FRACTAL DIMENSIONALITY AS QUANTITATIVE CHARACTERISTIC OF MUSHROOM MYCELIUM

<u>E. Fedchun</u>^{\dagger}

Dnepropetrovsk National University, Dnepropetrovsk, Ukraine

[†]E-mail: *helf@ukr.net*

The characteristic of mycelial colony is the important attribute having taxonomic meaning. At definition of mushrooms take into account various external attributes of colonies. For the description of a degree of mycelial branching use in the basic qualitative characteristics. The purpose of the given work is the quantitative description of a morphological structure of mushroom mycelium. As model of the ramified structure of mycelium can be chosen fractal. Fractal dimensionality allows quantitatively to characterizing a morphological structure of mycelium. Depending on conditions and stage of growth of culture the degree its of branching and accordingly fractal dimensionality showing changes as mycelium fills space occupied by it. Determining fractal dimensionality is possible characterizing filling by mycelium of space, to predict growth of mycelium at its further cultivation. For definition fractal dimensionality the surface of mycelium was scanned. Unfortunately the sanction of the received images has appeared unsufficient for definition fractal dimensionality. Now author works above reception of the qualitative images and will be grateful for any help and information. The author expresses gratitude to the employees of faculty of physiology of plants of the Dnepropetrovsk national university Sergey Shemet and Alexandre Balalaev for moral support, valuable advice and information.