Mindoro State University
Victoria, Oriental Mindoro 5205 Philippines
Email: universitypresident@minsu.edu.ph
Website: www.minsu.edu.ph
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BAGONG PILIPINAS

SUPPLY AND DELIVERY OF AGRICULTURAL SUPPLIES, SEMI-EXPENDABLE ICT EQUIPMENT, OFFICE SUPPLIES, LABORATORY SUPPLIES, LABORATORY EQUIPMENT AND FUEL OIL FOR THE NSBP-PGPM PROJECT
Name of Project

BAC Resolution Recommending Approval
Resolution No. 018, s. 2025

WHEREAS, the Mindoro State University (MinSU), through its Bids and Awards Committee (BAC), intends to undertake the procurement for the **"Supply and Delivery of Agricultural Supplies, Semi-Expendable ICT Equipment, Office Supplies, Laboratory Supplies, Laboratory Equipment and Fuel Oil for the NSBP-PGPM Project"**, with an Approved Budget for the Contract (ABC) in the amount of **Php676,780.00**, which is allocated as follows:

Particulars	Sub-ABC Amount
Lot 1 – Agricultural Supplies	Php113,450.00
Lot 2- Semi-expendable ICT Equipment	Php79,500.00
Lot 3- Office Supplies	Php49,550.00
Lot 4- Laboratory Supplies	Php157,280.00
Lot 5- Laboratory Equipment	Php125,000.00
Lot 6- Fuel Oil and Lubricants	Php152,000.00

WHEREAS, upon review of the six (6) lots, it has been determined that distinct procurement modalities shall govern their respective acquisition, in accordance with the Implementing Rules and Regulations (IRR) of Republic Act No. 9184;

WHEREAS, **Lot 1, 2, 3, 4** and **5** pertains to the procurement of goods and services which is classified under **Section 53.9** of the IRR of RA 9184 (Small Value Procurement);

WHEREAS, **Lot 6** involves the procurement Fuel Oil and Lubricants, which is classified under **Section 53.14** of the IRR of RA 9184 (Direct Retail Purchase of Petroleum Fuel, Oil and Lubricant (POL) Products, Airline Tickets and Online Subscriptions);

WHEREAS, the classification of procurement lots into distinct modalities is done in accordance with RA 9184 and does not violate the provision on Splitting of Government Contracts, as each procurement category is governed by its respective regulatory framework and procurement threshold;

WHEREAS, in accordance with the aforementioned distinctions, the BAC shall initiate separation for the procurement of the specified lots, ensuring alignment with the appropriate procurement modality as prescribed under RA 9184;

NOW, THEREFORE, BE IT RESOLVED, that the BAC hereby recommends to the Head of the Procuring Entity the approval of the following actions related to the project **"Supply and Delivery of Agricultural Supplies, Semi-Expendable ICT Equipment, Office Supplies, Laboratory Supplies, Laboratory Equipment and Fuel Oil for the NSBP-PGPM Project "**:

a. Lot 1, 2, 3, 4 and 5 under Negotiated Procurement as Section 53.9 of the IRR of RA 9184 (Small Value Procurement) and;
b. Lot 6 under Negotiated Procurement as per Section 53.14 of the IRR of RA 9184 (Direct Retail Purchase of Petroleum Fuel, Oil and Lubricant (POL) Products, Airline Tickets and Online Subscriptions).

RESOLVED, this 24th day of February, 2025 at MinSU-Main Campus, Alcate, Victoria, Oriental Mindoro.

CIEDELLE P. SALAZAR, *J.D., Ph.D*
BAC Chairperson

Engr. MARK LESTER A. MAGPANTAY
BAC Vice-Chairperson

ATTY. SHERLYN A. LAYESA
BAC Member

FRANIE M. AFABLE, *DBMHM*
BAC Member

MELGAR G. FADRIQUELAN
BAC Member

[ ] Approved / [ ] Disapproved

ENYA MARIE D. APOSTOL, *Ph.D.*
SUC President III
Date: _____

OVPPM - 977 - 2025

2025-125

290

Standard Form Number: SF-GOOD-01
Revised on: May 24, 2004

APPROVED BUDGET FOR THE CONTRACT (ABC)

SUPPLY AND DELIVERY OF AGRICULTURAL SUPPLIES, SEMI-EXPENDABLE ICT EQUIPMENT,OFFICE SUPPLIES, LABORATORY SUPPLIES, LABORATORY EQUIPMENT AND FUEL OIL FOR THE NSBP-PGPM PROJECT

Alcate, Victoria, Oriental Mindoro

Project Name and Location

Stations: Mindoro State University

Length: Contract Duration:

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	CURRENT MARKET PRICE	TOTAL COST	VAT, OTHER TAXES AND/OR DUTIES APPLICABLE	FREIGHT & INSURANCE	OTHER INDIRECT COSTS	OTHER COST FACTORS INFLATION, CURRRENCY %	OTHER COST FACTORS INFLATION, CURRRENCY VALUE	TOTAL COST	UNIT COST
									%	VALUE		
										(11)	(12)	(13)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(5)X(9)	(10%[(5)+(10)]	(11) / (3)
	LOT 1- AGRICULTURAL SUPPLIES				-							
1	Heavy Duty Weighing Scale 9150kg capacity)	3	pcs	7,000.00	21,000.00							
2	Spade	5	pcs	250.00	1,250.00							
3	Mattock (90 cm)	5	pcs	300.00	1,500.00							
4	Shovel (25.5cmx30cmx98cmx11.5cm)	5	pcs	225.00	1,125.00							
5	Wheel Borrow (50L capacity)	5	pcs	3,000.00	15,000.00							
6	Sickle	5	pcs	175.00	875.00							
7	Hoe (#2 4ft)	5	pcs	525.00	2,625.00							
8	knapsack sprayer (16L capacity battery operated)	5	pcs	7,500.00	37,500.00							
9	Shrub Rake	5	pcs	330.00	1,650.00							
10	Pick Fork (7.3in x11.6inx41 in)	5	pcs	525.00	2,625.00							
11	Hand Trowel	5	pcs	195.00	975.00							
12	Grab Hoe	5	pcs	550.00	2,750.00							
13	Long Sleeves	10	pcs	150.00	1,500.00							
14	Waway Hat	10	pcs	350.00	3,500.00							
15	Boots	10	pcs	650.00	6,500.00							
16	Gloves	10	pair	250.00	2,500.00							
17	Plastic Crates (50L)	10	pcs	550.00	5,500.00							
18	Meter Stick	5	pcs	315.00	1,575.00							
19	Garden Blue Twine	10	roll	350.00	3,500.00							
	sub-total Lot 1				**113,450.00**							
	Lot 2- Semi-Expendable ICT Equipment				-							
1	Printer	2	units	15,000.00	30,000.00							

	Specifictaion: (print, scan copy, fax), wired/wireless printing, Duplex printing, auto document feeder, 80-sheet multi-purpose tray, 1.8 inch LCD screen display)				-							
2	Laptop Computer	1	unit	49,500.00	49,500.00							
	Specifications: (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t, bluetooth mouse with mousepad				-							
	sub-total Lot 2				**79,500.00**							
	lot 3- Office Supplies				-							
1	Coupon Bond (Long Size, Substance 20)	30	ream	290.00	8,700.00							
2	Coupon Bond (Short Size, Substance 20)	25	ream	270.00	6,750.00							
3	Coupon Bond (A4 Size, Substance 20)	30	ream	280.00	8,400.00							
4	Clear Folder (Long, Green)	30	pcs	30.00	900.00							
5	Expanding Envelope (Long,Green)	50	pcs	25.00	1,250.00							
6	Stapler with staple wire remover	5	pcs	360.00	1,800.00							
7	Scissor 9Medium Size)	5	pcs	200.00	1,000.00							
8	Staple Wire #35	15	box	70.00	1,050.00							
9	Paper Clip Vinyl Coated #33	25	box	20.00	500.00							
10	Paper Clip Vinyl Coated #50	25	box	35.00	875.00							
11	Binder Clip 3/4" (19mm)	5	box	25.00	125.00							
12	Binder Clip 1" (19mm)	5	box	30.00	150.00							
13	Ballpen, black (RT ballpen)	9	box	130.00	1,170.00							
14	Ballpen, Blue sign pen	5	box	350.00	1,750.00							
15	Pencil	5	box	360.00	1,800.00							
16	Correction tape	60	pcs	43.00	2,580.00							
17	Sticky note (76x76mm)	20	pad	45.00	900.00							
18	Highlighter (yellow-green)	20	pcs	40.00	800.00							
19	record Book (500 leaves)	10	pcs	240.00	2,400.00							
20	Ink Refill (003;Black)	10	bottle	350.00	3,500.00							
21	Ink Refill (003;Yellow)	3	bottle	350.00	1,050.00							
22	Ink Refill (003;Magenta)	3	bottle	350.00	1,050.00							
23	Ink Refill (003;Cyan)	3	bottle	350.00	1,050.00							
	sub-total Lot 3				**49,550.00**							
	Lot 4- Laboratory Supplies				-							
1	Petridish (90mmx15mm)	100	pcs	350.00	35,000.00							
2	Media Bottle (500ml)	15	pcs	850.00	12,750.00							
3	Melin-Norkrans Modified Medium (500g)	5	bottle	7,500.00	37,500.00							
4	PDA Media (500g)	5	bottle	6,500.00	32,500.00							
5	Forceps	10	pcs	550.00	5,500.00							
6	Scalpel Blade (#10)	5	box	350.00	1,750.00							

