



QUARTERLY RESEARCH PROGRESS REPORT

QUARTER: 2nd

Research Title: Nanomaterial-encapsulated microbial inoculant as tuber sett coating to enhance growth, yield and micronutrient uptake of purple yam

I. Program/Project/Study Objectives

Project Objectives:

1. To formulate and characterize alginate-encapsulated *Bacillus megaterium* as microbial inoculant for tuber sett coating of purple yam
2. To evaluate performance of alginate-encapsulated *Bacillus megaterium* inoculant on the growth and yield of purple yam under pot experiments.
3. To evaluate performance of alginate-encapsulated *Bacillus megaterium* inoculant on the anthocyanin content of purple yam

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

This project is relevant to the primary mission of the university in research and development to generate knowledge and technologies that will contribute to advance knowledge, economic development, social development, and environmental sustainability.

Increasing yam production using new and improved technologies can provide good food sources, increase farmer income, and accelerate yam-derived products for food manufacturing and production.

III. Highlights of accomplishments within the quarter

A. Targets for the quarter

- Preparation and planting of purple yam for pot experiment set-up in the screen house for the second trial part of the project
- Preparation and planting of purple yam for a field trial in Pangasugan
- Collection of data for the newly planted purple yam in both pot experiment and field trial setup
- Fertilizer treatment for both screen house and field setup one month after planting

B. Highlights of accomplishments

- Planted purple yam at both the pot experiment set up in the screen house and the field for the second trial part of the project during the purple yam planting season
- Applied fertilizer for both screen house and field setup one month after planting



Figure 1: Pot experiment setup in the screen house



Figure 2: Field experiment setup in Pangasugan

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	none	0
Output Indicator		
1. Number of research outputs completed within the year	none	0
2. Percentage of research outputs published in internationally-referred or CHED recognized journal within the year	none	0

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

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

- Delayed delivery of supplies but constant follow-up was made.

Submitted by:

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Received by OVPREI-RPO:

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