



كلية الزراعة
قسم الميكروبيولوجيا الزراعية

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ABSTRACT



جامعة الفيوم

Seoudi, O. A., (2017). Enhancement of casing layer by indigenous pseudomonas putida via spent mushroom substrates processing. Egypt. J. Appl. Sci., 32 (12b): 85- 107.	البحث السادس
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Title	Enhancement of casing layer by indigenous pseudomonas putida via spent mushroom substrates processing.
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ABSTRACT

In this work, *Pseudomonas putida* strain was isolated from the casing layer ecosystem of edible mushroom and characterized by API20 NE as mushroom growth promoting bacteria (MGPB). To prove that, an experiment was conducted, through inoculation of casing layer with *Ps. putida* which based on three different types of casing materials; Spent Oyster mushroom Straw (SMS); Spent Agaricus mushroom Compost (SMC), and Farm Yard Manure (FYM), for new cycles of *Agaricus bisporus* production.

In the present work, significantly results of the mean time taken for various stages of mushroom production in particular, the three flushes of harvesting stage was approximately 5 days earlier with highest average total yield weight (587.6 g/bag) was obtained from the inoculated casing layer for 83 days followed by (446.73 g/bag) for 88 days with significant increase about 31.53% in *A. bisporus* fresh yield weight compared to control. In addition, increasing in the yield efficiency and biological efficiency of the treated casing layers were 6.39%, 21.6 % 4.86 % and 16.42% compared to control till the end of harvesting stage, respectively. Finally, it was concluded that the possibility to maximize value of reuse the Oyster spent mushroom substrates technically by cultivation other kind of mushroom, support agribusiness, decrease environment pollution and contribute to sustainable agricultural development.