MIRZO ULUG‘BEK NOMIDAGI
O‘ZBEKISTON MILLIY UNIVERSITETI
JIZZAX FILIALI



"BIOTEXNOLOGIYANING RIVOJLANISH ISTIQBOLLARI VA MUAMMOLARI"

MAVZUSIDAGI RESPUBLIKA MIQYOSIDAGI ILMIY-TEXNIK ANJUMAN TO‘PLAMI





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МИНИСТЕРСТВО ВЫСШЕГО ОБРАЗОВАНИЯ, НАУКИ И ИННОВАЦИЙ РЕСПУБЛИКИ УЗБЕКИСТАН

ДЖИЗАКСКИЙ ФИЛИАЛ НАЦИОНАЛЬНОГО УНИВЕРСИТЕТА УЗБЕКИСТАНА ИМЕНИ МИРЗО УЛУГБЕКА

СБОРНИК ТЕЗИСОВ РЕСПУБЛИКАНСКОЙ НАУЧНОЙ КОНФЕРЕНЦИИ

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mezonlari degustatsiya vaqtida mahsulotlarni turgorlik darajasini tavsiflash uchun ayniqsa muhim hisoblanadi. Kartoshka navlari tuganaklarining baholashda birinchi navbatda tashqi ko‘rinishi, shakli, rangi va boshqa xususiyatlarini muhim hisoblanadi

Foydalanilgan adabiyotlar ro‘yxati:

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MICROBIOLOGICAL MONITORING OF THE DRY BOTTOM AREAS OF THE ARAL SEA

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Annotation. This article investigates the microbiological monitoring of highly saline, residual marshy, solonchak, and sandy desert soil-ground layers formed in the dried bed of the Aral Sea. The presence of various microorganisms was identified in the collected soil samples, and their ability to survive in extreme conditions and resist salinity was studied. Strains capable of synthesizing

biologically active secondary metabolites were isolated, and their potential application in restoring vegetation was examined. As a result, new-generation biopreparations for saline and arid regions have been proposed.
Key words: Aral Sea, saline soils, microbial flora, biopreparations, extreme conditions, biologically active compounds.

Nowadays, studying the diversity of microorganisms living in extreme conditions by monitoring the flora of microorganisms in the highly saline, residual marshy, saline, and sandy desert soil-ground layers formed on the dried seabed of the Aral Sea, isolating strains that synthesize biologically active secondary metabolites, and creating a new generation of specific biopreparations based on them is considered one of the urgent tasks [1-2].

The composition of the saline and arid soil-grounds on the dried seabed of the Aral Sea includes heavy, medium, and light loamy and sandy types, with a humus content of 0.2-0.5%, nitrogen content being extremely low at 0.02-0.04%, carbonates at 7.0-8.0%, and gypsum content at 0.1-0.8%. In some highly saline areas, these indicators were found to reach 1.5-4.6% or even higher [2-4].

The application of specific biopreparations developed for the residual marshy and saline areas of the dried Aral seabed allows plants to adapt to unfavorable conditions, meet their natural need for mineral nitrogen and phytohormones, and fully assimilate mineral fertilizers. This, in turn, opens prospects for the creation and production of new generations of effective microbiological preparations that can be used to restore fruit plant flora even in extreme regions.

The aim of our research is to conduct microbiological monitoring of the dried seabed areas of the Aral Sea.

To study the microbiological monitoring of the highly saline, residual marshy, saline, and sandy desert soil-grounds of the dried seabed of the Aral Sea, samples were taken from the zero point of the Aral seabed area at intervals of 0-1 cm, 1-19 cm, 19-45 cm, 45-70 cm, and 70-85 cm. In each sample, the presence of microorganisms belonging to various genera of bacteria and fungi was identified. Specifically, 12×10^3 microorganisms were found in 0-1 cm soil, 34×10^2 in 1-20 cm soil, 5×10^2 in 20-40 cm soil, with the highest occurrence observed in the 40-60 cm soil samples, while in the 60-90 cm intervals, 3×10^2 microorganisms were detected.

One of the isolates from the saline, residual marshy and sandy soil samples from 60-90 cm intervals of the Aral seabed was found to grow and develop even in low-nutrient media, with resistance to 3-5% salinity.

Thus, isolating microorganisms from differently saline areas of the Aral seabed and monitoring them demonstrates that creating a biopreparation based on

their ability to synthesize secondary active substances provides the groundwork for restoring plant life even in saline, residual marshy, saline, and sandy desert soil-ground areas. It creates opportunities for developing a new generation of microbiological preparations based on biologically active local strains that ensure the restoration of plant flora in saline and arid conditions.

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KARTOSHKANI KUNDALIK HAYOTDA BIOPEREPARATLAR YORDAMIDA SAQLASH USULLARI

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Annotatsiya: Jahonda kartoshkachilik qishloq xo‘jaligining rivojlanayotgan yo‘nalishlaridan bo’lib, Kartoshka kundalik va bayramona taomlarning ajralmas mahsulotidir. Kartoshkani saqlash kartoshkani saqlashdagi salbiy omillar, jumladan, zararkunandalar, kasalliklar, vazn yo‘qotishlar, erta unib chiqishlarga bo‘lgan yuqori talablar atrof-muhitda aholi orasida kartoshkaga bo’lgan ehtiyojning ko’payishi va narx-navoning oshishi muammolarini keltirib chiqaradi.

Kalit so‘zlar: sifat, miqdor, namlik, kimyoviy birikmalar, vitaminlar, oziq-ovqat, xom-ashyo, yem-xashak, biopereparat.