

## **The mycological structure of serozem soils of the Surkhandarya area of Uzbekistan**

**A.A.Abzalov<sup>1</sup>, B.K.Mukhammadiev,**

<sup>1</sup>Tashkent Pharmaceutical Institute, Tashkent city, Uzbekistan

e-mail: [akmal.38@yandex.ru](mailto:akmal.38@yandex.ru)

*In given article questions of qualitative and quantitative structure of soil fungi-micromycetes serozem soils of southern area of Uzbekistan are discussed. As a result of the spent researches it has been noted 95 specieses from 28 genera. The most presented are rouble *Penicillium* (22) and *Aspergillus* (16). The maximum quantity of fungi germs and the most presented specific structure soil fungi-micromycetes is marked in the autumn. At change of crops and change of agroclimatic conditions structure of fungi-micromycetes are plasticity increases. So, on crops of other cultures after the grain the quantity and quality soil fungi-micromycetes raises.*

**Key words:** soil, micromycetes, cellulose, mineralization, fungi, biosynthesis, producer, mycological, structure, growing microorganisms.

**Introduction:** The fungi being an integral part of any biogeocenosis represent one of the important components. Possessing the developed fermentative device the fungi take part in biological circulation of substances, in particular, in destruction of organic substance and respectively, in soil processes and have a great impact on efficiency of a biocenosis as a whole (Mukhammadiev,2015).

Identification of structure of fungi-micromycetes – active producers of cellulosa enzymes and protein, and also regularities of their distribution in the conditions of Uzbekistan was the purpose of work.

The mycological structure of soils of various regions of Uzbekistan is studied in the second half of the XX century. Rather fully (Hamidova, 1990, etc., Mukhammadiev,2016).

However the most southern region of Uzbekistan – Surkhandarya, remained not studied. Before our researches quantitative and qualitative structure, mycological structure of soil Surkhandaryi wasn't published in this connection, studying mycological structure of soil the Surkhan-Darya area of Uzbekistan was one of problems of our research.

**Materials and methods:** As material soil fungi-micromycetes allocated of serozem soils of the middlesurkhan physiographic area with 1998-2005y.y. served.

Selection of soil samples took from depth of the soil horizon 0-20 cm, 4 times a year (April, July, September, November), on one fields under different crops.

Allocation of fungi-micromycetes carried out on Capek's circles, a potato and hungry agar. Quantity of fungi-micromycetes calculated in thousands on 1 g of the soil.

Identification carried out on Litvinov (1967) determinants, Pidoplichko (1977), etc., and also according to regional reports "Flora of sporous plants of Kazakhstan" and "Flora of fungi's of Uzbekistan". In work the Martina system, according to G.C.Ainsworth & G.R.Bisby (1971) is accepted.

**Results:** As a result of research in soils of the Surkhan-Darya area of Uzbekistan it was revealed the 95<sup>th</sup> fungi-micromycetes, relating to 28 gtnus, the 10th family from 4 sections.

Supervision over seasonal dynamics showed that the maintenance of fungi`s in soils not constant and changes on seasons and depending on a plant cover.

**Conclusions:** From the presented material follows that the maximum quantity of fungi germs and the widest range of soil fungi-micromycetes in an autumn season.

From the presented material it is possible to draw conclusions:

- The river of *Penicillium* (22 looks) and *Aspergillus* (16 looks) are the most presented.
- The most presented specific structure of soil fungi-micromycetes and the maximum quantity of fungi germs is noted in the fall.
- At change of crops and change of agroclimatic conditions plasticity mikocenosa increases. So, on crops of other cultures after the grain the quantity and quality of representation of soil fungi-micromycetes increases.

**References cited:**

1. Mukhammadiev B.K. The ecological analysis of fungi realed from soils of Uzbekistan. Bulletin of the agrarian Science of Uzbekistan.2015. N4, 75-78 pp.
2. Mukhammadiev B.K. Estimation of proteins formation and cellulose destruction abilities of micromycetes from classes *Zygomycetes*, *Ascomycetes* and *Deuteromycetes*. Bulletin of the agrarian Science of Uzbekistan.2016. N1, 74-78 pp.
3. Hamidova S. H. Micromycetes of the Tashkent area and their role in decomposition of the vegetable remains (flora, systematization, biochemistry and cultivation). Avtoref.Diss.Kand.Biol.Sc.– Tashkent, 1990. -22 p.
4. Ainsworth G.C., Bisby G.R. Dictionary of the Fungi. –Kiew, 1971. -663 p.
5. Litvinov M.A. Determinant of microscopic soil fungi`s.–L.Nayka, 1967. -303 p.
6. Pidoplichko N.M. Fungi`s parasites of cultural plants.Determinant.T.2. - Kiev,Nauk.Dumka, 1977.-299 p.