Peningkatan produksi tubuh buah jamur tiram (pleurotus ostreatus (jacq.) P. Kumm.1871) melalui penambahan aspergillus fumigatus (fresen.1863) pada proses pengomposan serbuk kayu = Increased production of fruiting body of oyster mushroom (pleurotus ostreatus (Jacq.) P. Kumm.1871) using the addition of aspergillus fumigatus fresen 1863 in sawdust composting process

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Abstrak

Pleurotus ostreatus atau jamur tiram merupakan salah satu cendawan yang dikonsumsi di Indonesia karena tingginya cita rasa dan nilai nutrisi, serta dapat dibudidaya dengan mudah dan murah menggunakan serbuk kayu sebagai media tumbuh. Penelitian bertujuan untuk meneliti pengaruh penambahan A. fumigatus dalam proses pengomposan substrat serbuk kayu untuk media tumbuh P. ostreatus terhadap kualitas kompos dan produksi tubuh buah. Hasil penelitian menunjukkan bahwa suhu, konsentrasi glukosa, xilosa, N-asetilglukosamin mengalami kenaikan, sedangkan nilai pH, kadar selulosa, dan hemiselulosa mengalami penurunan, pada hari ke-0 hingga hari ke-7. Berdasarkan data biokimia tersebut, penambahan A. fumigatus pada saat proses pengomposan meningkatkan kualitas kompos substrat serbuk kayu. Rata-rata kecepatan pertumbuhan miselia per hari pada kelompok perlakuan (1,10 cm) lebih cepat dibandingkan dengan kontrol (1,07 cm) selama 24 hari pengamatan. Analisis uji statistik ANAVA terhadap berat segar tubuh buah P. ostreatus menunjukkan hasil yang berbeda nyata secara signifikan (=0,05) tetapi diameter tudung tidak berbeda. Penambahan A. fumigatus dalam proses pengomposan serbuk kayu meningkatkan tubuh buah hasil panen P. ostreatus.

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Oyster mushroom Pleurotus ostreatus is the most popular edible mushroom in Indonesia because it is delicious and nutritious and can be cultivated easily and inexpensively using sawdust as the substrate The consumption of oyster mushroom is largely because of its taste and nutritional properties The aims of this research were to reveal the effect of A fumigatus addition in composting process using sawdust substrate for P ostreatus growth medium toward compost quality and yield productivity The experiment revealed that the temperature concentration of glucose xylose and N acetylglucosamine increased and the pH value percentage of cellulose and hemicellulose decreased during 7 days of composting process Based on that biochemical parameter addition of A fumigatus during composting process increased sawdust compost quality Mycelia growth rate per day in treatment group 1 10 cm was faster than control group 1 70 cm during 24 days of observation Statistical test analysis using ANAVA for the fresh weight of P ostreatus indicated that the result was significantly different 0 05 but had no significantly different in diameter of the cap Addition of A fumigatus in sawdust composting process increased yield productivity of P ostreatus.