7	Scalpel Holder	5	pcs	350.00	1,750.00							
8	Alcohol Lamp	5	pcs	220.00	1,100.00							
9	Stirring Rod (12in)	5	pcs	325.00	1,625.00							
10	Beaker (plastic 2L)	2	pcs	1,500.00	3,000.00							
11	Graduated Cylinder (plastic 2L)	2	pcs	2,100.00	4,200.00							
12	e-Flask (2000mL)	10	pcs	850.00	8,500.00							
13	Cotton	3	pack	375.00	1,125.00							
14	Gauze	10	pack	275.00	2,750.00							
15	Tie	3	roll	185.00	555.00							
16	Denature Alcohol	5	gallon	350.00	1,750.00							
17	Alcohol 70%	5	gallon	750.00	3,750.00							
18	Sprayer (1L)	5	pcs	215.00	1,075.00							
19	Bleach	3	gallon	250.00	750.00							
20	Lighter	2	box	175.00	350.00							
	sub-total Lot 4				**157,280.00**							
	Lot 5- Laboratory Equipment				-							
1	Compound Microscope	1	unit	125,000.00	125,000.00							
	sub-total Lot 5				**125,000.00**							
	Lot 6- Fule Oil and Lubricants				-							
1	diesel/gasoline for farm tractors, biochar chamber simulation, etc. (drum-200L)	8	drum	19,000.00	152,000.00							
	sub-total Lot 6				**152,000.00**							
	xvxvxvxvxvxvxvxvxvxvxvxvxvxvxvxvxvxvxvx				-							
GRAND TOTAL					**676,780.00**							

Prepared by

MARYNEL A. HERMOSA
Member, BAC Secretariat

Recommending Approval

CHRISTIAN B. APOSTOL, *Ph.D.*
Head, BAC Secretariat

Approved

CIEDELLE PIOL-SALAZAR, *Ph.D.*
Chairperson, BAC

ENYA MARIE D. APOSTOL, *Ph.D.*
SUC President III

Republic of the Philippines
MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		PR No.: PR25- 0029 Responsibility Center Code :		Date: February 10, 2025	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Agricultural Supplies			
	pcs	heavy duty weighing scale (150kg capacity)	3	7,000.00	21,000.00
	pcs	Spade	5	250.00	1,250.00
	pcs	mattock (90 cm)	5	300.00	1,500.00
	pcs	shovel (25.5 cm x 30 cm x 98 cm x 11.5 cm)	5	225.00	1,125.00
	pcs	wheel borrow (50 L capacity)	5	3,000.00	15,000.00
	pcs	sickle	5	175.00	875.00
	pcs	hoe (#2 4ft)	5	525.00	2,625.00
	pcs	knapsack sprayer (16L capacity battery operated)	5	7,500.00	37,500.00
	pcs	Shrub Rake	5	330.00	1,650.00
	pcs	Pick Fork (7.3 in x11.6 in x 41 in)	5	525.00	2,625.00
	pcs	Hand Trowel	5	195.00	975.00
	pcs	Grab Hoe	5	550.00	2,750.00
	pcs	long sleeves	10	150.00	1,500.00
	pcs	waway hat	10	350.00	3,500.00
	pcs	Boots	10	650.00	6,500.00
	pair	gloves	10	250.00	2,500.00
	pcs	plastic crates (50L)	10	550.00	5,500.00
	pcs	meter stick	5	315.00	1,575.00
	roll	garden Blue twine	10	350.00	3,500.00
				MDS -14-7	
				101-200 - DI-00857	
				6725701.00	
				SUB TOTAL 1	**113,450.00**

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

Republic of the Philippines
MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		PR No.: PR25-0029 Responsibility Center Code :		Date: February 10, 2025	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Semi-Expandables ICT Equipment			
	unit	Printer	2	15,000.00	30,000.00
		Specification: (print, scan, copy, fax), wired/wireless printing, duplex printing, auto document feeder, 80-sheet multi-purpose tray, 1.8 inch LCD screen display			
	unit	Laptop Computer	1	49,500.00	49,500.00
		Specification: (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t, bluetooth mouse with mousepad			
				SUB TOTAL 2	**79,500.00**

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

Republic of the Philippines
MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		**PR No.:** PR25-0029 **Responsibility Center Code :**		**Date: February 10, 2025**	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Office Supplies			
	ream	Coupon Bond (Long Size, Substance 20)	30	290.00	8,700.00
	ream	Coupon Bond (Short Size, Substance 20)	25	270.00	6,750.00
	ream	Coupon Bond (A4 Size, Substance 20)	30	280.00	8,400.00
	pcs	Clear Folder (Long, Green)	30	30.00	900.00
	pcs	Expanding Envelope (Long, Green)	50	25.00	1,250.00
	pcs	Stapler with staple wire remover	5	360.00	1,800.00
	pcs	Scissor (Meduim Size)	5	200.00	1,000.00
	box	Staple wire #35	15	70.00	1,050.00
	box	Paper Clip Vinyl Coated(#33)	25	20.00	500.00
	box	Paper clip Vinyl Coated (#50)	25	35.00	875.00
	box	Binder Clip 3/4" (19mm)	5	25.00	125.00
	box	Binder Clip 1" (19mm)	5	30.00	150.00
	box	Ballpen, black (RT ballpen)	9	130.00	1,170.00
	box	Ballpen, blue (sign pen)	5	350.00	1,750.00
	box	Pencil	5	360.00	1,800.00
	pcs	Correction tape	60	43.00	2,580.00
	pad	Sticky note (76x76mm)	20	45.00	900.00
	pcs	Highlighter (yellow-green)	20	40.00	800.00
	pcs	Record book (500 leaves)	10	240.00	2,400.00
	bottle	Ink Refill (003; Black)	10	350.00	3,500.00
	bottle	Ink Refill (003; Yellow)	3	350.00	1,050.00
	bottle	Ink Refill (003; Magenta)	3	350.00	1,050.00
	bottle	Ink Refill (003; Cyan)	3	350.00	1,050.00
					-
					-
					-
				MDS-14-7	-
				101-200-0100157	-
				50201020 0	-
				SUB TOTAL 3	**49,550.00**

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

Republic of the Philippines
MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		**PR No.:** PR25-0029 **Responsibility Center Code :**		**Date: February 10, 2025**	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Laboratory Supplies			
	pcs	petridish (90 mm x 15mm)	100	350.00	35,000.00
	pcs	media bottle (500 ml)	15	850.00	12,750.00
	bottle	Melin-Norkrans Modified Medium (500g)	5	7,500.00	37,500.00
	bottle	PDA media (500g)	5	6,500.00	32,500.00
	pcs	forceps	10	550.00	5,500.00
	box	scalpel blade (#10)	5	350.00	1,750.00
	pcs	scalpel holder	5	350.00	1,750.00
	pcs	alcohol lamp	5	220.00	1,100.00
	pcs	stirring rod (12 in)	5	325.00	1,625.00
	pcs	beaker (plastic 2L)	2	1,500.00	3,000.00
	pcs	graduated cylinder (plastic 2L)	2	2,100.00	4,200.00
	pcs	e-flask (2000 mL)	10	850.00	8,500.00
	pack	Cotton	3	375.00	1,125.00
	pack	gauze	10	275.00	2,750.00
	roll	tie	3	185.00	555.00
	gallon	denature alcohol	5	350.00	1,750.00
	gallon	alcohol 70%	5	750.00	3,750.00
	pcs	sprayer (1L)	5	215.00	1,075.00
	gallon	bleach	3	250.00	750.00
	box	lighter	2	175.00	350.00
		Subtotal			**157,280.00**
		Laboratory Equipment			
	unit	Compound Microscope	1	125,000.00	125,000.00
		Subtotal			**125,000.00**
					-
					-
					-
					-
				SUB TOTAL 4	**282,280.00**

NCS-14-7 STF-1071 164-200-02-0037-9

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

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Republic of the Philippines
MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		**PR No.:** PR25-0094 **Responsibility Center Code :**		**Date: February 10, 2025**	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Laboratory Supplies			
	pcs	petridish (90 mm x 15mm)	100	350.00	35,000.00
	pcs	media bottle (500 ml)	15	850.00	12,750.00
	bottle	Melin-Norkrans Modified Medium (500g)	5	7,500.00	37,500.00
	bottle	PDA media (500g)	5	6,500.00	32,500.00
	pcs	forceps	10	550.00	5,500.00
	box	scalpel blade (#10)	5	350.00	1,750.00
	pcs	scalpel holder	5	350.00	1,750.00
	pcs	alcohol lamp	5	220.00	1,100.00
	pcs	stirring rod (12 in)	5	325.00	1,625.00
	pcs	beaker (plastic 2L)	2	1,500.00	3,000.00
	pcs	graduated cylinder (plastic 2L)	2	2,100.00	4,200.00
	pcs	e-flask (2000 mL)	10	850.00	8,500.00
	pack	Cotton	3	375.00	1,125.00
	pack	gauze	10	275.00	2,750.00
	roll	tie	3	185.00	555.00
	gallon	denature alcohol	5	350.00	1,750.00
	gallon	alcohol 70%	5	750.00	3,750.00
	pcs	sprayer (1L)	5	215.00	1,075.00
	gallon	bleach	3	250.00	750.00
	box	lighter	2	175.00	350.00
		Subtotal			**157,280.00**
		Laboratory Equipment			
	unit	Compound Microscope	1	125,000.00	125,000.00
		Subtotal			**125,000.00**
					-
			MDS 14-7	STF-1071	-
			101-200	164-200	-
					-
				SUB TOTAL 4	**282,280.00**

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

MINDORO STATE UNIVERSITY
Main Campus
Alcate, Victoria, Oriental Mindoro

BAGONG PILIPINAS

PURCHASE REQUEST

Fund Cluster:

Office/Section :		PR No.: PR25-0029 Responsibility Center Code :		Date: February 10, 2025	
Stock/ Property No.	**Unit**	**Item Description**	**Qty**	**Unit Cost**	**Total Cost**
		Fuel, Oil and Lubricant Expenses			
	Drum	diesel/gasoline for farm tractors, biochar chamber simulation, etc. (drum-200L)	8	19,000.00	152,000.00
				SUB TOTAL 5	**152,000.00**
				SUBTOTAL 1	113,450.00
				SUBTOTAL 2	79,500.00
				SUBTOTAL 3	49,550.00
				SUBTOTAL 4	282,280.00
				SUBTOTAL 5	152,000.00
				GRAND TOTAL	**676,780.00**

Purpose: For the conduct of Research Project entitled "Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)"

	Requested by:	Recommending Approval:	Approved as to Availability of Funds	Approved by:
Signature :				
Printed Name :	NORA C. CABARAL-LASACA, Ph.D.	LEONEL C. MENDOZA, MAEd	ROVELYN P. ROXAS	ENYA MARIE D. APOSTOL, Ph.D
Designation :	OIC-Dean, CAAF Project Leader	VPRDE	Budget Officer III	SUC President III

2 January 2025

ENYA MARIE D. APOSTOL, *Ph.D.*
SUC President III, Mindoro State University
Alcate, Victoria, Oriental Mindoro

Mindoro State University
RECEIVED
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BY:
DATE: 2/4/25
TIME: 9:53
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Dear **Dr. Apostol**:

Warm greetings of love and peace!

