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# Optimization of mycelium growth condition of *Pleurotus Ostreatus sp* (Oyster mushroom) for seed production

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## ABSTRACT

*Pleurotus Ostreatus sp* mushroom spawn has a major importance in global agriculture production. Its production has not been adopted by many mushroom growers due to lack of knowledge of techniques required for preparation of spawn and mushroom cultivation. The spawn produced mycelium with low colonization rate and easily exposed to disease can impact towards the mushroom industry. This study was conducted to optimize the mycelium growth rate to enhance the mushroom cycled fruiting body. The mycelium was obtained from the fresh mushroom tissue to be cultured on the PDA medium. The cultured mycelium was sub-cultured to multiple the production of the mycelium. This study involved several parameters namely different types of grains such as maize, millet and wheat; different range of pH such as pH 7.2, 7.7 and 8.2; different time for boiling the grains such as 10 minutes, 20 minutes and no boiling; and the effect of addition of rice husk towards the mycelium growth rate. The mycelium growth rate showed optimum in the conditions of using the wheat grains as the seed for the mycelium to grow, pH 7.7 for the most favoured mycelium growth condition with duration of 20 minutes of boiling the grains and the addition of rice husk does influence the growth rate to become higher with compact of mycelium condition achieved.

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