



## **QUARTERLY RESEARCH PROGRESS REPORT**

**QUARTER: 4th**

**(October – December 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. Continuation of the chemical analyses of soil samples collected from upland and lowland experimental set-up.
2. Chemical analyses of tissue samples of Arugula planted in upland and lowland area.
3. Encode the data obtained from chemical analyses of soil and plant tissue samples.

#### **B. Highlights of accomplishments**

1. Analysed pH, nitrogen, organic matter, and phosphorus content of soil samples from upland and lowland experimental set-up.

2. Analysed nitrogen, phosphorus, and iron content of Arugula tissue samples planted in upland and lowland area.

3. Encoded all the data acquired from chemical analyses of soil and plant tissue samples.

#### IV. Physical Report of Operation

##### A. Research Program

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

##### 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	
<b>A. Technology Invention(s)</b>	NONE				
<b>B. New Information</b>	NONE				

##### 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	NONE			
Institutional				
National				
International				
b. Semi-popular publ'n (newsletter, etc.)	NONE			
c. Popularized publ'n (technoguides, etc.)	NONE			
d. Book Chapter/s	NONE			
e. Books	NONE			

**Vision:** A globally competitive university for science, technology, and environmental conservation.  
**Mission:** Development of a highly competitive human resource, cutting-edge scientific knowledge and innovative technologies for sustainable communities and environment.

#### 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
NONE									

#### 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

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