This is to respectfully submit our proposal entitled **"BOOSTING HARVEST, NURTURING EARTH: NEXT-GEN SOIL BIO-CONDITIONER PELLETS (NSBP) WITH PLANT GROWTH-PROMOTING MICROORGANISMS (PGPM) FOR SUPERIOR AND SUSTAINABLE CROP YIELD (NSBP-PGPM Project)"** under the project were three (3) studies entitled: **Study 1:** Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crops (tomato, chilli, and eggplant), **Study 2:** Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in lettuce varieties and **Study 3:** Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in corn varieties amounting to **Php 2,641,963.42.**

Attached is the full proposal (title page with the SDG addressed, introduction, objectives, review of related literature, materials and methods of the two studies, and references) for your evaluation.

I am looking forward for your continuous support and cooperation regarding our commitment and engagement to conduct quality researches and publish the research paper to highly indexed journals as one of the mandate of the university.

MDS-14-7
101-200-01-00051
07/10/2024

Thank you very much in advance and GOD BLESS!

Very respectfully yours,

NORA C. CABARAL-LASACA, *Ph.D*
OIC Dean, College of Agriculture and Allied Fields
Project Leader

Recommending Approval:

LEONEL C. MENDOZA, MAEd
OIC, Vice President for Research, Development and Extension

Approved:

ENYA MARIE D. APOSTOL, *Ph.D.*
SUC President III

PROJECT PROPOSAL

PROJECT TITLE: **BOOSTING HARVEST, NURTURING EARTH: NEXT-GEN SOIL BIO-CONDITIONER PELLETS (NSBP) WITH PLANT GROWTH-PROMOTING MICROORGANISMS (PGPM) FOR SUPERIOR AND SUSTAINABLE CROP YIELD (NSBP-PGPM Project)**

Study 1: Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crops (tomato, chilli, and eggplant)

Study 2: Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in lettuce varieties

Study 3: Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in corn varieties

SDG ADDRESS: SDG 1- No Poverty, SDG 2- Zero Hunger, SDG 8- Decent Work and Economic Growth, SGD 9 – Industry, Innovation and Infrastructure, SDG 13- Climate action, and SDG 17- Partnership for the Goal

PROPONENT: **NORA C. CABARAL-LASACA (Project Leader)**
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PROJECT DURATION: January to December 2025

TOTAL BUDGET: **Php 2,641,963.42**

I. RATIONALE

Conventional agriculture based on large application of fertilizers and pesticides has made a significant contribution to meet global food demands, at the expenses of soil degradation, reduction in soil fertility, crop yield and ecosystem health. Given that nearly 99% of food production for humans is reliant on soil (Kopittke *et al.*, 2019), the deterioration of soil fertility and productivity becomes a universal threat to food security (Ortiz-Bobea *et al.*, 2021). The substantial reduction in the production capacity of soils could be attributed to its physical constraints like surface crusting and hardening, subsurface hard pan and compactness, high or slow permeability and extremes of consistence, soil water-related constraints, wind and water erosion, etc. This envisages that for increasing crop production, soil must be maintained in such a physical condition so as to allow adequate crop growth. No doubt, if soils are managed properly for good physical health, the yield potential of different crops can be increased significantly. As a means to increased production, we can consider the use of organic and inorganic soil conditioners and additives to improve agricultural land and increase productivity (Donn *et al.*, 2014).

Any process which increases the ability of a soil to enhance crop yields, or which improves the performance of a soil for any function, can be described as soil conditioning, and any product used in soil conditioning is a soil conditioner. Soil needs conditioning for a number of reasons, one of the vital needs is to control soil degradation, another is to improve soil-air-water relations, soil drainage and soil aggregation, to reduce soil crusting and compaction, to overcome water repellency and so on. Soil conditioners as defined include many kinds of organic materials, gypsum, lime, natural deposits, various water-soluble polymers and cross-linked polymers that hold water in soil, living plants,

microbes, and others. Soil conditioners are useful as they make soil more functional as an ecosystem and more efficient as support for crops (Shinde *et al.*, 2019).

Increasing soil organic carbon through utilization of compost and biochar is a promising strategy for both organic carbon retention and soil nutrient, will bete disposal in the environment as well (Tran *et al.*, 2018; Huang *et al.*, 2019a, 2019b). Compost and biochar are naturally derived materials and products that play a vital role in sustaining agricultural productivity while promoting environmentally friendly practices. Composting is a biological process that is performed by the degradation of organic matters (biomass will bete) into valuable fertilizer which will help in enriching the nutrient content for soil and plants (Chew *et al.*, 2019; Fan *et al.*, 2023). Biochar is a carbon-rich material produced through pyrolysis of biomass under a limited supply of oxygen. It has been recognized as a potential use as an effective amendment to enhance soil properties to achieve sustainable agricultural and environmental development (Zhang *et al.*, 2019, Sun *et al.*, 2021; Singh *et al.*, 2022; Elkhlifi *et al.*, 2023). Owing to its carbon-rich and high stability, biochar can capture soil nutrients that have not been absorbed by crops while ensuring long-term carbon storage (Li and Tasnady, 2023). In this way, it can reduce leaching with nutrient retention and availability and serve as a carbon source carrier for microorganisms' biomass and activity (Nepal et al., 2023). Likewise, compost and biochar has been actively used to improve soil fertility, increase crop yields, and mitigate global climate change (Asses *et al.*, 2018; Huang *et al.*, 2019a, 2019b; Yin *et al.*, 2020; Tran *et al.*, 2022; Hassan *et al.*, 2023). Recently, co-composting with biochar has proven successful in enhancing soil amendment, immobilizing heavy metals, and degrading organic pollutants (Tran *et al.*, 2023).

Moreover, pelletization is the process of compressing biomass through mechanical pressure to produce pellets that enhance density and facilitate handling such as transportation, storage, and usability by improving flowability. This is particularly beneficial for organic pellets, allowing them to degrade slowly and release nutrients gradually (Hettiarachchi *et al.*, 2019). Likewise, pelletizing is the flexibility to incorporate local materials such as biochar, bio-extracts, and others, effectively enhancing the properties and quality of the pellets. Indeed, compressing soil conditioner into pellets not only facilitates ease of use and simplifies management but also aids in reducing rapid mineralization. Additionally, it ensures that the organic pellets remain in the top layer of soil, where plant roots grow, preventing them from settling into the lower soil layers or leaching away with water, especially during rainfall and drainage (Asses *et al.*, 2018; Huang *et al.*, 2019a, 2019b; Yin *et al.*, 2020; Tran *et al.*, 2022; Hassan *et al.*, 2023).

Furthermore, bio-fertilizers represent one of the interesting option for enhancing the quality of pelletized organic fertilizers (Ajeng *et al.*, 2020). When it comes to soil conditioner pellet (SCP), this improves the uniformity of amending properties. Papandrea *et al.*, (2021) produced compost pellets using extinguishing powders as a binder, enabling their versatile application in various crops. Thus, Trichorderma and mychorriza which are proven to be both beneficial to soil and plants are a better prudent choice to further enhance and improved the amending properties of SCP. Hence, this study will be conducted.

II. OBJECTIVES:

The primary objective of this project is to develop a next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crop (tomato, chilli, and eggplant), lettuce and corn varieties.

Specifically, it aims to:

1. Developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crop (tomato, chilli, and eggplant), lettuce and corn varieties;
2. Identify the bio-physico-chemical properties of the developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for solanaceous (tomato, chilli, and eggplant), lettuce and corn varieties in terms of electrical conductivity (EC), positive potential of the hydrogen ions (pH), Nitrogen (N), Phosphorus (P), potassium (K), organic matter (OM) carbon-nitrogen ratio (C/N), seeds germination index (GI), and equilibrium moisture content (EMC) and bulk density(kg m^{-3}); and
3. Standardized the process of developing the next-gen soil bio-conditioner pellets (NSBP) with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crop (tomato, chilli, and eggplant), lettuce and corn varieties.

III. REVIEW OF RELATED LITERATURE

Importance and function of soil conditioner

Soil conditioners improve the physical, chemical and biological properties of the soil. In problematic soils such as acidic or alkaline soils it helps in maintaining the soil pH. In dry and sandy soils, soil conditioners improve the water

retention capacity, infiltration, percolation and permeability of water. Soil conditioners create a healthy environment in soil which helps to attracts useful microorganisms and earthworms in soil. Soil conditioners improve the physical properties resulting in better soil aeration, water retention, root development and soil ecosystems. Soil conditioners can be used to improve poor soils, or to rebuild soils which have been damaged by improper soil management. Likewise, SCP adds nutrients, enriching the soil and allowing plants to grow healthier, stronger and yield more. Soil becomes compressed over time and it has less air space. Moreover, soil conditioner helps in reducing the soil compaction and hard pan problem. It increases the soil fertility and helps to maintain soils in good condition.

Types of Soil Conditioners

The soil conditioners can be classified on the basis of two criteria: (1) origin of the materials, and (2) composition of the materials. With regard to origin of materials may be synthetic or natural occurring. In terms of composition, soil conditioners materials are either organic or inorganic.

Organic Soil Conditioners. Organic conditioners consist of material derived from living things (e.g. plants and animals). They are applied to increase infiltration and soil water retention, promote aggregation, provide substrate for soil biological activity, improve aeration, reduce soil strength, and resist compaction, crusting, and surface sealing. There are a number of organic products that can be used as soil conditioners, but perhaps the most popular one is composts. Organic conditioners also include crop residues, manures, peat, biochar, bone meal, blood meal, coffee grounds, compost tea, coir, sewage sludges, FYM, sawdust lignite, humate and vermiculite.

