

TITLE: PRODUCTION OF INOCULANT OF *Pleurotus pulmonarius* IN DIFFERENT SUBSTRATES

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ABSTRACT:

Mushrooms are consumed for nutritional, gastronomic and medicinal purposes. Members of the *Pleurotus* genus possess high rusticity and grow in a wide range of organic substrates. For commercial production it is necessary the initial multiplication of the mycelium in some substrate that will be later inoculated in the substrate where the mushroom will be produced and harvested. An alternative commonly used is the growth of the mycelium in rice. The use of organic waste for the production of *Pleurotus* inoculums may reduce the production costs of mushrooms. The objective of this work was to evaluate substrates for the growth of *Pleurotus pulmonarius* to be used as inoculants. The experiment was carried out with five replicates and four substrates were used in the following proportions: 49ml of rice + 120mL of water; 49 ml of fresh brewers' spent grain; 49 ml of sugarcane bagasse + 15 ml of water; 49ml of coffee grounds + 48mL of water. The material was added to autoclaved 250mL Erlenmeyer flasks. Then each erlenmeyer was inoculated with a 5mm diameter disc taken from the edge of a culture of *Pleurotus pulmonarius* growing Sabouraud Dextrose Agar medium and left at room temperature (25-28°C). Substrate ranking was performed by observing how long the mycelia took take all the substrate of the five erlenmeyers. The rice was completely taken up by the mycelium after 5 days, while the coffee grounds were completely taken up by the mycelium after 14 days. The sugarcane bagasse was not completely taken up by the mycelium, which stopped his growth after 10 days. The fresh brewers' spent grain did not show any mycelial growth. It is concluded that coffee grounds may be a cheaper alternative for the production of *P. pulmonarius* inoculant, although it is not as efficient as rice.

Keywords: *Pleurotus pulmonarius*, substrate, inoculant, mushroom

Development Agency: UFSJ; FAPEMIG