CENTRAL LUZON STATE UNIVERSITY

PERFORMANCE OF *Pleurotus djamor* ON BANANA BASED SUBSTRATE FORMULATION

LOURILAINE ALEJANDRO SILVA

An Undergraduate Thesis Submitted to the Faculty of Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines in Partial Fulfillment of The Requirements for the Degree

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COLLEGE OF ARTS AND SCIENCES
Department of Biological Sciences

APPROVAL SHEET

The Undergraduate Thesis entitled: **PERFORMANCE OF *Pleurotus djamor* ON BANANA BASED SUBSTRATE FORMULATION** prepared and submitted by **LOURILAINE ALEJANDRO SILVA** in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY** is hereby approved and accepted.

SOFRONIO P. KALAW, Ph. D.
Adviser
06/09/17
Date Signed

RICH MILTON R. DULAY, M. Sc.
Critic
06/09/17
Date Signed

RICH MILTON R. DULAY, M. Sc.
Department Research Coordinator
06/09/17
Date Signed

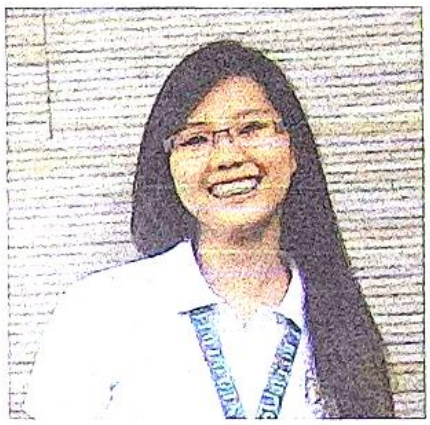
Accepted in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY.**

EVARISTO A. ABELLA, Ph. D.
Department Chair
06/09/17
Date Signed

ANNA MARIA LOURDES S. LATONIO, Ph. D.
College Research Coordinator
06/09/17
Date Signed

MYRNA R. UMAGAT, Ph. D.
Dean
06/09/17
Date Signed

BIOGRAPHICAL SKETCH



PERSONAL DATA

Name:	Lourilaine A. Silva
Date of Birth:	February 04, 1997
Place of Birth:	Manuel V. Gallego General Hospital, Cabanatuan City, Nueva Ecija
Home Address:	Edmar Village Maestrang Kikay District, Talavera, Nueva Ecija
Religion:	Roman Catholic
Parents:	Mr. Noel M. Silva Mrs. Vivian A. Silva

EDUCATIONAL BACKGROUND

TERTIARY (A.Y. 2013-2017) Bachelor of Science in Biology	: Central Luzon State University Science City of Muñoz, Nueva Ecija
SECONDARY (A.Y. 2009-2013)	: Talavera National High School Talavera, Nueva Ecija
ELEMENTARY (A.Y. 2003-2009)	: Faith Christian Academy Talavera, Nueva Ecija

ON-THE JOB TRAINING

Philippine National Collection of Microorganisms, The National Institute Of Molecular Biology and Biotechnology University of the Philippines, Los Baños, Laguna June 21 - July 21 2016

SEMINARS ATTENDED

Direct Seeding: A Response to Economical and Technological Challenges in Rice Farming

Central Luzon State University
Science City of Muñoz, Nueva Ecija
September 7, 2013

Current Trends in Food and Safety
Central Luzon State University
Science City of Muñoz, Nueva Ecija
August 30, 2014

HIV: AIDS "Survival of the Fittest. The Human Culture Media"
Central Luzon State University
Science City of Muñoz, Nueva Ecija
November 21, 2015

Philippine Biodiversity and the National Museum
Central Luzon State University
Science City of Muñoz, Nueva Ecija
March 22, 2016

EXTRA CURRICULAR ACTIVITIES

Treasurer	CLSU Biological Society
Lady Master Initiator	
Business Manager	Biology Supreme Student Council

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LOURILAINE A. SILVA

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ABSTRACT

SILVA, LOURILAINE A, Bachelor of Science in Biology, Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, June 2017. **PERFORMANCE OF *Pleurotus djamor* ON BANANA BASED SUBSTRATE FORMULATION**

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Pleurotus djamor, is also known as pink oyster mushroom due to its pink color and cap shape, is known for its rapidity in fruiting. The study was conducted to determine the mycelial growth of *P. djamor* on banana fruit based medium and to evaluate the fruiting body production on banana leaves based substrate formulations.

Fruits of three banana varieties namely: Lakatan, Latundan and Saba were used in the preparation of culture media. The mycelial growth rate, mycelial density and incubation period were determined. Moreover, different banana based substrate formulations such as 100% banana leaves, 75% banana leaves + 25% sawdust, 50% banana leaves + 50% sawdust, 25% banana leaves + 75% sawdust, 100% sawdust and 70% rice straw + 30% sawdust were evaluated.

Results showed that saba sucrose gulaman exhibited faster mycelial growth rate (11.79 mm/day), shortest incubation period (7.67 days) and thick mycelial density. On the other hand, potato dextrose gulaman (control) recorded the slowest mycelial growth rate (9.33 mm/day), longest incubation period (9.67 days) and very thick mycelial density.

Among the different substrate formulations, 70% rice straw + 30% banana leaves (control) exhibited shorter incubation period (26.73 days), shorter duration of primordial formation (28.93 days) and longest stipe length (14.82 mm). Substrate formulation containing 100% sawdust exhibited wider pileus diameter (54. 62 mm). Lastly, 50% banana leaves + 50% sawdust exhibited highest yield (136.51 g) and highest biological efficiency (19.50%).

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