VISAYAS STATE UNIVERSITY

ECOLOGICAL FARM AND RESOURCE MANAGEMENT INSTITUTE
Visca, Baybay City, Leyte, PHILIPPINES
Telephone: (053) 565 0600; local: 1040
Website: www.vsu.edu.ph

QUARTERLY RESEARCH PROGRESS REPORT
QUARTER: FIRST QUARTER (April - June 2022)

Research Title: INTEGRATED NUTRIENT MANAGEMENT FOR HORTICULTURAL CROPS: Effects of Bio-fertilizers on soil properties and productivity of Arugula (*Eruca vesicaria*) and other herbs (*ORP10 - CAHO NM 14-1420-11*)

I. Program/Project/Study Objectives

Project Objectives:

Develop a nutrient management strategy that could help reduce or arrest soil degradation in horticultural crop production area of VSU.

Specifically this project aims to:

1.Evaluate the effectiveness of BOF application on the growth and yield performance of the different horticultural crops (e.g. arugula) grown at the EcoFARMi demonstration farm.

2. Assess nutrient and microbial activity in the soil of the field trial experiment.

II. Relevance to VSU & College's Thrust and Priorities: Relevant

III. Highlights of accomplishments within the quarter

A. Targets for the quarter

1. Soil Nitrogen Analysis (Malabar Spinach)
2. Data gathering of aragula planted in upland area
3. Encoding data gathered in growth parameters of aragula planted in upland area
4. Harvesting aragula planted in upland area
5. Collection of final soil and plant samples for soil and tissue analyses
6. Production of bio-fertilizers such as Effective Microorganisms (EM) and Indigenous Microorganisms-6 (IMO6) for aragula to be planted the lowland area
7. Field preparation in lowland area
8. Collection of initial soil samples in the lowland area
9. Collection of materials and preparation of aragula seedlings

B. Highlights of accomplishments

1. Continued the analysis of soil nitrogen for the field experimental set-up of Malabar Spinach.

2. Gathered the data in growth parameters of aragula planted in upland area.

3. Encoded the data gathered in aragula planted in upland area

4. Harvested the aragula planted in upland area

5. Collected and prepared soil samples for the final chemical analyses and plant tissue samples for the nutrient uptake of aragula

6. Prepared the raw materials such as raw milk, rice wash, and rice bran for the production of EM likewise, IMO2, fermented plant juice (FPJ), fish amino acid (FAA), sandy soil, chicken manure, and rice bran for the production of IMO6.

7. Prepared the field experimental set-up for aragula in the lowland area. Performed clearing, weeding, manual soil tilling, plotting, and mulching.

8. Collected initial soil samples in the lowland area for chemical analysis

9. Prepared aragula seedlings from sowing until ready for transplanting.

IV. Physical Report of Operation

A. Research Program

	Particulars/Name and Brief Description of Utilized/ Commercialized Technologies	**Number**
Outcome Indicator		
1. Number of research outputs utilized by the industry or by other beneficiaries		
Output Indicator		
1. Number of research outputs completed within the year		
2. Percentage of research outputs published in internationally-referred or CHED recognized journal within the year		

B. Technologies/Information patented and commercialized

Technology Invention(s) New Information	**Invention Patent Number**	**Date of Issue**	**Utilization of Invention**		**Name of Commercial Product**
			Development	**Service**	
A. Technology Invention(s)					

B. New Information					

C. Research papers published *(Identify if articles were for Research, Extension, Innovation or MSc/ PhD Studies)*

	Title	Author (s)	Date/Year/Publication/ Publisher	Remarks *(if Research, Extension, Innovation, Thesis, MSc/PhD*
a. Refereed Journal				
Institutional				
National				
International				
b. Semi-popular publ'n (newsletter, etc.)				
c. Popularized pub'ln (technoguides, etc.)				
d. Book Chapter/s				
e. Books				

D. Citation

Research Output as Cited by Other Researcher(s) in Journal Activities									
Title of Research Output/ Published Journal Articles/ Book	Title of Journal & Vol. Issue/ Year	Keywords	Researcher (s)	Citation Details					
				Author(s) Who Cited the Research Output	Title of Article Where the Research Output Was Cited	Title of Journal	Vol. / Issue / Page No.	City/ Year Published	Publisher

V. Issues, Problems, and Recommendations

1. Delayed delivery of chemicals and other laboratory materials such as sulfuric acid and filter paper due to problems encountered during procurement processes.

2. Delayed field experimental set-up due to unfavorable weather condition

Submitted by : **DHENBER C. LUSANTA**
Study Leader

Endorsed by : **DHENBER C. LUSANTA**
OIC Director, Eco-FARMI

Date Submitted : July 5, 2022

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