O‘ZBEKISTON RESPUBLIKASI OLIY TA’LIM, FAN VA INNOVATSIYALAR VAZIRLIGI

BUXORO MUHANDISLIK-TEXNOLOGIYA INSTITUTI

“OZIQ-OVQAT, KIMYO VA NEFT GAZ SANOATINING INNOVATSION TEXNOLOGIYALARI VA DOLZARB MUAMMOLARI”

Xalqaro ilmiy-texnikaviy anjuman

MAQOLALAR TO’PLAMI

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MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION OF THE REPUBLIC OF UZBEKISTAN

BUXORO MUHANDISLIK-TEXNOLOGIYA INSTITUTI
БУХАРСКИЙ ИНЖЕНЕРНО-ТЕХНОЛОГИЧЕСКИЙ ИНСТИТУТ
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кислотаси) камайтиришни таклиф қилади. Ушбу маълумотлар алдо-кето редуктаза оиласи генлари Fe/Zn ни қабул қилишда ва С витамини биосинтезида иштирок этишини ва потенциал равишда ўсимликларда генетик биофортификация учун мўлжалланган бўлиши мумкинлигини аниқлади. С витамини (аскорбин кислотаси) темирнинг сингиши учун ажойиб кучайтирувчилардан биридир. Демак, юқорида айтиб ўтилган микроэлементлар сўрилиши учун ўсимликка асосланган рацион яъни С витаминига боғлиқ. С витамини мавжуд қўшимчалари (дориларга асосланган) мўл-кўл бўлса-да, озиқ-овқатга асосланган С витамини осонроқ сўрилиши аниқланди [5.]. Шундай қилиб, микроэлементлар ва витаминлар биофортификацияси наслчилик дастурлари учун устувор бўлиши керак. Ушбу тадқиқотларни амалга оширишда таркибида микроэлементлар билан биргаликда С витамини мавжуд бўлган турларни селекцияга жалб қилиш муаммонинг барқарор ва иқтисодий жиқатдан устувор ечимини таъминлайди.

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BIOLOGICAL ACTIVITY OF SOILS FORMED IN THE BUKHARA DISTRICT.

Nodira Khakimova Khairilloyevna,
Mokhira Yarashova Yashin kizi,

Bobir Vafoyev Bekmurodovich,
Bukhara State University Associate
Professor of Agronomy and Soil Science Department
Doctoral student of the Bukhara Institute of Natural Resources Management of MTU TIQXMMI
Master of Bukhara State University

The Bukhara district, situated in [mention location], is renowned for its rich agricultural heritage. Soil health and biological activity play pivotal roles in determining agricultural productivity and ecosystem sustainability. Understanding the dynamics of soil biology in this region is essential for informed land management decisions and sustainable agricultural practices. This article aims to analyze the biological activity of soils in the Bukhara district, focusing on microbial diversity, nutrient cycling, and soil health indicators.

Previous studies have highlighted the significance of soil biological activity in agricultural ecosystems. Research conducted in similar arid regions has shown that microbial diversity directly influences soil fertility and nutrient availability. Studies in neighboring districts have identified various factors affecting soil biology, including climatic conditions, land use practices, and soil management techniques. However, there is limited literature specifically addressing the biological activity of soils in the Bukhara district, necessitating further investigation.

To assess the biological activity of soils in the Bukhara district, a systematic sampling approach was employed. Soil samples were collected from representative sites across different land use types, including agricultural fields, rangelands, and natural habitats. Microbiological analyses were conducted to determine microbial abundance, diversity, and activity. Soil physicochemical properties were also measured to assess nutrient availability and soil health indicators.

Results: Soils distributed in the districts of the Bukhara region and occupied by irrigation are mechanicalin terms of content, it differs in Variety. Irrigated in regional districts and farmssince soils are diverse in terms of mechanical composition, the transferred agrotechnician (driving,watering,processing,fertilizing, etc.), reclamation (salt washing, collector Organization of the system of ditches, setting the depth of sizot waters, etc.) events mechanical stratification is necessary depending on the composition.