Composts. Compost is produced due to decomposition of organic will betes by microorganisms in the presence of oxygen. Multiple benefits are derived from the use of compost as soil conditioner, for example an increase in organic C content and microbial activity, a source of plant nutrients like N, P K and Mg, and a root reinforcement (Donn *et al.*, 2014). An important feature of compost is the capability to influence soil micro flora by suppressing many soil borne pathogens such as Trichoderma and Myccorrhiza. Thus in general, the use of compost maintains and enhances stability and fertility of the agricultural soil (Zhou *et al.*, 2016).

Farmyard manure (FYM). FYM refers to the bulky organic manure resulting from the naturally decomposed mixture of dung and urine of farm animals along with the litter (bedding material). It is rich sources of nutrients and improves the soil physical, chemical and biological properties through the addition of organic matter (Gore *et al.*, 2011a and b). It can be used in all types of problematic soils and crops.

Green Manures. Green manures are the crops that are mainly grown to add nutrients and organic matter to the soil; they are used in rotation with other crops, ploughed and incorporated in soil in order to serve the same purposes as manures. Green manures help to provide the stable soil structure for plant growth and development. It promotes aeration, drainage and aggregation in soil and thereby increases the microbial activity and soil fertility (Shinde et al., 2017).

Sewage Sludge. Sewage sludge or biosolids are organic solids subjected to several treatments to stabilize organic matter in order to reduce unpleasant smell and to not attract pests and spreading disease (Goss et al., 2013). As containing nutrients and organic matter, biosolids can be applied to agricultural soils but under regulatory controls that set limits for heavy metals, weeds, human and plant pathogens.

Crop residues. Crop residues are the plant materials left in an agricultural field or orchard after the harvests of crops. These residues include stalks and stubble (stems), leaves and seed pods. Crop residues are an important source of organic matter that can be returned to soil for nutrient recycling and to improve soil physical, chemical and biological properties. Thus crop residues incorporation in soil enhances nutrient cycling, soil and water conservation, and subsequent crop yield (Grace et al., 2013; Sharma et al., 2014 and Shinde et al., 2019).

Peat Moss. It is an accumulation of partially decayed vegetation or organic matter. It is found in areas of peat lands, bogs, moors. Peat is formed when plant material does not fully decay in acidic and anaerobic conditions. It helps to improves soil structure by increasing the water holding capacity. Humates: It is a mined ancient organic soil or products derived from oxidized lignite, an earthy, coal-like substance associated with lignite outcrops. Unlike peat, humates are thoroughly decayed or mineralized, so nutrients are available to plants. It Contains up to 35% humic acids that dissolve other nutrients for plant utilization.

Biochar. Biochar is generally a solid, fine, granular and black charcoal material produced by slow pyrolysis of biomass often sourced from agricultural or forestry industries. Greater surface area, negative surface charge and high charge density of biochar enables greater ability to adsorb cations and to retain and exchange nutrients with soil environment, including microorganisms and plant roots. Biochar stabilizes biomass and native SOM, which enhances soil aeration, improves microbial activity and immobilize N which together reduces the emission of major greenhouse gases viz., CH_4, CO_2 and N_2O.

Inorganic soil conditioners. Inorganic soil conditioners are either mined or byproducts of manufacturing or some are both or man-made. They may be natural occurring or synthetically produced. The inorganic conditioners include the mineral conditioners such as Gypsum, Lime, pyrites, crushed rocks, flyash, sulfur, zeolites, phosphogypsum, etc. While synthetic conditioners include water soluble polymers used to stabilize clay, hydrogel polymers and synthetic binding agents which include anionic and catalytic polymers, nonviable polymers and so on.

Soil conditioning with Inorganic soil conditioners implies improvement of the soil physical properties; thus permitting more effective utilization of soil and water resources. Inorganic soluble conditioners undergo physico-chemical reactions with soil constituents, especially the clay fraction. Thus, the application of different soil conditioners (VAMA, Krilium, PVA and Hygromull (a urea formaldehyde soil conditioner) result in improved aggregation, porosity and hydraulic conductivity, decreased bulk density, improved porosity, improved infiltration, permeability and increased soil profile water (Doyle et al., 1960 and Nimah et al., 1983).

Mineral conditioners. This conditioner is used to retrieve problematic soil. Examples include Gypsum, Lime, sulfur, Crushed Rocks, dolomite, etc.

Gypsum. Gypsum is a moderately soluble source of the essential plant nutrients, calcium and sulfur, and can improve overall plant growth. Gypsum has ability to displace exchangeable sodium from the cation exchange sites of soils which are high in sodium. It can be used to reclaim sodic soil (Deshpande et al., 2011), saline areas or slick spots, soften, and crumble alkali hard pans. It supply calcium on low exchange capacity soils, and improve infiltration for some puddled soils. It also improves the physical chemical and biological properties of soils (Gore et al., 2011b), thus reducing erosion losses of soils and nutrient concentrations (especially phosphorus) in surface water runoff.

Lime. Lime is nothing but Calcium containing inorganic minerals, composed primarily of oxides, and hydroxide of calcium, which generally contains 75–95 percent CaCO3. It is used to restore soil pH balance in highly acidic soils. It acts as a source of calcium and works to raise soil pH. Lime is especially applied in overly acidic soil (with pH lower than 6.0) where low soil pH interferes with soils ability to absorb nutrients, including those from fertilizers.

Fly ash. Fly ash is byproduct of thermal power plants. It is used in both soil amendment and plant nutrient sources. Fly ash is helpful in improving crop productivity and soil fertility. It not only helps in improving crop growth and yield in low fertility soils but also mobilizes macro and micronutrients in soil. It is used to produce novel soil condition known as "Biosil".

Other mineral conditioners. Limestone, Dolomite, Crushed rock, Elemental sulfur and other products high in calcium and/or magnesium helps to improve the physical condition of problematic soils, when applied at several tons per acre.

Synthetic binding agents. These are the polymers applied at much lower rates which have been promoted as soil conditioners. The compounds are very high molecular weight, long-chain, polymeric, organic compounds, which bind particles together and form stable aggregates. Organic polymers used for improving aggregate stability, maintaining fertility and reducing seal formation which are mainly polysaccharides (PSD) and polyacrylamides (PAM). The addition of small amounts of these polymers (10–20 kg ha−1), either sprayed directly on to the soil surface or added to the applied water, will be noted to be effective in stabilizing and cementing aggregates together at the soil surface, and hence maintaining soil fertility in soils with ESP (>20). It consists of anionic and catalytic polymers, and non-viable polymers.

Cationic polymers. Cationic polymers such as polyvinyl choride, (PVC) polyphenol hydrochloride (PPH) are absorbed by clay through cation exchange and here the calcium act as a bridge between clay and polymers. Cationic polymers have high flocculating power.

Anionic polymers. Anionic polymers consist of hydrolyzed polyacrylontrile (HPAN) and Vinyl acetate- maleic acid (VAMA) copolymers. It is used in preventing crusting of highly sodic soils. The anion polymers peripheral complexes form linking clay lattice together in an edges to edges arrangement by series of hydrogen bond. They do not have flocculating power but stabilizes the flocculated clays. They are adsorbed on surface of dispersed particles and bind the particles by forming bridge between the particles.

Non Ionic soil conditioners like Polyvinyl alcohol (PVA) which form interemicellar complex with expanding lattice type clay by suppressing swelling and the stability of soil aggregates i.e., caused by lining the pores with the polymers.

Polyacrylamide. polymeric soil conditioners are known since the 1950s, these polymers will be developed to improve the physical properties of soil in view to reduce surface sealing, increase seedling emergence; reduce runoff and erosion, fertilizer and pesticides losses. It is a synthetic binding agent which can be used in investigating physical quality of coarse textured soil which is often poor due to high % of macrospores.

Other Soil Conditioners: This category of soil conditioners includes industrial will bete, enzyme, microorganisms and activators.

In order to meet the ever increasing requirement of food grain and other farm products from the limited geographical area, we need to have wide use of soil conditioners in addition to conservation methods in farming. Soil conditioners are useful as they make soil more functional as an ecosystem and more efficient as support for crops. Before using the inorganic and organic soil conditioners, one should know the needs and requirements of their land.

IV. METHODOLOGY:

Preparation of materials for pelletization

Different residues of dry leaf litters, namely *Albizia saman*, *Arachis pintoi* and mixed leaves, along with goat, chicken and dried cow dung will be obtained from the Animal Production Area, Mindoro State University. The use of

these materials for composting will be implemented.

Composting will be take place in open areas on rainy season (May to October 2025, 2026 and 2027), in which the compost pile had a width of 2.5 m, a height of 1.5 m, and a length determined by the volume of materials. Animal manure residue will be mixed with leaves litter in a 1:3 (v/v) ratio, and the layers will be alternated, with each layer approximately 15 cm thick.

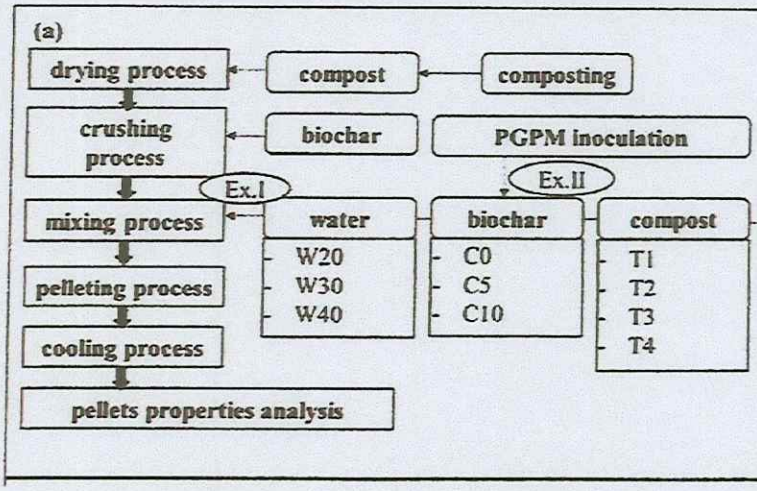
The initial moisture content will be adjusted to approximately 60–70%. The composting process lasted for 6 months until maturation, without turning over the pile. The seed germination index (GI) will be utilized to evaluate the phytotoxicity of compost, following the method by Zucconi *et al.* (1981). Equilibrium moisture contents will be determined after drying them according to the moisture content methodology. Briefly, after ensuring sun-dried compost for 7 days, dry materials will be random collected, weighted, then oven dried at 105 ◦C for 24 hr. Equilibrium moisture contents will be calculated by following formula: Moisture contents (%) = (weight before oven dried - weight after oven dried)/weight after oven dried x 100.

