

Initiation Trigger on Pin Head of Oyster Mushroom *Pleurotus ostreatus* by Plant Extracts and Blue Light

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Pleurotus ostreatus is known as oyster mushroom, its cultivation has become popular as it is highly nutritious and medicinally important. It requires twenty-one days of incubation period generally before exposing to light to induce the fruiting. This study was designed to reduce the incubation period and to induce the pin head initiation. Paddy straw was used as the substrate and were sprayed with 5%, 10% and 15% of banana pseudostem and fenugreek extract and exposed to the 1W blue light on the 10th day of inoculation. The temperature was maintained at 29 ± 1 °C throughout the experiment period. Harvest was obtained until 31 days from the inoculation. Earliest pin head was initiated on the 22nd day from the 15 % fenugreek juice and 5% banana pseudostem juice applied treatment. 25 numbers of fruiting bodies were obtained from 15% banana pseudostem juice application and, the lowest was recorded from the 5% banana pseudostem juice applied treatment. Highest fresh weight of 127.55 ± 10.52 g was recorded from the 15% banana pseudostem juice application and the lowest was recorded 77.63 ± 5.56 g from 5% banana stem juice application. Biological efficiency was significantly higher in 15% banana pseudostem juice application, which was 85.03%. Pin head initiation was not recorded from 5% and 10% of fenugreek juice applied treatment during the thirty-one days from the inoculation. It reveals that, there is a positive effect of blue light in inducing pin heads formation of *P. ostreatus*.

Keywords: *Pleurotus ostreatus*, Blue light, Plant extract, Fruiting body.