



CENTRAL LUZON STATE UNIVERSITY



OPTIMAL GROWTH CONDITION OF *Pleurotus djamor* ON CORN BASED  
SUBSTRATE

CARL PHILIP BATILO BUMANLAG

An Undergraduate Thesis Submitted to the Faculty of Department of  
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Requirements for the Degree

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Carl Philip B. Bumanlag  
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**CENTRAL LUZON STATE UNIVERSITY**  
Science City of Muñoz, Nueva Ecija

COLLEGE OF ARTS AND SCIENCES  
Department of Biological Sciences

**APPROVAL SHEET**

The Undergraduate Thesis entitled: **OPTIMAL GROWTH CONDITION OF *Pleurotus djamor* ON CORN BASED SUBSTRATE** prepared and submitted by **CARL PHILIP B. BUMANLAG** 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

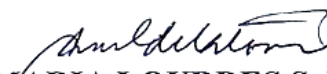
  
**RICH MILTON R. DULAY, M.Sc.**  
Department Research Coordinator

06/09/17  
Date Signed

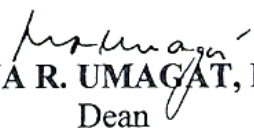
Accepted in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN BIOLOGY**.

  
**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 INFORMATION

Name : Carl Philip B. Bumanlag  
Date of Birth : December 15, 1995  
Place of Birth : Cabanatuan Doctor's Hospital,  
Cabanatuan City, Nueva Ecija  
Home Address: San Vicente, Zaragoza, Nueva  
Ecija  
Religion : Roman Catholic  
Parents : Mr. Rolando A. Bumanlag  
Mrs. Rosenda B. Bumanlag



### EDUCATIONAL BACKGROUND

TERTIARY : Central Luzon State University  
(A.Y. 2013-2017) Science City of Munoz, Nueva Ecija  
Bachelor of Science in Biology  
SECONDARY : Don Bosco Technical Institute Tarlac  
(A.Y. 2009-2013) Sto. Cristo, Tarlac, Tarlac City  
ELEMENTARY : Vincentian Catholic Academy  
(A.Y. 2003-2009) San Vicente, Zaragoza, Nueva Ecija

### ON THE JOB TRAINING

Bureau of Fisheries and Aquatic Resources- CAR

### SEMINAR ATTENDED

Symposium on Rice Technology  
CLSU auditorium, Science City of Munoz, Nueva Ecija



September 7, 2013

Symposium on Current Trends in Food Safety and Quality Assurance  
CLSU Gymnatorium, Science City of Munoz, Nueva Ecija

August 30, 2014

Symposium on Philippine Biodiversity and the National Museum  
University Auditorium, CLSU, Science City of Munoz, Nueva Ecija

March 22, 2016

Symposium on HIV: AIDS Survival of the fittest. The Human Culture Media

University Auditorium, CLSU, Science City of Munoz, Nueva Ecija

November 21, 2015



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## ABSTRACT

**BUMANLAG, CARL PHILIP BATILO**, 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. **OPTIMAL GROWTH CONDITIONS OF *Pleurotus djamora* ON CORN BASED SUBSTRATES.**

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*Pleurotus djamora*, also known as pink oyster mushroom, is a newly introduced exotic species of mushroom in the Philippines. Because of its color, most Filipinos are fascinated by this mushroom. In this study, the influence of corn grit decoction sucrose gulaman using three varieties of corn (sweet corn, glutinous corn and yellow corn) and physical conditions (pH, aeration, illumination and temperature) on mycelial growth was evaluated. Moreover, corn based substrate formulations using different combinations of corn stubbles (leaves and stems) and saw dust were used in fruiting body production.

Maximum mycelial growth was observed in both sweet corn grit decoction sucrose gulaman and yellow corn sucrose gulaman, with pH of 8.0 incubated in either sealed or unsealed; light or dark condition at room temperature. Moreover, sweet corn and yellow corn can be used as grain spawning materials.

Among the different substrate formulations used in fruiting body production, 75% corn stubbles + 25% saw dust and the control registered the shortest incubation period and shortest number of days to primordial initiation while the longest incubation period and longest period to primordial initiation were recorded in 25% corn stubbles + 75%



saw dust. Among the different corn based substrate formulations, 100% corn stubbles and 75% corn stubbles+ 25% saw dust are the best that can use as alternative for the control. Moreover, 70% rice straw + 30% saw dust (control) exhibited the highest diameter of pileus, length of stipe, weight of fruiting bodies and biological efficiency.



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