

**DETERMINATION OF STRAIN *BACILLUS MEGATERIUM* ONU 500  
LARVICIDAL ACTIVITY AGAINST MUSHROOMS PEST *BRADYSIA  
PILISTRIATA* FREY (SCIARIDAE)**

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It is known that microbial drugs are successfully used in fighting with insect pests. In most cases active components of such drugs are presented by entomopathogenic bacteria of the genus *Bacillus* and products of their metabolism. The positive features of such drugs are selective activity against insect pests and safety for human and environment.

The aim of this work was to determine larvicidal activity of the *Bacillus megaterium* ONU 500 against larvae of mushrooms pests *Bradysia pilistriata*. The strain *B. megaterium* ONU 500 was isolated from fermented mustard leaves. There was determined its antagonistic activity against phytopathogenic bacteria from the genera *Erwinia*, *Ralstonia*, *Rhizobium*. An experiment was performed in three repeats. Hiratake mushroom mycelium was grown on petri dishes with wet filtering paper on 10-15 inoculated cereal grains. In experimental variant mycelium was treated by *B. megaterium* ONU 500 suspension by the spraying, in control variant – by sterile water. 30 larvae of mushroom pest *Bradysia pilistriata* of the second and the third age were settled in each plate and incubated under optimum conditions ( $20 \pm 1$  °C and 80-90% of humidity). Larvicidal activity was determined on the third day.

It was also shown that the mortality rate of larvae under the *B. megaterium* ONU 500 treatment reached in average 75% from total amount of larvae, in control variants this criteria reached only 36% in average. So the difference between mortality rate in experiment and in control was in average 39%. Efficiency was expressed, according to the Abbots formula, as a percentage to control, was 61%.

Thus, there was shown that the strain *B. megaterium* ONU 500 has significant larvicidal activity against larvae of mushrooms pests *Bradysia pilistriata*. Obtained results are perspective to use this strain as a plant protector and to create a complex product with antibacterial and antylarvicidal activity.