - 2024
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МАВОДИ

АНҶУМАНИ ИЛМӣ-АМАЛИИ БАЙНАЛМИЛЛАЛИИ “ХОНИШҲОИ VI – УМИ АРТУЧ” БАХШИДА БА “МАСОИЛИ МУБРАМИ ИЛМҲОИ ПЕДАГОГӢ, ИҶТИМОӢ-ГУМАНИТАРӢ ВА ФАНҲОИ ДАҚИҚ ДАР ЗАМОНИ МУОСИР”, 4-6 ИЮЛИ СОЛИ 2024 ДАР ДОНИШКАДАИ ОМӮЗГОРИИ ТОҶИКИСТОН ДАР ШАҲРИ ПАНҶАКЕНТ

МАТЕРИАЛЫ

НАУЧНО-ПРАКТИЧЕСКОЙ МЕЖДУНАРОДНОЙ КОНФЕРЕНЦИИ “VI – Е АРТУЧЕВСКИЕ ЧТЕНИЯ”, ПОСВЯЩЕННОЙ «АКТУАЛЬНЫМ ВОПРОСАМ ФИЛОЛОГИЧЕСКИХ, СОЦИАЛЬНО-ГУМАНИТАРНЫХ И ЕСТЕСТВЕННЫХ НАУК В СОВРЕМЕННОЕ ВРЕМЯ», 4-6 ИЮЛЯ 2024 ГОДА В ТАДЖИКСКОМ ПЕДАГОГИЧЕСКОМ ИНСТИТУТЕ В ГОРОДЕ ПЕНДЖИКЕНТ

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BIOTECHNOLOGY OF MICROSCOPIC ALGAE CULTIVATION IN DITCH WATERS AND THEIR APPLICATION IN FISH FARMING

Annotation. This article presents data on the cultivation of microscopic algae in ditch waters, water purification and their use in fish farming.

Day by day in our republic, such important tasks as the development of fish farming, as well as other livestock industries, as well as meeting the demand of our country for fish and fish products, are becoming more and more important. This leads to the fact that much attention is paid to the development of fisheries based on new technologies, as well as the creation and practical application of new methods of fish farming through intensive

technologies in this direction. As an example, we can cite several resolutions and orders developed by our president and applied in practice by the country's leading experts.

Decree of the President of the Republic of Uzbekistan dated May 1, 2017 PP-2939 “On measures to improve the management system of the fishing industry”, dated November 6, 2018 PP-4005 “On additional measures for the further development of the fish farming industry”, dated August 29, 2020 PP-4816 - “Measures to support and improve the efficiency of the fishing industry”, dated January 13, 2022 No. PP-83 "On additional measures for the further development of the fishing industry", dated February 8, 2022 PP-120, "On measures for the development of animal husbandry and its branches in the Republic of Uzbekistan" In paragraph 5 of Chapter 2 of the resolution "On approval of the program for 2022-2026", the resolutions on the "development of the fishing industry" and other normative legal acts related to this activity define important tasks for the development of fisheries aimed at providing the population with environmentally friendly fish products.

In accordance with these resolutions and orders, intensive development of the fishing industry based on a scientific approach is planned in the republic, increasing efficiency through the introduction of modern and innovative methods of production of fish products into the industry. Currently, the implementation of these decrees is underway and positive results are being achieved.

In order to purify the composition of soils on the arable lands available in our country from organo-mineral substances, a large number of ditches have been organized. 7 lakes have been formed in the Bukhara region due to the waters flowing out of the ditches. From these lakes, Lake Khadicha was formed, which receives wastewater which comes from the Karaulbazar district. Phytoplankton and zooplankton species living in the waters of Lake Hadicha have been identified [1-4; 56-67 b].