Nutrient content in the compost will be analyzed by sending samples to the laboratory of the Bureau of Soils and Water Management (BSWM). The SOC will be measured using the wet oxidation method as described by Walkley and Black (1934). Total nitrogen will be determined using the Kjeldahl nitrogen method according to Bremner (1965). The total phosphorus and potassium will be measured using the wet oxidation method as per Jackson (1967).

Biochar and compost production will take place at the Crop Production Area, Mindoro State University. Biomass materials, including trimmed and toppled twigs from pruning for landscaping or fallen from storms, will be collected from woody plants. It will be cut into 20 cm long pieces. These bio-materials will be sun-dried in an open space at ambient temperature for 7 days to reduce moisture content. Subsequently, the materials will be tightly and systematically packed into a horizontal pyrolysis kiln, created from a 200-liter fuel tank. Initial ignition will be allowed under the sides of the tank to start the biomass combustion. During this initial stage, the color of the smoke changed from creamy brown to white and eventually dissipated. Afterward, no more firewood will be added, and the pyrolysis process will be allowed to convert the biomass into biochar. The biomass materials underwent slow pyrolysis at a temperature of 800 ◦C for 3 h without oxygen in the system. Once the process will be completed, the biochar will be collected and crushed for mixing with compost.

The raw compost materials contained solid rocks, plastics, glass, metals, and other contaminants collected before composting. These impurities could potentially lead to interruptions in the pelletizing process and pose safety concerns for workers. Additionally, crushing process is also provided uniform of particle size. Both compost and biochar materials will be dried to achieve equilibrium moisture content over a period of 5 days. Subsequently, there will be ground using a hammer mill crusher with 12 beating blades, a 6 mm sieve size, 1 horsepower of the motor, 1430 rpm, and a feed rate of 250 kg hr− 1, ensuring the production of favorable and uniform particle sizes. The particle sizes of the composts will be measured using the sieve analysis method. Briefly, 500 g of grounded dry material will be poured through a series of sieves with the following sieve: No. 4, 8, 16, 30, 50, 100, 200, 400, and pan, respectively. Particle sizes will be separated at 150 rpm for 10 min using a sieve shaker.

Pelletization of the developed next-gen soil bio-conditioner pellets (NSBP).



Mixture ratio for producing each 100 g of pellet dry weight			
Compost (g)	Biochar (g)	Water (g) [+PGPM (ml)]	
100	0	20	
95	5	20	
90	10	20	
100	0	30	29 [+1]
95	5	30	29 [+1]
90	10	30	29 [+1]
100	0	40	
95	5	40	
90	10	40	

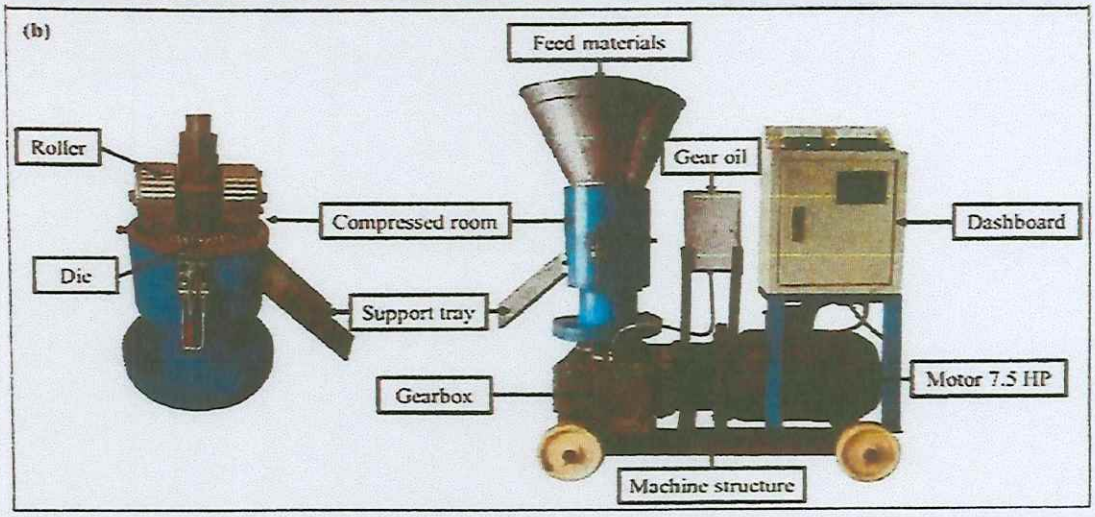


Figure 1. Schematic block diagram of a process used for soil amendment pellets production (a) and a flat die pellet mill and its components (b).

Production of Solanaceous Crops applied with next-gen soil bio-conditioner pellets (NBCP) with Plant Growth-Promoting Microorganisms (PGPM)

Experimental Design and Treatment. A total of 320 (10 sample plants per treatment replication) each of the tomatoes, chili and eggplant will be used in the study following simple Randomized Complete Block Design using four treatments with eight replication per treatment:

T1 – 50% Compost + 50% Biochar
T2 – 50% Compost + 50% Biochar + 5% Trichoderma
T3 – 50% Compost + 50% Biochar + 5% Mychorriza
T4 – 50% Compost + 50% Biochar + 2.5% Trichoderma + 2.5% Mychorriza

Care and management of crops. Except for the application of treatment, the production guide of DA-IVB for tomatoes, chili and eggplant from seedling establishment, sowing, care and management of seedlings, land preparation, transplanting, fertilizer application (i.e. based on recommended rate for organic fertilizer), irrigation, weeding and cultivation, pest management, harvesting and marketing will be followed.

Production of Lettuce Varieties applied with next-gen soil bio-conditioner pellets (NBCP) with Plant Growth-Promoting Microorganisms (PGPM)

Experimental Design and Treatment. A total of 320 (10 sample plants per treatment replication) each of the romaine, iceburg and curly green will be used in the study following simple Randomized Complete Block Design using four treatments with eight replication per treatment:

T1 – 50% Compost + 50% Biochar
T2 – 50% Compost + 50% Biochar + 5% Trichoderma
T3 – 50% Compost + 50% Biochar + 5% Mychorriza
T4 – 50% Compost + 50% Biochar + 2.5% Trichoderma + 2.5% Mychorriza

Care and management of crops. Except for the application of treatment, the production guide of DA-IVB for lettuce from seedling establishment, sowing, care and management of seedlings, land preparation, transplanting, fertilizer application (i.e. based on recommended rate for organic fertilizer), irrigation, weeding and cultivation, pest management, harvesting and marketing will be followed.

Production of Corn Varieties applied with developed applied with next-gen soil bio-conditioner pellets (NBCP) with Plant Growth-Promoting Microorganisms (PGPM)

Experimental Design and Treatment. A total of 320 (10 sample plants per treatment replication) each of the IPB var 6, LB lagkitan glutinous corn, and hybrid sweet corn will be used in the study following simple Randomized Complete Block Design using four treatments with eight replication per treatment:

T1 – 50% Compost + 50% Biochar
T2 – 50% Compost + 50% Biochar + 5% Trichoderma
T3 – 50% Compost + 50% Biochar + 5% Mychorriza
T4 – 50% Compost + 50% Biochar + 2.5% Trichoderma + 2.5% Mychorriza

Care and management of crops. Except for the application of treatment, the production guide of DA-IVB for corn from seedling establishment, sowing, care and management of seedlings, land preparation, transplanting, fertilizer

application (i.e. based on recommended rate for organic fertilizer), irrigation, weeding and cultivation, pest management, harvesting and marketing will be followed.

Data Analysis

All data will be analyzed using the Academic SAS Software version 9.3.4. Mean values will be reported based on four replications, along with standard deviations. Study component will be having phase 1 and 2.

In phase I, the following parameters which include yield per plot, yield per hectare and the economics will be measured within four replications in four treatments with each crop, and the results will be averaged for each replication. For the production of NSBP-PGPM, production capacity of the machine, percentage of pellet formation, bulk density, pellet sizes (diameter and length), true density, and WP measurements will be taken from 100 pellets (100 sub-replications) and averaged for each replication. The mean data of each replication will be analyzed using simple RCBD with analysis of variance to determine significant differences at a 95% confidence level ($P \leq 0.05$). Subsequently, Tukey-Kramer significant difference test will be performed to identify any significant differences between treatments.

In phase II, analysis for of the bio-physico-chemical properties of the developed NSBP-PGPM with the highest yield and profit for solanaceous (tomato, chilli, and eggplant), lettuce and corn varieties will be conducted which includes the electrical conductivity (EC), positive potential of the hydrogen ions (pH), Nitrogen (N), Phosphorus (P), potassium (K), organic matter (OM) carbon-nitrogen ratio (C/N), seeds germination index (GI), and equilibrium moisture content (EMC) and bulk density(kg m^{-3}) for future commercialization and marketing. Nutrient content, soil texture, and soil type will be subjected to descriptive statistical analysis for all treatments.

