

Pola aktivitas enzim lignoselulase tiga galur jamur tiram putih (*pleurotus ostreatus* (Jacq.) P. Kumm.) terhadap pertumbuhan dan produksi tubuh buah = Lignocellulolytic enzyme activity pattern of three white oyster mushroom (*pleurotus ostreatus* (Jacq.) P. Kumm.) strains during growth and fruiting body production

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Abstrak

*Pleurotus ostreatus* merupakan jamur pangan yang menggunakan substrat lignoselulosa, sehingga jamur ini mampu mensekresi enzim lignoselulase. Produksi enzim lignoselulase pada *P. ostreatus* InaCC F209, F216, dan LIPI selama 70 hari pertumbuhan dan hubungan enzim tersebut dengan produksi tubuh buah selama 95 hari pengamatan diamati dan dibandingkan. Supernatan yang diekstrak dari media budidaya digunakan untuk memperkirakan gula reduksi, protein terlarut, dan aktivitas enzim. Hasil penelitian menunjukkan lakase, LiP, dan MnP lebih tinggi ketika ketiga galur *P. ostreatus* berada dalam fase vegetatif (masa pertumbuhan miselium), sedangkan produksi endoksilanase dan endoglukanase lebih tinggi ketika ketiga galur *P. ostreatus* berada dalam masa reproduktif. fase (periode pembentukan tubuh buah). Pola aktivitas &#946;-glukosidase menunjukkan variasi antara ketiga strain *P. ostreatus*. Produktivitas hasil diukur dengan menggunakan parameter waktu panen, bobot basah, jumlah badan buah, diameter pileus dan panjang batang. *Pleurotus ostreatus* InaCC F209 membentuk badan buah sebanyak tiga kali selama pengamatan 95 hari, isolat *P. ostreatus* LIPI sebanyak dua kali, dan *P. ostreatus* InaCC F216 tidak membentuk badan buah.

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*Pleurotus ostreatus* is a food fungus that uses a lignocellulose substrate, so that this fungus is able to secrete the lignocellulase enzyme. The production of lignocellulase enzymes in *P. ostreatus* InaCC F209, F216, and LIPI for 70 days of growth and the association of these enzymes with fruit body production for 95 days of observation were observed and compared. The supernatant extracted from the culture medium was used to estimate reducing sugars, dissolved protein, and enzyme activity. The results showed that lacase, LiP, and MnP were higher when the three *P. ostreatus* lines were in the vegetative phase (mycelium growth period), while the production of endoxylanase and endogilanase was higher when the three *P. ostreatus* lines were in the reproductive period. phase (the period of formation of the fruiting body). . The &#946;-glucosidase activity pattern showed variations between the three *P. ostreatus* strains. Yield productivity was measured using the parameters of harvest time, wet weight, number of fruit bodies, pileus diameter and stem length. *Pleurotus ostreatus* InaCC F209 formed fruit bodies three times during 95 days of observation, *P. ostreatus* LIPI isolates twice, and *P. ostreatus* InaCC F216 did not form fruit bodies.