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**THE EFFECT OF ADDING ORGANIC NITROGEN SOURCES FROM THE
AGRICULTURAL BY-PRODUCTS ON THE GROWTH AND DEVELOPMENT OF
GOLD OYSTER MUSHROOM (*PLEUROTUS CITRINOPILEATUS*) AT THE
FARM IN DONGNAI PROVINCE – VIETNAM**

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Abstract

The aim of this study was conducted to investigate the effect of organic nitrogen, sources from some agricultural by-products on the growth and development of the *Pleurotus citrinopileatus*. Organic sources such as rice bran, corn bran, soybean meal and peanut oil residue are high in protein content, they also contain macronutrients, micronutrients and some minerals help develop of mushroom spawn as well as fruit body formation. In addition to the single supplementation of organic protein sources, this study also conducted a two-component blends study to find the best supplementation rate for mushroom growth, shorten spawn running time and complete fruiting body, increasing the fresh weight of the mushrooms. The results indicated that the supplementation of two-component protein 7 % (w/w) vermicompost and 1 % (w/w) rice bran showed the highest spawning rate (1.26 cm/day) for the remaining protein sources, the earliest fruit bodies (20 days) compared to the remaining sources, the fruit bodies weight obtained was 341.35 g /kg substrate and the biological efficiency (BE %) was 88.69 %, which is equivalent to the results of other studies. Thus, the addition of 7 % (w/w) vermicompost and rice bran 1 % (w/w) is also the appropriate ratio to blend with sawdust substrate under the conditions of culture 22-30 ° C and humidity 70-90 % which helps *P. Citrinopileatus* growing and developing best.

Keywords: *Pleurotus citrinopileatus*, by-products, organic, agriculture, mushroom

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