V. EXPECTED OUTPUT

- Developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crop (tomato, chilli, and eggplant);
- Developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in lettuce varieties;
- Developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in corn varieties;
- Recommend specific next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) appropriate for enhancing yields of solanaceous crop (tomato, chilli, and eggplant); lettuce varieties; and in corn varieties;
- Recommend specific next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) based on bio-physico-chemical properties of the developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for solanaceous (tomato, chilli, and eggplant), lettuce and corn varieties in terms of electrical conductivity (EC), positive potential of the hydrogen ions (pH), Nitrogen (N), Phosphorus (P), potassium (K), organic matter (OM) carbon-nitrogen ratio (C/N), seeds germination index (GI), and equilibrium moisture content (EMC) and bulk density(kg m^{-3}) for marketing purposes;
- Correlate the yield solanaceous crop (tomato, chilli, and eggplant); lettuce varieties; and in corn varieties and bio-physico-chemical properties of the developed next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM);
- Standardized the process of developing the next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crop (tomato, chilli, and eggplant), lettuce and corn varieties.
- Technical papers and posters presented in International or National Scientific Fora
- Publishable articles in a reputable journal
- Project report

VI. TARGET BENEFICIARIES

- RDE Institutions involved in organic agriculture and environmental management (DA-RIARC, ATI)
- Agriculture Profession
- CAAF students conducting research studies
- Municipal Agriculture Office (14 municipalities in Oriental Mindoro)
- Victoria Agriculture Office
- Provincial Agriculture Office (Oriental Mindoro)
- Department of Agriculture MIMAROPA Regional Field Office
- CAAF Faculty members, researchers, and other stake holders

VII. SCHEDULE OF ACTIVITIES (GANTT CHART)

ACTIVITY	J	F	M	A	M	J	J	A	S	O	N	D	Succeeding Months
Mobilization (i.e. leveling off, hiring of RA and laborers, acquisition of materials and equipment)													
Project Implementations: Study 1: *Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in solanaceous crops (tomato, chilli, and eggplant)*													
Data Gathering													
Data Encoding and Analysis													
Project Implementations: Study 2: *Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in lettuce varieties*													
Data Gathering													
Data Encoding and Analysis													
Project Implementations: Study 3: *Development of next-gen soil bio-conditioner pellets with Plant Growth-Promoting Microorganisms (PGPM) for superior and sustainable yield in corn varieties*													
Data Gathering													
Data Encoding and Analysis													
Analysis of the developed *Next-gen Soil Bio-conditioner Pellets (NBCP) with Plant Growth-Promoting Microorganisms (PGPM) – resulted with higher yield*													
Writing of Progress Report													
Writing of Final Report													

VIII. BUDGETARY REQUIREMENTS

Maintenance and Other Operating Expenses	Q1	Q2	Q3	Q4
Direct Cost				
Travelling Expenses (local)	49,120.00			
Communication expenses				
Mobile Expenses	7,500.00	7,500.00	7,500.00	7,500.00
Supplies and Materials Expenses				
Agricultural Supplies	113,450.00			
Semi-expendable ICT Equipment	79,500.00			
Office supplies	49,550.00			
Laboratory tools	157,280.00			
Fuel and Oil Expenses	42,375.00	42,375.00	42,375.00	42,375.00
Representation Expenses	10,062.50	10,062.50	10,062.50	10,062.50
Professional Expenses	237,696.00	237,696.00	237,696.00	492,696.00
Technical and Scientific Equipment (60)	735, 000.00			
Contingencies				12,529.42
Sub-Total	**1,481,533.50**	**297,633.50**	**297,633.50**	**565,162.92**
Grand Total				**2,641,963.42**

STF - 1071
164-200-01-0001
CO - 735,000.00

MDS-14-7
101-200-01-0051
50,250.00

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SUC President III

APPENDICES

A. Travel Expenses		*Year 1*
Per diem @2200 (meal and incidental) (6 persons- project leader, study leader, research assistant and driver, consultation of biochar installation)	2 trips	26,400.00
Vehicle fare plus driver fare (going to and from UPLB) @ 3800x2 per trip (vessel fare)	2 trips	7,600.00
6 persons (project and study leader) @ 630x2 vessel fare and terminal fee	2 trips	15,120.00
Sub-total		**49,120.00**

B. Communication Expenses		*Year 1*
Communications @Php 500 load per 5 personnel	12 months	30,000.00
Sub-total		**30,000.00**

Item Description	Unit	Quantity	Unit cost	Total Cost
Agricultural Supplies				
Heavy duty weighing scale (150 kg capacity)	pcs	3	7000	21,000.00
Spade	pcs	5	250	1,250.00
mattock (90 cm)	pcs	5	300	1,500.00
shovel (25.5 cm x 30 cm x 98 cm x 11.5 cm)	pcs	5	225	1,125.00
wheel borrow (50 L capacity)	pcs	5	3000	15,000.00
sickle	pcs	5	175	875.00
hoe (#2 4ft)	pcs	5	525	2,625.00
knapsack sprayer (16L capacity battery operated)	pcs	5	7,500	37,500.00
Shrub Rake	pcs	5	330	1,650.00
Pick Fork (7.3 in x11.6 in x 41 in)	pcs	5	525	2,625.00
Hand Trowel	pcs	5	195	975.00
Grab Hoe	pcs	5	550	2,750.00
long sleeves	pcs	10	150	1,500.00
waway hat	pcs	10	350	3,500.00
Boots	pcs	10	650	6,500.00
gloves	pair	10	250	2,500.00
plastic crates (50L)	pcs	10	550	5,500.00
meter stick	pcs	5	315	1,575.00
garden Blue twine	roll	10	350	3,500.00
Sub-total				**113, 450.00**

Item Description	Unit	Quantity	Unit cost	Total Cost
Semi-Expandables ICT Equipment				
Laptop Computer (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t	Unit	1	49,500.00	49,500.00
Inkjet Printer (print, scan, copy, fax), wired/wireless printing, duplex printing, auto document feeder, 80-sheet nulti-purpose tray, 1.8 inch LCD screen display	unit	2	15,000	30,000.00
Sub-total				**79,500.00**

Item Description	Unit	Quantity	Unit cost	TC Year 1
Office supplies				
Long bond paper (substance 20)	ream	30	290	8,700.00
Short Bond Paper (substance 20)	ream	25	270	6,750.00
A4 bond paper (substance 20)	ream	30	280	8,400.00
Green Clear Folder (long)	pcs	30	30	900.00
Expanding envelope (long)	pcs	50	25	1,250.00
Stapler	pcs	5	360	1,800.00
Sissor (Meduim Size)	pcs	5	200	1,000.00
Staple wire #35	box	15	70	1,050.00
Paper Clip (big)	box	25	20	500.00
Paper clip (small)	box	25	35	875.00
Binder Clip 3/4" (19mm)	box	5	25	125.00
Binder Clip 1" (19mm)	box	5	30	150.00
Ballpen, black (RT ballpen)	box	9	130	1,170.00
Ballpen, blue (sign pen)	box	5	350	1,750.00
Pencil	box	5	360	1,800.00
Correction tape	pcs	60	43	2,580.00
Sticky note (76x76mm)	pad	20	45	900.00
Highlighter (yellow-green)	pcs	20	40	800.00
Record book (500 leaves)	pcs	10	240	2,400.00
Ink Refill (003; Black)	bottle	10	350	3,500.00
Ink Refill (003; Yellow)	bottle	3	350	1,050.00
Ink Refill (003; Magenta)	bottle	3	350	1,050.00
Ink Refill (003; Cyan)	bottle	3	350	1,050.00
Sub-total				**49,550.00**

Item Description	Unit	Quantity	Unit cost	Total Cost
Laboratory supplies				
petridish (90 mm x 15mm)	pcs	100	350	35,000.00
media bottle (500 ml)	pcs	15	850	12,750.00
Melin-Norkrans Modified Medium (500g)	bottle	5	7500	37,500.00
PDA media (500g)	bottle	5	6500	32,500.00
forceps	pcs	10	550	5,500.00
scalpel blade (#10)	box	5	350	1,750.00
scalpel holder	pcs	5	350	1,750.00
alcohol lamp	pcs	5	220	1,100.00
stirring rod (12 in)	pcs	5	325	1,625.00
beaker (plastic 2L)	pcs	2	1500	3,000.00
graduated cylinder (plastic 2L)	pcs	2	2100	4,200.00
e-flask (2000 mL)	pcs	10	850	8,500.00

Cotton	pack	3	375.00	1,125.00
gauze	pack	10	275.00	2,750.00
tie	roll	3	185.00	555.00
denature alcohol	gallon	5	350.00	1,750.00
alcohol 70%	gallon	5	750.00	3,750.00
sprayer (1L)	pcs	5	215.00	1,075.00
bleach	gallon	3	250.00	750.00
lighter	box	2	175.00	350.00
Sub-total				**157,280.00**

D. Fuel and Oil Expenses		***Total Cost***
Diesel/gasoline for university vehicle @ 3500/trip)	5 trips	17,500.00
diesel/gasoline for farm tractors, biochar chamber simulation, etc. @ 95/L (drum-200L)	8 drums	152,000.00
Sub-total		**169,500.00**

E. Representation Expenses			***Total Cost***
Representation Allowance (Snack and lunch for meetings)	25 meetings	80	14,000.00
for 7 persons	25 meetings	150	26,250.00
Sub-total			**40,250.00**

F. Professional Expenses		***Total Cost***
3 Research Assistant with 19,744 wages/month	12 months	710,784.00
Bio-physico-chemical properties of the developed NSBP-PGPM	10 variables (1 parameter, 3500 per variable, 3 replicates)	105,000.00
2 Laborer (10,000/month)	12 months	240,000.00
Professional fee (Statistical Analysis/Data Analysis)	45,000.00	45,000.00
Study Component 1: Solanaceous Crops (15 variables, 3 parameters)	45,000.00	45,000.00
Study Component 2: Cash Crops (Lettuce varieties) (15 variables, 3 parameters)	60,000.00	60,000.00
Study Component 3: Corn Varieties (20 variables, 3 parameters)		
Sub-total		**1,205,784.00**

Capital Outlay	***Unit***	***Quantity***	***Total Cost***
Technical and Scientific Equipment			
Compound Microscope	unit	1	125,000.00
Pelletizing machine (90-120 L capacity, 7.5HP, 180/220 nw/gw, packing size 1000x500x750)	unit	1	305,000.00
Biochar chamber and installation (300-500kg/h)	unit	1	305,000.00
Sub-total			**735, 000.00**