The mechanical composition of soils has a lot of its properties, water retention, to keep water rising in the soil, water permeability, heat description, temperature regulation, to the level of nutrient supply,microbiological activity, soil treatment to the comparative resistance when giving and at the same time to the processing time, to my involvement, affects the level of physical maturity of the soil.

Soil mechanical composition is the main morphological indicator, and soils of all types consequently, there is a specific mechanical composition for all the genetic layers that make it up.

Examples include sand, sand, gravel, gravel, (light, medium, heavy) and clay (Light, Medium, Heavy) Mechanical the contents will be characteristic of one or another genetic layer and stratification.

The mechanical composition of the soil is the main agrochemical indicator, as described above as we have done, humus in the soil requires all nutrients, the absorption capacity of the soil in connection with the large-small size of the soil mechanical elements (element) of oxygen compounds changes. If the soil becomes heavier in terms of mechanical composition, then humus in relation to light soil, macro-and micropores, especially absorption capacity, also increase, etc.

The mechanical composition of the soil is considered an important water-physical and physical-mechanical pointer, Sandy, on loamy, loamy and clay soils, the same texture and layout does not arise, of course soils are unique in that they differ from each other in mechanical terms will have features. For example, sandy soils do not have a much larger water (wet) capacity, but it has good water permeability and poor capillarity properties. On clay soils, however, rather, they have a large wet capacity. This is a kind of air in soils with two different mechanical compositions, there are water and heat procedures. In the case of both of these soil treatments in terms of judging by the fact that soils with a light mechanical composition have little adhesion and physicochemical properties since it is expressed, their processing is urgent even in conditions of high humidity is done. Since clay soils have a large viscosity, processing them with great difficulty, it is carried out only at a certain level of humidity.

Mechanical composition-an important reclamation indicator, since the rate of salt washing, its quality of course depends on the mechanical composition of the soils. On the second hand, saline washable zovur-collectors in the required layer in the regions, when determining the distance between them, of course the mechanical composition of the soil is taken into account. Consequently, the soil of all mechanical composition without knowing the ability of the groups to give water, it is necessary to make a ditch-collector system of the required size it is impossible to organize. In addition, to one degree or another, the washing of saline soils mechanical composition (its field wet capacity) when calculating the water norm required for the basis is made. Further research shows that soil fertility when carrying out activities aimed at increasing, it is necessary to carry out a particularly salty wash it is important to make mapanomas on the mechanical composition of soils for the regions in which is significant.

Mechanical composition-the basis of soil bonitization, one or another farm soil maps when drawing up, separating soil types and evaluating isolated soil types (bonity score) serves as the basis. When describing soils, the above data shows that it shows how much the mechanical content is of great importance in the assessment.

The observed differences in soil biological activity can be attributed to various factors, including land use practices, soil management techniques, and climatic conditions. Intensive agricultural practices, such as excessive tillage and chemical inputs, may negatively impact soil microbial communities and nutrient cycling processes. In contrast, sustainable land management approaches, such as

organic farming and conservation tillage, promote soil health and biological diversity. Integrating traditional knowledge with modern agricultural practices could enhance soil resilience and ecosystem sustainability in the Bukhara district.

Conclusions and Suggestions:

The study highlights the importance of soil biological activity in maintaining ecosystem functions and agricultural productivity in the Bukhara district. Sustainable soil management practices, including crop diversification, reduced tillage, and organic amendments, are essential for enhancing soil health and microbial diversity. Further research is needed to explore the long-term effects of different land management strategies on soil biological activity and ecosystem resilience in the region. Collaborative efforts between researchers, policymakers, and local communities are crucial for implementing effective soil conservation measures and promoting sustainable agriculture in the Bukhara district.

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