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## Fungal mycelium growth: effects of the sand particle size

**Andrey Zuev**

A.N. Severtsov Institute of Ecology and Evolution RAS, Laboratory for soil zoology, Russian Federation  
(agzuev.sevin@gmail.com)

In-growth mesh bag technique is widely used for assessing production and turnover of the fungal mycelium in soil, but remains poorly standardized. Various filling materials are used mainly quartz sand with particle size range of 0.4–2.0 mm or 0.5–1.5 mm. Substrate particle size plays a crucial role in soil pore formation: larger pore space may increase the growth of mycelium that spreads along cracks and other air-filled pores. In contrast, the volume of soil explored by fungi can increase with greater bulk density while mycelium allocation shifts from a few large pores to more evenly distributed small pores. This research was aimed at testing the use of quartz sand of different particle size, as a filling for in-growth mesh bags, in order to obtain a maximum amount of fungal mycelium. Mesh bags were incubated in a Norway spruce forest in Central Russia. Mycelial biomass was higher in sand of coarse (> 0.5 mm) particle size and reached maximum (up to 798  $\mu\text{g}$  of mycelium dry weight  $\text{g}^{-1}$  sand).