

THE INFLUENCE OF pH AND THE SOURCE OF NITROGEN ON THE MYCELIAL GROWTH OF THE PLEUROTUS OSTREATUS MUSHROOMS

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Abstract

Pleurotus ostreatus mushrooms (popularly called phage trout or oyster mushroom) are edible flora mushrooms under natural conditions, created spontaneous by beech wood waste, from which he also received the popular name of "Trout phage". Cultivation in artificial conditions required a long work of research and selection carried out in different countries around the world to adapt to the growing conditions in artificially climate, with making a substrate of culture optimal to obtain yields bigger per unit area, in terms of profitability.

Pleurotus ostreatus mycelium development requires a rich material in polysaccharides and lignin, sufficiently low in essential minerals and without having been previously attacked by bacteria (decomposed). Compared with mineral sources, organic nitrogen sources have a particular influence on mycelial growth. Thus, the addition of barley flour or malt fangs is favorable.

In contrast to the genus *Agaricus* mushroom, at *Pleurotus* species the nutrient medium does not require a fence part (fermentation) of the transformed microorganisms or partially hydrolysed by physico-chemical processes.

Pleurotus ostreatus mycelium growth is carried out at pH values between 5 and 6.5 the limits being from 4.2 to 7.5. A highly acidic pH (pH 4) stops the growth of mycelium. Increasing the pH of 4 to 6.5 has a positive influence on the growth of mycelium, unlike higher values, ie pH neutral or slightly alkaline (pH 7-8), when the mycelium growth is again partially inhibited.

With regard to sources of nitrogen, it has been found that the addition of albumin, in the form of soybean meal, reduces the mycelium growth and delay the production of mushrooms.

Key words: *Pleurotus ostreatus*, mushrooms, mycelium, pH, nitrogen source