



CENTRAL LUZON STATE UNIVERSITY



**SINGLE CELL PROTEIN POTENTIAL OF ENDOPHYTIC FUNGI
ASSOCIATED WITH BAMBOO USING PINEAPPLE PEEL
AS SUBSTRATE**

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An Undergraduate Thesis Submitted to the Faculty of the Department of
Biological Sciences, College of Arts and Sciences, Central Luzon
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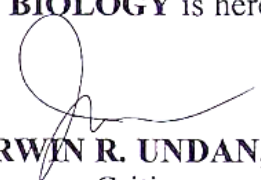
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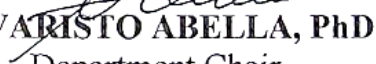

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ABSTRACT

AGONOY JULIE ANN N., Bachelor of Science in Biology, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, June 2017, **SINGLE CELL PROTEIN POTENTIAL OF ENDOPHYTIC FUNGI ASSOCIATED WITH BAMBOO USING PINEAPPLE PEEL AS SUBSTRATE**

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This study was conducted to determine the potential of nine endophytic fungi associated with bamboo namely: *Aspergillus niger*, *Aspergillus flavus*, *Aspergillus ochraceus*, *Fusarium sp.1*, *Fusarium sp.2*, *Fusarium semitectum*, *Monascus ruber*, *Penicillium citrinum*, and *Cladosporium cladosporoides* as a source of Single Cell Protein. Increase in the crude protein content of the enriched pineapple peel was evaluated in the study. In addition, proximate composition (crude fat, crude fiber, ash and moisture content) of the fungal enriched pineapple peel was also evaluated.

Increase in Crude Protein Content of the fungal enriched pineapple peel was observed after 20 days of solid state fermentation. *C. cladosporoides*- treated pineapple peel had the highest CPC of 9.24% followed by *Fusarium sp.2* - treated pineapple peel with 7.65% while the untreated pineapple peel registered the least CPC of 3.31%. For the proximate composition; reduction in moisture content of all fungi treated pineapple peel was recorded, while increased in ash content and crude fiber of all fungi treated pineapple peel were noted. For the crude fat content, reduction in pineapple peel treated with *A.*



niger, *Fusarium sp.1* and *P. citrinum* was noted while the rest of fungal treated pineapple peel registered increase in crude fat.



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