Sub-Total (ALL MOOE and CAPITAL OUTLAY)	2,629,434
Contingencies	12,529.42
Grand Total	**2,641,963.42**

Republic of the Philippines
MINDORO STATE UNIVERSITY
Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AGRICULTURAL SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
heavy duty weighing scale (150kg capacity)	3	pcs	7,000.00	21,000.00				✓									
Spade	5	pcs	250.00	1,250.00				✓									
mattock (90 cm)	5	pcs	300.00	1,500.00				✓									
shovel (25.5 cm x 30 cm x 98 cm x 11.5 cm)	5	pcs	225.00	1,125.00				✓									
wheel borrow (50 L capacity)	5	pcs	3,000.00	15,000.00				✓									
sickle	5	pcs	175.00	875.00				✓									
hoe (#2 4ft)	5	pcs	525.00	2,625.00				✓									
knapsack sprayer (16L capacity battery operated)	5	pcs	7,500.00	37,500.00				✓									
Shrub Rake	5	pcs	330.00	1,650.00				✓									
Pick Fork (7.3 in x11.6 in x 41 in)	5	pcs	525.00	2,625.00				✓									
Hand Trowel	5	pcs	195.00	975.00				✓									
Grab Hoe	5	pcs	550.00	2,750.00				✓									
long sleeves	10	pcs	150.00	1,500.00				✓									
waway hat	10	pcs	350.00	3,500.00				✓									
Boots	10	pcs	650.00	6,500.00				✓									
gloves	10	pair	250.00	2,500.00				✓									
plastic crates (50L)	10	pcs	550.00	5,500.00				✓									
meter stick	5	pcs	315.00	1,575.00				✓									
garden Blue twine	10	roll	350.00	3,500.00				✓									

UDGET: **113,450.00**

ABARAL-LASACA, Ph.D.
College of Agriculture and Allied Fields
der

Noted:

CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

Approved

LEONEL C. MENDOZA, MAEd
Vice President for Research Development and Extension

Republic of the Philippines
MINDORO STATE UNIVERSITY
Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
SEMI-EXPANDABLES ICT EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Printer	2	unit	15,000.00	30,000.00				✓									
Specification: (print, scan, copy, fax), wired/wireless printing, duplex printing, auto document feeder, 80-sheet multi-purpose tray, 1.8 inch LCD screen display																	
Laptop Computer	1	unit	49,500.00	49,500.00				✓									
Specification: (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t, bluetooth mouse with mousepad																	
JDGET:				**79,500.00**													

Noted:

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College of Agriculture and Allied Fields
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CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

Approved

LEONEL C. MENDOZA, M.Ed
Vice President for Research Development and Extension

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Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

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GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
)FFICE SUPPLIES					Shopping - Ordinary/Regular Office Supplies & Equipment (Sec. 52.1.b)												
Coupon Bond (Long Size, Substance 20)	30	ream	290.00	8,700.00				✓									
Coupon Bond (Short Size, Substance 20)	25	ream	270.00	6,750.00				✓									
Coupon Bond (A4 Size, Substance 20)	30	ream	280.00	8,400.00				✓									
Clear Folder (Long, Green)	30	pcs	30.00	900.00				✓									
Expanding Envelope (Long, Green)	50	pcs	25.00	1,250.00				✓									
Stapler with staple wire remover	5	pcs	360.00	1,800.00				✓									
Scissor (Meduim Size)	5	pcs	200.00	1,000.00				✓									
Staple wire #35	15	box	70.00	1,050.00				✓									
Paper Clip Vinyl Coated(#33)	25	box	20.00	500.00				✓									
Paper clip Vinyl Coated (#50)	25	box	35.00	875.00				✓									
Binder Clip 3/4" (19mm)	5	box	25.00	125.00				✓									
Binder Clip 1" (19mm)	5	box	30.00	150.00				✓									
Ballpen, black (RT ballpen)	9	box	130.00	1,170.00				✓									
Ballpen, blue (sign pen)	5	box	350.00	1,750.00				✓									
Pencil	5	box	360.00	1,800.00				✓									
Correction tape	60	pcs	43.00	2,580.00				✓									
Sticky note (76x76mm)	20	pad	45.00	900.00				✓									
Highlighter (yellow-green)	20	pcs	40.00	800.00				✓									
Record book (500 leaves)	10	pcs	240.00	2,400.00				✓									
Ink Refill (003; Black)	10	bottle	350.00	3,500.00				✓									
Ink Refill (003; Yellow)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Magenta)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Cyan)	3	bottle	350.00	1,050.00				✓									

DGET: **49,550.00**

ABARAL-LASACA, Ph.D.
ollege of Agriculture and Allied Fields
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Noted:

CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

Approved

LEONEL C. MENDOZA, MA.d
Vice President for Research Development and Extension

Republic of the Philippines
MINDORO STATE UNIVERSITY
Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
petridish (90 mm x 15mm)	100	pcs	350.00	35,000.00				✓									
media bottle (500 ml)	15	pcs	850.00	12,750.00				✓									
Melin-Norkrans Modified Medium (500g)	5	bottle	7,500.00	37,500.00				✓									
PDA media (500g)	5	bottle	6,500.00	32,500.00				✓									
forceps	10	pcs	550.00	5,500.00				✓									
scalpel blade (#10)	5	box	350.00	1,750.00				✓									
scalpel holder	5	pcs	350.00	1,750.00				✓									
alcohol lamp	5	pcs	220.00	1,100.00				✓									
stirring rod (12 in)	5	pcs	325.00	1,625.00				✓									
beaker (plastic 2L)	2	pcs	1,500.00	3,000.00				✓									
graduated cylinder (plastic 2L)	2	pcs	2,100.00	4,200.00				✓									
e-flask (2000 mL)	10	pcs	850.00	8,500.00				✓									
Cotton	3	pack	375.00	1,125.00				✓									
gauze	10	pack	275.00	2,750.00				✓									
tie	3	roll	185.00	555.00				✓									
denature alcohol	5	gallon	350.00	1,750.00				✓									
alcohol 70%	5	gallon	750.00	3,750.00				✓									
sprayer (1L)	5	pcs	215.00	1,075.00				✓									
bleach	3	gallon	250.00	750.00				✓									
lighter	2	box	175.00	350.00				✓									

UDGET: **157,280.00**

ABARAL-LASACA, Ph.D.
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Campus Executive Director, MinSU Main Campus

Approved
LEONEL C. MENDOZA, MAEd
Vice President for Research Development and Extension

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MINDORO STATE UNIVERSITY
Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
grams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Compound Microscope	1	unit	125,000.00	125,000.00				✓									

UDGET: **125,000.00**

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:ABARAL-LASACA, Ph.D.
College of Agriculture and Allied Fields
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Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

R UNIT : College of Agriculture & Allied Fields
STF (Production)
grams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
FUEL, OIL AND LUBRICANT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
diesel/gasoline for farm tractors, biochar chamber simulation, etc. (200L/drum)	8	drum	19,000.00	152,000.00				✓									

UDGET: **152,000.00**

Noted:

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AGRICULTURAL SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
heavy duty weighing scale (150kg capacity)	3	pcs	7,000.00	21,000.00				✓									
Spade	5	pcs	250.00	1,250.00				✓									
mattock (90 cm)	5	pcs	300.00	1,500.00				✓									
shovel (25.5 cm x 30 cm x 98 cm x 11.5 cm)	5	pcs	225.00	1,125.00				✓									
wheel borrow (50 L capacity)	5	pcs	3,000.00	15,000.00				✓									
sickle	5	pcs	175.00	875.00				✓									
hoe (#2 4ft)	5	pcs	525.00	2,625.00				✓									
knapsack sprayer (16L capacity battery operated)	5	pcs	7,500.00	37,500.00				✓									
Shrub Rake	5	pcs	330.00	1,650.00				✓									
Pick Fork (7.3 in x11.6 in x 41 in)	5	pcs	525.00	2,625.00				✓									
Hand Trowel	5	pcs	195.00	975.00				✓									
Grab Hoe	5	pcs	550.00	2,750.00				✓									
long sleeves	10	pcs	150.00	1,500.00				✓									
waway hat	10	pcs	350.00	3,500.00				✓									
Boots	10	pcs	650.00	6,500.00				✓									
gloves	10	pair	250.00	2,500.00				✓									
plastic crates (50L)	10	pcs	550.00	5,500.00				✓									
meter stick	5	pcs	315.00	1,575.00				✓									
garden Blue twine	10	roll	350.00	3,500.00				✓									

UDGET: **113,450.00**

ABARAL-LASACA, Ph.D.
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Alcate, Victoria, Oriental Mindoro

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rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
SEMI-EXPANDABLES ICT EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Printer	2	unit	15,000.00	30,000.00				✓									
Specification: (print, scan, copy, fax), wired/wireless printing, duplex printing, auto document feeder, 80-sheet multi-purpose tray, 1.8 inch LCD screen display																	
Laptop Computer	1	unit	49,500.00	49,500.00				✓									
Specification: (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t, bluetooth mouse with mousepad																	

UDGET: **79,500.00**

Noted:

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College of Agriculture and Allied Fields
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GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
OFFICE SUPPLIES					Shopping - Ordinary/Regular Office Supplies & Equipment (Sec. 52.1.b)												
Coupon Bond (Long Size, Substance 20)	30	ream	290.00	8,700.00				✓									
Coupon Bond (Short Size, Substance 20)	25	ream	270.00	6,750.00				✓									
Coupon Bond (A4 Size, Substance 20)	30	ream	280.00	8,400.00				✓									
Clear Folder (Long, Green)	30	pcs	30.00	900.00				✓									
Expanding Envelope (Long, Green)	50	pcs	25.00	1,250.00				✓									
Stapler with staple wire remover	5	pcs	360.00	1,800.00				✓									
Scissor (Meduim Size)	5	pcs	200.00	1,000.00				✓									
Staple wire #35	15	box	70.00	1,050.00				✓									
Paper Clip Vinyl Coated(#33)	25	box	20.00	500.00				✓									
Paper clip Vinyl Coated (#50)	25	box	35.00	875.00				✓									
Binder Clip 3/4" (19mm)	5	box	25.00	125.00				✓									
Binder Clip 1" (19mm)	5	box	30.00	150.00				✓									
Ballpen, black (RT ballpen)	9	box	130.00	1,170.00				✓									
Ballpen, blue (sign pen)	5	box	350.00	1,750.00				✓									
Pencil	5	box	360.00	1,800.00				✓									
Correction tape	60	pcs	43.00	2,580.00				✓									
Sticky note (76x76mm)	20	pad	45.00	900.00				✓									
Highlighter (yellow-green)	20	pcs	40.00	800.00				✓									
Record book (500 leaves)	10	pcs	240.00	2,400.00				✓									
Ink Refill (003; Black)	10	bottle	350.00	3,500.00				✓									
Ink Refill (003; Yellow)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Magenta)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Cyan)	3	bottle	350.00	1,050.00				✓									