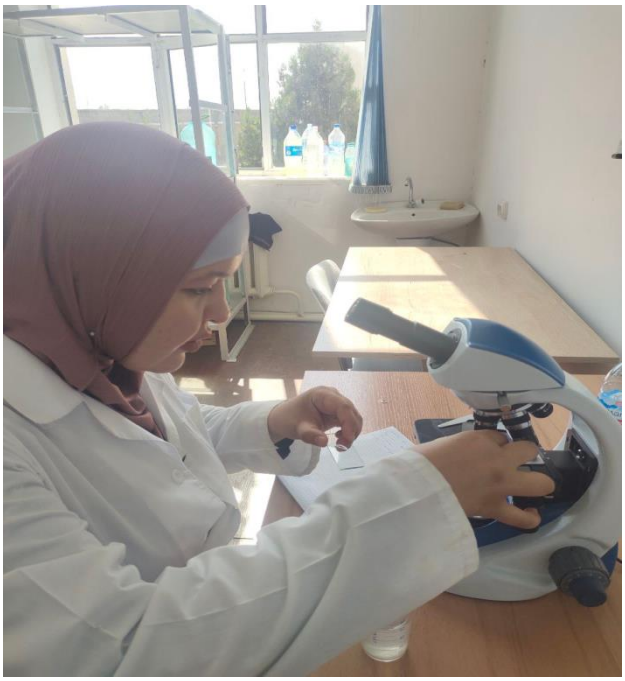
Experiments were conducted on the breeding of microscopic algae in the ditch waters of the lake in laboratory and semi-productive conditions for their use in fish farming. Before the experiment, the hydrochemical composition of ditch waters was determined. At the same time, it was determined that the content of oxygen dissolved in water is 4.5 mg/l; biochemical oxygen consumption is 25 mg/l; oxidation state is 38.5 mg/l; ammonia content is 8.0 mg/l; nitrite content is 0.2 mg/l; nitrate content is 4 mg/l; sulfate content is 55.5 mg/l; chlorides 70.5 mg/l.

Just 1 liter which consist of 1.5 mln/ml of Chlorella vulgaris and Scenedesmus obliquus cells were planted in ditch waters in laboratory conditions. During the experiments, the temperature was 25-280 °C, the light was 15-20 thousand lux. The reproduction of green algae in the ditch waters was observed for 6 days. Their reproduction is shown in the table.

Dynamics of reproduction of microscopic algae in the ditches of Lake Hadicha

Algae	Amount of cells, mln/ml					
	1	2	3	4	5	6
Chlorella vulgaris	1.5	3.2	7.5	16.0	29.0	41.0
Scenedesmus Obliquus	1.5	2.8	5.0	12.3	19.4	28.4
Nutrient medium “04”						
Chlorella vulgaris	1.5	3.8	8.4	20.2	38.0	51.0
Scenedesmus Obliquus	1.5	3.5	7.6	14.0	30.0	45.5

Experiments showed that the algae developed with activity, with the number of Chlorella vulgaris cells being 41.0 million/ml, and Scenedesmus obliquus -28.4 million/ml. In the control variant, when the nutrient medium was 0.4, Chlorella vulgaris increased to 51.0 million/ml, and Scenedesmus obliquus increased to 45.5 million/ml.



As a result of the development of algae in ditch waters, it was found that the content of oxygen dissolved in water is 11.5 mg/l, the biochemical oxygen consumption is 3.0 mgO_2/l, the degree of oxidation is reduced to 12.8 mg/l, complete assimilation of ammonia, nitrites and nitrates, the content of sulfates is reduced to -12.6 mg/l, and chlorides to -32.4 mg/l.

The growth and development of algae in wastewater in 50-liter rectangular aquariums under semi-productive conditions has been detected. Chlorella vulgaris cells 2.0 ml/ml per 1 liter in ditch water were planted and observed for 6 days. During the experiment, Chlorella cells increased to 35.0 - 38.5 million/mg as a result of mixing with microcompressors.

It was found that chlorella cells, multiplied in laboratory and semi-productive conditions in ditch waters, are introduced within 6 months as food for 100-gram white bottom fish, increasing them to an average of 900 grams.

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Termiz davlat universiteti Yuridik fakulteti yoshlar bilan ishlash bo‘yicha dekan o‘rinbosari

YOSHLAR TARBIYASIDA MA’NAVIY MEROSIMIZNING O‘RNI

Anatotsiya: Ushbu maqolada yoshlar tarbiyasida ma’naviy merosimizning tutgan o‘rni va ahamiyati masalalari ilmiy tahlil etilgan

Kalit so‘zlar: yoshlar tarbiyasi, ma’naviyat, ma’rifat, milliy ma’naviy meros, .

Mamlakatimizda mustaqillik yillarida keng ko‘lamli islohatlarda millat, xalq, manfaatini har tomonlama himoya qilish hamda yuksak ma’naviyatli yosh avlodlarni ma’naviy yetuk etib tarbiyalashga muhim e’tibor qaratilmoqda. Yangi O‘zbekistonda

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Суратгир Сиёвуш Солеҳзода, Наимҷон Норов, Шодмон Воҳидов

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Маълумот дар бораи муаллифон бо розигии шахсии онҳо баррасӣ мешавад
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