RICHARD R. TEMPLO
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VISION

The Mindoro State University is a center of excellence in agriculture and fishery, science, technology, culture, and education of globally competitive lifelong learners in a diverse yet cohesive society.

MISION

The University commits to produce 21st – century skilled professionals and generate and commercialize innovative technologies by providing excellent and relevant services in instruction, research, extension, and production through industry-driven curricula, collaboration, internationalization, and continual organizational growth for sustainable development.

GOAL

Provide and broaden the access to quality education responsive to an ever growing and dynamic society.

OBJECTIVES

Strengthen the capabilities of the institution to:

1. Offer quality education.
2. Provide opportunities for the youth to develop their potential as human being and as productive members of society.
3. Expand financial assistance to poor but deserving student toward greater access to education.
4. Maximize productivity to sustain income generation and;
5. Intensify research and extension services, which are relevant to the needs of the

I. PROGRAM PROFILE:

A. Title of the Program/Project: BUKID-LEAP Program: Business Upgrading through Knowledge, Innovation, and Development for Local Enterprise Advancement Program

Title of the Project 1: Developing Community-Driven Agribusiness Concepts through Market Needs Assessment and Value Proposition Analysis for YFC, Startups and MSME Beneficiaries in Oriental Mindoro.
Title of the Project 2: Establishing a Product Development, Prototyping, and Pre-Fabrication Support Program for Agri-Food Enterprises
Title of the Project 3: Enhancing Agricultural Commodities through Food Innovation and Value-Addition Technologies for Market-Ready Enterprise Development
Title of the Project 4: Strengthening Food Safety, Quality Assurance, and Regulatory Compliance for Community-Based Agri-Food Enterprises
Title of the Project 5: Building Capacities on Machinery Operation, Preventive Maintenance, and Efficient Production Systems for Agri-Enterprise Sustainability
Title of the Project 6: Improving Financial Management and Enterprise Operations of Young Agripreneurs and MSMEs for Business Sustainability
Title of the Project 7: Accelerating Market Access, Commercialization, and Business Expansion of Agri-Based Enterprises through Strategic Partnerships

B. Head of the Agency: Dr. Enya Marie D. Apostol (SUC President III)
B.1. Program Leader/Coordinator: Engr. Randy A. Joco, *MSc.*
B.2. Project Leader/s: Engr. Mark Keylord S. Onal, Arlhet O. Atienza, Engr. Christian B. Hernandez, Flordemae V. Ines, Engr. Arvin P. Tolentino, Engr. Carl Mudat, Engr. Jerrel S. Reyes, Engr. Marjun Caguay, Engr. John John M. Bidon, Engr. July Kit Lacsina, Engr. Fernando Paralejas, Elisa M. Agoncillo

C. Cooperating Agency: Department of Agriculture MIMAROPA
- Provide vital funding support for the program.

D. Implementers:
D.1: Office of Innovation
D.2: Institute of Agricultural and Biosystems Engineering
D.3 College of Business Management

E. Program Cost: DA MIMAROPA – PHP 2,000,000.00
MinSU - PHP 180,000.00
F. Project Site: MinSU Main Campus
G. Direct Beneficiaries: Startups, YFC Grantees, MSMEs
H. Project Duration: January – December 2026
I. Funding Agencies: DA MIMAROPA, MinSU
J. SDGs: SDGs 1, 2, 4, 8, 9, 12, and 17

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II. **Rationale**

The MIMAROPA Region remains one of the least economically active regions in the country, characterized by a low density of Micro, Small, and Medium Enterprises (MSMEs) and relatively slow enterprise growth compared to other regions. Despite its rich agricultural resources, the region's economy is still largely dependent on traditional primary production, with limited engagement in value-adding activities, innovation-driven enterprises, and market-oriented agribusiness development. These conditions constrain income generation, employment creation, and inclusive rural development.

Several factors contribute to this situation, including limited access to shared production and innovation facilities, inadequate entrepreneurial and technical training, weak market linkages, and insufficient mentoring systems for startups, young agripreneurs, and community-based enterprises. While many farmers and youth-led enterprises possess viable product ideas, they often lack the capacity to translate these ideas into compliant, scalable, and market-ready products. As a result, promising agricultural innovations remain underdeveloped, and local enterprises struggle to move beyond subsistence-level operations.

The government has instituted various programs to address these concerns. The Department of Agriculture's Young Farmers Challenge (YFC) Program aims to encourage youth participation in agripreneurship by providing start-up capital and enterprise development incentives. Similarly, different government agencies implement initiatives related to product development, food safety, innovation, and market access. However, these interventions are often fragmented, short-term, or limited to specific stages of enterprise development.

