

**THE CULTIVATION OF *PLEUROTUS SAJOR CAJU*
(GREY OYSTER MUSHROOM) ON AGROINDUSTRIAL WASTE**

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Wassalam

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ABSTRACT

THE CULTIVATION OF *PLEUROTUS SAJOR CAJU* (GREY OYSTER MUSHROOM) ON AGROINDUSTRIAL WASTE

Potato Dextrose Agar (PDA) was found to be the most suitable medium to establish a pure culture growth of *Pleurotus sajor caju*. Average growth rate of its colony on PDA plate was 1.19 cm/day. The next suitable medium for pure culture growth of this fungus was found to be Natural Potato Dextrose Agar (NPDA) followed by Malt Extract Agar (MEA). Average rate of growth of colony on NPDA and MEA were 1.17 cm/day and 1.16 cm/day respectively. Three types of grains namely wheat, barley and soybean were found suitable used for spawn preparation of *Pleurotus sajor caju*. All the grains were suitable for spawn preparation of *Pleurotus sajor caju* grown in 50 mL conical flasks. The average time taken for the mycelia to grow and fully cover the wheat, barley and soybean grains in the flasks during spawning are 11.3, 14.0 and 21.3 days respectively. Thus, the most preferred grain for spawn preparation of *Pleurotus sajor caju* was wheat. The basic substrates used for *Pleurotus sajor caju* cultivation were sawdust, cotton waste and palm oil waste fibre. Each bag of substrate used in the cultivation of this mushroom was prepared using 250 g of dry substrate material subsequently moistened with water. All the substrates were found to be suitable for the cultivation of *Pleurotus sajor caju*. The maximum total wet weight of the mushroom grown on sawdust harvested after three flushes was found to yield 303 g wet weight of the mushroom, with each flush yielding an average of about 101 g wet weight of mushroom per bag of substrate.

ABSTRAK

PENANAMAN *PLEUROTUS SAJOR CAJU* (CENDAWAN TIRAM KELABU) PADA SISA AGROINDUSTRI

'Potato Dextrose Agar' (PDA) telah didapati paling sesuai medium untuk pembiakan kultur tulin *Pleurotus sajor caju*. Kadar purata pertumbuhan koloninya di atas plat PDA adalah 1.19 cm/hari. Medium kedua paling sesuai bagi pertumbuhan koloni tulin kulat ini adalah 'Natural Potato Dextrose Agar' (NPDA) disusuli dengan medium ketiga yang paling sesuai bagi pertumbuhannya iaitu 'Malt Extract Agar' (MEA). Kadar purata penumbuhan koloni tulin kulat ini pada NPDA dan MEA masing-masing adalah sebanyak 1.17 cm/hari dan 1.16 cm/hari secara turutan. Tiga jenis bijirin iaitu gandum,barli dan bijirin kacang soya didapati boleh digunakan dalam penyediaan benih ('spawning') *Pleurotus sajor caju* di dalam kelalang kon 50 mL. Purata masa diambil untuk miselia tumbuh dan menutupi sepenuhnya bijirin gandum, barli dan kacang soya di dalam kelalang-kelalang tersebut adalah masing-masing 11.3 hari, 14.0 hari dan 21.3 hari. Justru, bijirin yang paling sesuai digunakan dalam penyediaan 'spawn' untuk *Pleurotus sajor caju* adalah gandum. Substrat asas yang digunakan untuk penanaman *Pleurotus sajor caju* adalah habuk kayu, sisa kapas dan serat kelapa sawit. Setiap bag substrat yang digunakan bagi penanaman cendawan ini telah disediakan daripada 250 g berat kering bahan substrat yang kemudiannya telah dilembabkan dengan air. Kesemua substrat ini didapati sesuai untuk pertumbuhan cendawan *Pleurotus sajor caju*. Pengeluaran maksimum jumlah berat basah cendawan *Pleurotus sajor caju* di atas habuk kayu yang diperolehi selepas tiga kali tuaian adalah sebanyak 303 g, dengan purata setiap tuaian menghasilkan berat bersih cendawan sebanyak 101 g bagi setiap bag substrat.