PROJECT PROPOSAL
2022 DOST-GIA FUNDING

I. PROJECT PROFILE

(1) Project Title: Establishment of Tissue Cultured Laboratory for Banana

(2) Project Leader/Sex: Harvey A. Dulay/ Male
Agency: Marinduque State College
Address/Telephone/Fax/Email: MSC Torrijos, Poctoy, Torrijos, Marinduque

(3) Cooperating Agency/ies: DOST-PSTC

(4) Site/s of Implementation (Municipality / District / Province / Region)
Base Station: MSC Torrijos, Poctoy, Torrijos, Marinduque
Other Implementation Site (s): _____

(5) Project Duration: 2 year

(6) Total Project Cost: (indicate Counterpart Funds; use Form A for the Line-Item Budget)

Source of Fund / Site(s) of Implementation	PS	MOOE	EO	Total
A. DOST	0.00	847,469.00	1,670,000.00	2,517,469.00
B. MSC	467,280.00	220,000.00	35,000.00	722,280.00
TOTAL	**467,280.00**	**1,067,469.00**	**1,705,000.00**	**3,239,749.00**

II. PROJECT SUMMARY

One of the mature technologies being used for modern agriculture is tissue culture. This technology provides high yield and uniformity (in terms of shape, size, weight, and color) unlike the traditional method which usually does not meet the commercial demand.

Farmers using conventional banana farming methods are now encountering issues such as slow growth rate, low yields, high mortality rates, and struggle in propagating a disease-free uniform suckers. The said problems could be linked to different factors such as absence of disease-free banana planting materials and the farmer's lack of knowledge when it comes to modern cultivation techniques.

Based on the 2018 Provincial Commodity Investment Plan (PCIP Marinduque), there are 4,500 hectares of land in the province which is planted with banana. For every hectares of land, an estimated of 400 banana (saba) or 1,111 banana (lakatan) that can be planted. It is also reported that there are 13,533 farmers engaged in the production of banana.

Asides from farmers, there are local food processors who are also dependent to the production of banana. Among these processors includes (insert 3 sisters, Rejanos, etc.) which generate banana-products and job opportunities for the province. Furthermore, banana have been part of the local delicacies of Marinduque, this creates local demand for banana.

In the previous years, Marinduquenos had an experience of strong typhoons which destroys the banana plantations. This disrupts the continuous production, forcing the increase in price of banana and importation from other provinces. To address this concern, the timing of planting and immediate replacement of banana plants must be implemented.

In view of this, the establishment of a banana tissue culture laboratory and nursery is an intervention that could aid in the recovery of banana industry in the province. With the production of readily available uniform, disease-free banana planting materials, farmers in the different areas can plan for planting schedule to avoid seasons where typhoon can damage plantations. MSC through the province agriculture office will provide quality planting materials. Thus, this proposal.

(8) Project Description (Not to exceed 15 pages)

OBJECTIVES

Generally, this project aims to promote and enhance the production banana (Saba and Lakatan) in the province of Marinduque.

Specifically,

- To establish tissue culture laboratory for banana in MSC
- To produce 22,400 tissue-cultured banana planting materials per year for farming communities in the province.
- To engage at least 50 farmers in banana production per year

METHODOLOGY

Establishment of Plant Tissue Culture Laboratory

The banana tissue culture laboratory will be established at the Institute of Agriculture, Poctoy, Torrijos. This facility will be used for R&D, instruction and production activities. MSC will assign permanent staff who will oversee the project and a contractual employee as laboratory technician for the actual day to day operations in the laboratory.

A nursery for banana plantlets will be established in the MSC Torrijos and 2 technician of the college will be assigned to managed it.

Planting materials dissemination

The PGM- PAgriO will then coordinate with the six municipalities for the distribution of the tissue cultured banana that are ready for field transplanting. To promote high adoption rate of farmers a subsidy will be provided to the purchase of planting materials.

Conduct of Training

MSC Institute of Agriculture through its Community Outreach Center (COC) will conduct series of trainings and consultancy activities for the recipients of the project.

EXPECTED OUTPUTS

Product

With the implementation of the project, about 22,400 tissue cultured will be produced by the MSC Tissue culture Laboratory.

People Service

In support to the promotion of banana production in the province, training on banana production will be catered by the MSC Community Outreach Center (COC).

Place and Partnership

The project will establish a plant tissue culture laboratory in MSC Torrijos, Poctoy, Torrijos, Marinduque.

Policy
For the sustainability of the project, a policy support to institutionalize the tissue culture of banana in MSC will be crafted through the board of trustees (BOT).

EXPECTED OUTCOMES

It is expected that this project will establish a plant tissue culture in MSC Torrijos which will cater the production of quality planting materials for banana and other important crops in the province. The project will also provide an estimate of 22,400 banana plants which are ready for out planting by local farmers. A total of 50 farmer beneficiaries will be capacitated for the mass planting of banana in the province.

PERCEIVED IMPACT

Social Impact

This project will involve about 50 farmers who will be capacitated to produce quality banana. This will ensure the supply of banana for the processor in the province. The production system design for this project will provide opportunity for the local farmers and processor to be linked for better production flow and market opportunity.

Economic impact

The intervention of this project to the banana industry in the province will ensure steady supply of quality planting materials for banana in the province. This address the lack of planting materials and further enhance the production banana thus providing income to local farmers engaged in banana planting.

SUSTAINABILITY PLAN

The tissue cultured laboratory for banana will be handled by 1 laboratory technical and 1 nursery worker. It is estimated that with this number of persons working in 5 days a week basis they could produce 1866 pcs a month of plantlets or **22,400** a year.

If the laboratory could produce 14,000 lakatan and 8,400 saba and can sell it at **₱ 30.00** for lakatan and **₱ 35.00** for saba it could generate an income of ₱ 420,000.00 and ₱ 294,000.00 for a total of **₱ 714,000.00** a year. An average of **₱ 59,500.00** monthly gross income can be generated with a net income of **₱ 14,976.91**

Estimated Monthly Expense Item

Personal Services	Amount
Laboratory technician	11,000.00
Nursery Worker	8,470.00
MOOE	
Micronutrients & Vitamins/Organic Supplement	5,000.00
Bottles (186 pcs)	1,860.00
Poly bags (1,866 pcs)	3,732.00
Utility expenses	2,500.00
Building & Nursery Depreciation	
(300,000.00/15years/12mo.)	1,666.66
(300,000.00/15years/12mo.)	1,666.66
Equipment Depreciation	
(1,553,000.00/15years/12mo.)	8,627.77
Total	**₱ 44,523.09**

Monthly Net Income: ₱ 59,500.00 - **₱ 44,523.09 = ₱ 14,976.91**

To further sustain the operation of the project. A coordination and partnership with the local government units will be undertaken. This is to gain, policy support specifically on the allocation of resource devoted for the promotion, enhancement, and further development of banana industry in the province.

(9) Workplan (See Form B)

(10) Project Management (not to exceed one page)

- MSC will provide of building to be rehabilitated as plant tissue culture laboratory.
- MSC Laboratory technician will handle the overall operations in the laboratory.
- Project Monitoring will be done by DOST MIMAROPA, MSC and PGM PAgriO.

III. ATTACHMENTS (Please refer to the DOST-GIA Guidelines for the necessary documents.)

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