A critical gap persists in the absence of an integrated, facility-based extension ecosystem that supports enterprises across the entire value chain—from ideation and product development to food innovation, regulatory compliance, operational sustainability, financial management, and market commercialization. Many beneficiaries of existing programs receive funding or training but lack continued access to prototyping facilities, food innovation equipment, technical mentorship, and business advisory services necessary for sustained enterprise growth.

In response to these gaps, Mindoro State University, through its Innovative Business Incubator for Biosystems Solutions (MinSU i-BIBES), proposes the implementation of the BUKID-LEAP Program under the BUKID Hub: Business Upgrading for Knowledge, Innovation and Development Hub. The program is designed as a comprehensive extension platform that operationalizes government support by providing structured, sequential, and hands-on assistance to DA-YFC awardees, young agripreneurs, startups, and MSMEs in MIMAROPA.

The BUKID-LEAP Program integrates seven extension projects that collectively address critical enterprise development stages: community-driven ideation and market validation; product development, prototyping, and pre-fabrication; food innovation and value addition; food safety and regulatory compliance; machinery operation and maintenance; financial management; and market access and enterprise scaling. By anchoring these services within a university-led innovation hub, the program bridges the gap between policy support and on-the-ground enterprise implementation.

The establishment of the BUKID Hub also strengthens collaboration among the academe, government agencies, industry partners, and local communities. It provides shared facilities for prototyping and food innovation, reduces entry barriers for early-stage enterprises, and fosters a culture of innovation and entrepreneurship in the region. Moreover, the program aligns with the DA-AMAD's mandate to uplift farmers and agri-based enterprises by enabling beneficiaries to move up the value chain and participate more competitively in local and national markets.

discussions will be facilitated to surface real customer pain points, unmet needs, pricing sensitivities, and buying behavior within the agricultural value chain.

Day 2 – Problem–Solution Mapping and Opportunity Identification

Participants will analyze collected data through facilitated workshops. They will map production, processing, and marketing bottlenecks and identify enterprise opportunities grounded on community resources and capabilities. Group exercises will translate real problems into feasible agribusiness opportunities, validated through peer and mentor critique.

Day 3 – Value Proposition Design and Concept Testing

Participants will develop value propositions using the Value Proposition Canvas tool. Prototype business concepts will be presented in simulated buyer-feedback sessions, where mentors and invited stakeholders will react as customers. Concepts will be refined based on feedback to ensure strong demand alignment.

PROJECT 2: Establishing a Product Development, Prototyping, and Pre-Fabrication Support Program

Day 1 – Product Concept Translation and Formulation

Participants will conduct actual product formulation and design planning sessions using local agricultural commodities. Guided experimentation will allow them to adjust ingredients, materials, functions, and features, transforming concepts into initial physical or functional prototypes.

Day 2 – Hands-On Prototyping and Pre-Fabrication

Participants will personally operate prototyping and fabrication equipment at the BUKID Hub. Under supervision, they will fabricate packaging components, containers, or product parts using molds, tools, and machines. Demonstrations will be followed immediately by participant operation.

Day 3 – Prototype Testing and Refinement

Participants will test prototypes for usability, durability, aesthetics, and market appeal. Iterative improvement activities will be conducted where prototypes are modified based on actual testing results, peer review, and mentor recommendations.

PROJECT 3: Enhancing Agricultural Commodities through Food Innovation and Value-Addition Technologies

Day 1 – Food Innovation Technology Demonstrations

Participants will engage in live demonstrations of food innovation technologies such as dehydration, fermentation, concentration, and preservation. Actual equipment will be used, and participants will take part in operating, monitoring, and documenting the process.

Day 2 – Hands-On Processing and Batch Production

Participants will process their own agricultural raw materials into value-added products. They will perform full batch production runs, managing inputs, processing time, yields, and basic production controls under supervised conditions.

Day 3 – Product Quality and Sensory Evaluation

Participants will conduct sensory evaluation, basic quality tests, yield analysis, and shelf-life observation exercises. Results will be analyzed and used to adjust formulations and improve product positioning for the market.

PROJECT 4: Strengthening Food Safety, Quality Assurance, and Regulatory Compliance

Day 1 – GMP and SSOP Application in Actual Processing Environments

Participants will undergo hands-on implementation of GMP and SSOP inside processing areas. Activities will include personal hygiene drills, sanitation procedures, equipment cleaning, waste management, pest control, and facility zoning. Participants will prepare sanitation schedules and monitoring logs.

Day 2 – HACCP Development and Risk Control Simulation

Participants will map their real production processes and identify hazards and critical control points. They will develop simplified HACCP plans, define critical limits, and practice monitoring and corrective actions using simulated hazard scenarios and real products.