DGET: **49,550.00**

ABARAL-LASACA, Ph.D.
College of Agriculture and Allied Fields
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CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

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LEONEL C. MENDOZA, MAEd
Vice President for Research Development and Extension

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Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
petridish (90 mm x 15mm)	100	pcs	350.00	35,000.00				✓									
media bottle (500 ml)	15	pcs	850.00	12,750.00				✓									
Melin-Norkrans Modified Medium (500g)	5	bottle	7,500.00	37,500.00				✓									
PDA media (500g)	5	bottle	6,500.00	32,500.00				✓									
forceps	10	pcs	550.00	5,500.00				✓									
scalpel blade (#10)	5	box	350.00	1,750.00				✓									
scalpel holder	5	pcs	350.00	1,750.00				✓									
alcohol lamp	5	pcs	220.00	1,100.00				✓									
stirring rod (12 in)	5	pcs	325.00	1,625.00				✓									
beaker (plastic 2L)	2	pcs	1,500.00	3,000.00				✓									
graduated cylinder (plastic 2L)	2	pcs	2,100.00	4,200.00				✓									
e-flask (2000 mL)	10	pcs	850.00	8,500.00				✓									
Cotton	3	pack	375.00	1,125.00				✓									
gauze	10	pack	275.00	2,750.00				✓									
tie	3	roll	185.00	555.00				✓									
denature alcohol	5	gallon	350.00	1,750.00				✓									
alcohol 70%	5	gallon	750.00	3,750.00				✓									
sprayer (1L)	5	pcs	215.00	1,075.00				✓									
bleach	3	gallon	250.00	750.00				✓									
lighter	2	box	175.00	350.00				✓									

JDGET: **157,280.00**

'ABARAL-LASACA, Ph.D.
College of Agriculture and Allied Fields
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LEONEL C. MENDOZA, MAEd
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GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Compound Microscope	1	unit	125,000.00	125,000.00				✓									

UDGET: **125,000.00**

Noted:

CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

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LEONEL C. MENDOZA, MA
Vice President for Research Development and Extension

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
FUEL, OIL AND LUBRICANT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
diesel/gasoline for farm tractors, biochar chamber simulation, etc. (200L/drum)	8	drum	19,000.00	152,000.00				✓									

UDGET: **152,000.00**

Noted:

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AGRICULTURAL SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
heavy duty weighing scale (150kg capacity)	3	pcs	7,000.00	21,000.00				✓									
Spade	5	pcs	250.00	1,250.00				✓									
mattock (90 cm)	5	pcs	300.00	1,500.00				✓									
shovel (25.5 cm x 30 cm x 98 cm x 11.5 cm)	5	pcs	225.00	1,125.00				✓									
wheel borrow (50 L capacity)	5	pcs	3,000.00	15,000.00				✓									
sickle	5	pcs	175.00	875.00				✓									
hoe (l/2 4ft)	5	pcs	525.00	2,625.00				✓									
knapsack sprayer (16L capacity battery operated)	5	pcs	7,500.00	37,500.00				✓									
Shrub Rake	5	pcs	330.00	1,650.00				✓									
Pick Fork (7.3 in x11.6 in x 41 in)	5	pcs	525.00	2,625.00				✓									
Hand Trowel	5	pcs	195.00	975.00				✓									
Grab Hoe	5	pcs	550.00	2,750.00				✓									
long sleeves	10	pcs	150.00	1,500.00				✓									
waway hat	10	pcs	350.00	3,500.00				✓									
Boots	10	pcs	650.00	6,500.00				✓									
gloves	10	pair	250.00	2,500.00				✓									
plastic crates (50L)	10	pcs	550.00	5,500.00				✓									
meter stick	5	pcs	315.00	1,575.00				✓									
garden Blue twine	10	roll	350.00	3,500.00				✓									

UDGET: **113,450.00**

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Noted:

CHRISTIAN B. APOSTOL, PhD
Campus Executive Director, MinSU Main Campus

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Republic of the Philippines
MINDORO STATE UNIVERSITY
Alcate, Victoria, Oriental Mindoro

PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
rams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
SEMI-EXPANDABLES ICT EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Printer	2	unit	15,000.00	30,000.00				✓									
Specification: (print, scan, copy, fax), wired/wireless printing, duplex printing, auto document feeder, 80-sheet multi-purpose tray, 1.8 inch LCD screen display																	
Laptop Computer	1	unit	49,500.00	49,500.00				✓									
Specification: (ideapad gaming 13-15iah7, 82s9008yph, onyo grey intel core i5-12500h/8gb ddr4/512 gb m2 nvme ssd/nvidia geforce rtx3050t, bluetooth mouse with mousepad																	

UDGET: **79,500.00**

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
OFFICE SUPPLIES					Shopping - Ordinary/Regular Office Supplies & Equipment (Sec. 52.1.b)												
Coupon Bond (Long Size, Substance 20)	30	ream	290.00	8,700.00				✓									
Coupon Bond (Short Size, Substance 20)	25	ream	270.00	6,750.00				✓									
Coupon Bond (A4 Size, Substance 20)	30	ream	280.00	8,400.00				✓									
Clear Folder (Long, Green)	30	pcs	30.00	900.00				✓									
Expanding Envelope (Long, Green)	50	pcs	25.00	1,250.00				✓									
Stapler with staple wire remover	5	pcs	360.00	1,800.00				✓									
Scissor (Meduim Size)	5	pcs	200.00	1,000.00				✓									
Staple wire #35	15	box	70.00	1,050.00				✓									
Paper Clip Vinyl Coated(#33)	25	box	20.00	500.00				✓									
Paper clip Vinyl Coated (#50)	25	box	35.00	875.00				✓									
Binder Clip 3/4" (19mm)	5	box	25.00	125.00				✓									
Binder Clip 1" (19mm)	5	box	30.00	150.00				✓									
Ballpen, black (RT ballpen)	9	box	130.00	1,170.00				✓									
Ballpen, blue (sign pen)	5	box	350.00	1,750.00				✓									
Pencil	5	box	360.00	1,800.00				✓									
Correction tape	60	pcs	43.00	2,580.00				✓									
Sticky note (76x76mm)	20	pad	45.00	900.00				✓									
Highlighter (yellow-green)	20	pcs	40.00	800.00				✓									
Record book (500 leaves)	10	pcs	240.00	2,400.00				✓									
Ink Refill (003; Black)	10	bottle	350.00	3,500.00				✓									
Ink Refill (003; Yellow)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Magenta)	3	bottle	350.00	1,050.00				✓									
Ink Refill (003; Cyan)	3	bottle	350.00	1,050.00				✓									

JDGET: **49,550.00**

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PROJECT PROCUREMENT MANAGEMENT PLAN (PPMP) F.Y. 2025

UNIT : College of Agriculture & Allied Fields
STF (Production)
grams and Activities (PPAs): Boosting Harvest, Nurturing Earth: Next-Gen Soil Bio-Conditioner Pellets (NSBP) With Plant Growth-Promoting Microorganisms (PGPM) For Superior and Sustainable Crop Yield (NSBP-PGPM Project)

GENERAL DESCRIPTION	QTY	UNIT	UNIT COST	ESTIMATED BUDGET	MODE OF PROCUREMENT	SCHEDULE/ MILESTONE OF ACTIVITIES											
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY SUPPLIES					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
petridish (90 mm x 15mm)	100	pcs	350.00	35,000.00				✓									
media bottle (500 ml)	15	pcs	850.00	12,750.00				✓									
Melin-Norkrans Modified Medium (500g)	5	bottle	7,500.00	37,500.00				✓									
PDA media (500g)	5	bottle	6,500.00	32,500.00				✓									
forceps	10	pcs	550.00	5,500.00				✓									
scalpel blade (#10)	5	box	350.00	1,750.00				✓									
scalpel holder	5	pcs	350.00	1,750.00				✓									
alcohol lamp	5	pcs	220.00	1,100.00				✓									
stirring rod (12 in)	5	pcs	325.00	1,625.00				✓									
beaker (plastic 2L)	2	pcs	1,500.00	3,000.00				✓									
graduated cylinder (plastic 2L)	2	pcs	2,100.00	4,200.00				✓									
e-flask (2000 mL)	10	pcs	850.00	8,500.00				✓									
Cotton	3	pack	375.00	1,125.00				✓									
gauze	10	pack	275.00	2,750.00				✓									
tie	3	roll	185.00	555.00				✓									
denature alcohol	5	gallon	350.00	1,750.00				✓									
alcohol 70%	5	gallon	750.00	3,750.00				✓									
sprayer (1L)	5	pcs	215.00	1,075.00				✓									
bleach	3	gallon	250.00	750.00				✓									
lighter	2	box	175.00	350.00				✓									

UDGET: **157,280.00**

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LABORATORY EQUIPMENT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
Compound Microscope	1	unit	125,000.00	125,000.00				✓									

UDGET: **125,000.00**

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						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
FUEL, OIL AND LUBRICANT					Negotiated Procurement - Small Value Procurement (Sec. 53.9)												
diesel/gasoline for farm tractors, biochar chamber simulation, etc. (200L/drum)	8	drum	19,000.00	152,000.00				✓									

UDGET: **152,000.00**

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