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Cultivation of the edible mushroom *Auricularia polytricha* using sawdust-based substrate made of three Indonesian commercial plantation species, *Falcataria moluccana*, *Shorea* sp., and *Tectona grandis**

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ABSTRACT

***Auricularia polytricha* is an edible mushroom, also known as black jelly. In Indonesia, although *A. polytricha* has been extensively cultured on the wood meal substrates, information is very limited on effects of wood meal from various tree species used for cultivation substrates on *A. polytricha* cultivation characteristic. An investigation, therefore, is needed to find suitable tree species for the substrate of *A. polytricha* cultivation. In this study, wood meals of 3 tropical hardwood species (*Falcataria moluccana, Shorea* sp., and *Tectona grandis*) from Indonesia were used as basal cultivation substrates. The fastest mycelia growth was found in the substrate made of *Shorea* sp., and the highest glucosamine content was found in the substrates made**

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of *Shorea* sp. and *F. moluccana.* No significant difference in the period of time to the first harvest was found between *F. moluccana* (23 days) and *Shorea* sp. (25 days), whereas a significant difference was found in the interval between the following harvesting periods (7 and 10 days for substrates made of *F. moluccana* and *Shorea* sp., respectively). Over the entire cultivation period, the substrates made of *F. moluccana* produced the highest fruiting body yield, greatest biological conversion, and greatest weight loss from the substrate. These results indicate that *F. moluccana* wood meal is the appropriate basal substrate for *A. polytricha* cultivation.

Key words: ***Auricularia polytricha*, *Falcataria moluccana*, mushroom cultivation, *Shorea* sp., *Tectona grandis*.**