Day 3 – FDA Compliance, Labeling, and Inspection Simulation

Participants will prepare actual FDA-related documents including labels, product information sheets, and traceability records. A mock FDA inspection will be conducted, allowing participants to respond to inspection findings and correct non-compliances.

PROJECT 5: Building Capacities on Machinery Operation, Preventive Maintenance, and Efficient Production Systems

Day 1 – Machinery Operation and Safety Demonstration

Participants will receive hands-on training on the safe operation of food processing and packaging equipment. Safety protocols will be demonstrated, followed by participant-led machine operation under supervision.

Day 2 – Preventive Maintenance and Troubleshooting Activities

Participants will perform actual preventive maintenance tasks such as inspection, cleaning, lubrication, calibration, and minor troubleshooting using real machines. Common faults will be simulated to train response actions.

Day 3 – Production Efficiency and Workflow Simulation

Participants will conduct simulated production runs, managing workflow, time, and resources. Inefficiencies will be identified and corrected through guided feedback to improve productivity and reduce downtime.

PROJECT 6: Improving Financial Management and Enterprise Operations for Business Sustainability

Day 1 – Actual Costing and Pricing Workshops

Participants will compute production costs using real data from their prototypes and processing activities. They will calculate selling prices, break-even points, and profit margins using guided templates.

Day 2 – Hands-On Bookkeeping and Cash Flow Management

Participants will record actual business transactions, prepare simplified financial statements, and develop cash flow projections based on realistic enterprise scenarios.

Day 3 – Operations and Business Planning Sessions

Participants will develop operational plans, production schedules, inventory systems, and manpower plans anchored on their real enterprise capacity. Plans will be reviewed and refined through mentoring.

PROJECT 7: Accelerating Market Access, Commercialization, and Business Expansion

Day 1 – Product Pitching and Market Presentation
Participants will present their products in simulated and actual pitching sessions before mentors, buyers, and partner agencies. Feedback will focus on pricing, packaging, scalability, and buyer requirements.
Day 2 – Market Linkage and Partnership Engagement

Participants will directly engage with institutional buyers, cooperatives, financiers, and support agencies through business matching sessions. Collaboration opportunities and supply arrangements will be explored.
Day 3 – Commercialization and Expansion Planning

Participants will prepare market entry strategies, scale-up plans, and partnership roadmaps. Mentors will validate plans to ensure technical, financial, and operational readiness.

Monitoring and Evaluation

The Monitoring and Evaluation (M&E) of the BUKID-LEAP Extension Program will adopt a mixed-methods, results-based approach designed to systematically assess program implementation, outputs, outcomes, and emerging impacts. This methodology will combine quantitative performance indicators with qualitative learning assessments to ensure a comprehensive understanding of program effectiveness and beneficiary progress.

The M&E system will be embedded throughout the program lifecycle, from pre-implementation to post-training follow-up, allowing real-time feedback and evidence-based decision-making.

1. M&E Design and Framework

The program will utilize a Results-Based Monitoring and Evaluation framework anchored on the Input–Process–Output–Outcome–Impact (IPO-OI) model. This framework will enable systematic tracking of how BUKID Hub resources and extension interventions translate into improved enterprise capability, compliance, and market readiness among YFC awardees, startups, and MSMEs.

2. Data Collection Methods

Multiple data collection methods will be employed to ensure reliability, validity, and triangulation of findings.

a. Quantitative Methods
Pre- and Post-Training Assessments
Structured questionnaires will be administered before and after each project to measure changes in knowledge, skills, and confidence related to product development, food safety, machinery operation, financial management, and commercialization.

Performance Metrics and Output Counts
Numerical indicators will be recorded, such as number of prototypes developed, HACCP plans completed, FDA-ready documents prepared, machines operated, and market linkages established.

b. Qualitative Methods

Observation Checklists and Facilitator Logs
Trainers and mentors will document participant engagement, skill application, and competency demonstrations during hands-on activities.
Focus Group Discussions (FGDs)
FGDs will be conducted at the end of major project components to capture insights on relevance, applicability, and challenges experienced by participants.
Key Informant Interviews (KIIs)
Selected beneficiaries, mentors, and partner agencies will be interviewed to validate observed outcomes and identify improvement areas.

3. Monitoring Procedures

Monitoring will be conducted continuously during program implementation using standardized tools.

- Daily attendance and participation records will be maintained
- Photo and video documentation will capture actual demonstrations and outputs
- Equipment and facility utilization logs will measure effective use of BUKID Hub resources
- Daily reflection and review sessions will be conducted to identify issues and immediate corrective actions

4. Evaluation Approach

a. *Formative Evaluation*
Formative evaluation will be conducted during training implementation to improve delivery and engagement.
Daily feedback forms will assess participant satisfaction and learning relevance
Facilitator debriefings will identify challenges and adaptive strategies

b. *Summative Evaluation*
Summative evaluation will be conducted after completion of each project or program cycle to assess attainment of objectives.
Post-training assessment scores will be compared with baseline results
Completion and quality of outputs will be evaluated using structured rubrics
Enterprise readiness will be assessed against predefined criteria (technical, financial, regulatory, and market readiness)

5. Outcome and Impact Tracking

- Outcome and impact tracking will be conducted through post-program follow-ups.
- Follow-up surveys will be administered three to twelve months after completion
- Enterprise progress will be tracked in terms of commercialization, compliance, and market linkages
- Validation will be conducted through LGU, DA, and partner agency reports.

6. Reporting and Utilization of Results

M&E results will be documented in progress reports, terminal reports, and policy briefs.
Findings will be utilized to:

- Improve succeeding BUKID-LEAP program cycles
- Inform DA-AMAD and institutional decision-making
- Strengthen the BUKID Hub extension model

- Support replication and scaling in other regions

7. Ethical Considerations.

Participation in M&E activities will be voluntary, and confidentiality of participant information will be strictly observed. Data will be used solely for program improvement and reporting purposes.

V. Work Plan

The BUKID-LEAP Extension Program will be implemented over a 12-month period as shown in Table 1 following a progressive enterprise development pipeline. The initial phase (Months 1–2) will focus on program mobilization, partner coordination, beneficiary identification, and baseline assessment. This will be followed by market needs assessment and value proposition development under Project 1 (Months 3–4). Projects 2 and 3 will be implemented during the mid-phase of the program (Months 5–8), emphasizing product development, prototyping, food innovation, and value addition. Projects 4 and 5 will be conducted in Months 9–10, focusing on food safety compliance, regulatory readiness, and machinery operation efficiency. The final phase (Months 11–12) will concentrate on strengthening financial management, market access, commercialization, and business expansion. Monitoring and evaluation activities will be conducted continuously throughout the implementation period, with terminal evaluation and reporting completed at the end of the program.

Table 1. BUKID – LEAP Workplan

Major Activities / Projects	M 1–2	M 3–4	M 5-6	M 7–8	M 9–10	M11–12
Program Mobilization & Partner Coordination	✓	✓				
Beneficiary Identification & Baseline Assessment	✓	✓				
Project 1: Market Needs & Value Proposition Development		✓				
Project 2: Product Development, Prototyping & Pre-Fabrication			✓	✓		
Project 3: Food Innovation & Value-Addition Technologies				✓	✓	
Project 4: Food Safety & Regulatory Compliance (GMP, HACCP, FDA)					✓	
Project 5: Machinery Operation & Production Efficiency					✓	
Project 6: Financial Management & Enterprise Operations						✓
Project 7: Market Access, Commercialization & Expansion						✓
Monitoring, Evaluation & Documentation	✓	✓	✓	✓	✓	✓
Terminal Evaluation & Program Reporting						✓

VI. Expected Outputs

1. Publications

- 7 IEC materials
- 1 extension paper

2. Patents and Intellectual Property Outputs

- 2 Utility model and other IP filing from the participants assisted

3. Products

- 7 market-ready or near-commercial agri-food products, including improved packaging formats and standardized formulations.

4. People Services (Human Capital Development)

- 30 trained beneficiaries, including extension workers, students, faculty, and entrepreneurs.

5. Places and Partnerships

- 3 strategic partnerships with government agencies (DA, FDA, DTI, LGUs), cooperatives, and private sector stakeholders.

6. Policies and Science-Based Guidelines

- 1 Operational manual drafted and approved by the joint Academic and Admin Council

VII. Budgetary Requirements

- Department of Agriculture (downloaded fund) - PhP 2,000,000.00 (Facility refurbishment and equipment)
- Mindoro State University

Description	Amount (PhP)
Training expenses 35 pax/training x 2 days x 7 trainings @ Php 80.00/snacks twice per day @PhP 160.00/meal (lunch)	156,800.00
Travel Expenses (Monitoring and Impact Assessment) At least 12 trips	15,000.00
Fuel	8,200.00
Total	**180,000.00**

GAD-Responsive Strategy for BUKID-LEAP Extension Program

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The BUKID-LEAP program ensures that men and women, as well as marginalized groups, equally benefit from capacity-building, technology transfer, and enterprise development. Gender considerations are integrated into planning, implementation, monitoring, and evaluation, promoting participation, empowerment, and equitable access to resources.

Prepared by:

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