NON-R&D PROJECT PROPOSAL
(Technology Transfer, S&T Promotion and Linkages, Policy Advocacy, Provision of S&T Services, Human Resource Development and Capacity-Building)

I. PROJECT PROFILE

(1) Program Title: Regional Agri-Aqua Innovation System Enhancement (RAISE) Program in Central Luzon   **Project Title:** Establishment of the Intellectual Property and Technology Business Management (IPTBM) in Tarlac Agricultural University (TAU) through the RAISE Program
(2) Project Leader/Sex: Prof. Maribel C. Ramales/ Female   **Agency:** Tarlac Agricultural University (TAU)   **Address/Telephone/Fax/Email:** Malacampa, Camiling, 2306 Tarlac, Region 3   09762317634/mcramales@tau.edu.ph
(3) Cooperating Agency/ies: DTI, PCCI-Tarlac, Tarlac Henyo Entrepreneurs Cooperative, LGus, Wood Inspiration, PGT, DA RFO3, DOST-PCAARRD, DA BAI, etc.
(4) Implementing Agency: Tarlac Agricultural University (TAU)   **Address/Telephone/Fax/Email:** Malacampa, Camiling, 2306 Tarlac, Region 3   **Base Station:** Malacampa, Camiling, 2306 Tarlac, Region 3   **Other Implementation Site (s):** _____
(5) Project Duration: 24   **Project Start Date:** October 1, 2023   **Project End Date:** September 30 ,2025

(6) Total Project Cost: Php 3,147, 520 (Please see attached DOST Form 4 for the Line-Item Budget)

Implementing Agency/ies	PS	MOOE	EO	Total
A.　　Requested Fund				
Year 1	496,260.00	805,000.00	80,000.00	1,381,260.00
Year 2	496,260.00	770,000.00	-	1,266,260.00
TOTAL	992,520.00	1,575,000.00	80,000.00	2,647,520.00
B.　　Counterpart Fund 1				
Year 1		250,000.00		250,000.00
Year 2		250,000.00		250,000.00
TOTAL	992,520.00	2,075,000.00	80,000.00	3,147,520.00

Sustainable Development Goal (SDG) Addressed SDG 1: No Poverty; SDG 2: Zero Hunger; SDG 3: Good Health and Well-being; SDG 5. Gender Equality; SDG 9:Industry, Innovation, and Infrastructure; SDG 12: Responsible Consumption and Production; SDG 13: Climate Action

II. PROJECT SUMMARY

(7) Executive Summary (not to exceed 200 words)

The Intellectual Property and Technology Business Management Office of Pampanga State Agricultural University is the main office in charge of the University's agri-aqua generated technologies. This Office was established in 2018 and strengthened through the DOST-PCAARRD projects, "Enhancing the IPTBM Operations of PSAU" and "IPTBM Phase II: Patent Mining… in Advancing Industry-based S&T for Milkfish". Since then, the University – through the assistance of IP-TBM – has been able to apply already a total of 59 AANR technologies and relevant works for IPR protection and held a number of training in the basics of IP, patent search and drafting, copyright, and technology commercialization.

The goal of the present project, hence, is to establish a regional IP-TBM in Central Luzon – led by the PSAU IPTBM – to intensify the IP and technology commercialization activities of other consortium member institutions (CMIs) in the region. The project is focused on the conduct of training, mentoring of CMIs' IP-TBM officers, harmonization of IP policies, creation of a regional IP inventory, and intensifying linkages among agencies to enhance IP-TBM-related activities. A patent mining report on tamarind, as the flagship commodity of PSAU, is also targeted to be published and distributed to relevant stakeholders at the end of this project.

(8) Introduction (Not to exceed 15 pages)
　　Rationale/Significance (Not to exceed 300 words)

Over the years, the Tarlac Agricultural University (TAU) has strongly engaged in research and development, which has generated several matured technologies from its flagship commodities such as sweetpotato, bamboo, free-range chicken, and kamlong. Some of these technologies have been award winning and have been showcased in the international trade fair and exhibit. TAU's innovative technologies like sweetpotato clean planting materials and value-added food products, free-range chickens, e-bamboo, and kamlong were adopted by local farmers, women groups, cooperatives, entrepreneurs, and even farmers abroad. There are also innovative and transformative technologies that have been developed by the Department of Food Science, Biosystems Engineering, and Veterinary Medicine, which await IPR protection and an opportunity to be commercialized. Numerous business implements of the graduates of the BS Entrepreneurship have been set up and evaluated. However, the majority landed on empty shelves and dreams.

Despite the winnings, acclamation, technology adoption, the positive market response from trades and exhibits, and many success stories of farmers and women groups, none of the developed technologies has commercially reached the market. Only one percent (1%) of the numerous business implements of the BS Entrepreneurship graduates have been converted into a real operational business. It is a sad truth. One cannot say that the technologies have not gained interest from investors, because in fact, there are many positive responses and queries from the market and entrepreneurs. The lack of entrepreneurial aggressiveness and incubator facility that will assist in promoting and commercializing these technologies are strongly evident and thus lost the economic opportunity and growth.

With the availability of matured technologies produced by the university, the desire to promote and commercialize these products, the plan of institutionalizing entrepreneurship in the curriculum for greater efficiency and synergy, to have competent entrepreneur experts in the university, have led to the idea of establishing the Tarlac Agricultural University Intellectual Property and Technology Business Management (TAU IP-TBM). This will serve as a facility that will provide a stimulating entrepreneurial environment and professional support in promoting and commercializing the mature technologies of the university as well as to nurture the business implements of the BS Entrepreneurship students of TAU and other start-up business in the nearby towns until it reaches the entire Province of Tarlac.

The IP-TBM of TAU is envisioned to serve as an engine to propel the socio-economic growth of the small farm holders, food processors, and other agri-based entrepreneurs in the Province of Tarlac by assisting and offering a specialized business service program on agro-based production and cultural management, food and e-bamboo processing, poultry raising, and other business ventures, which contributes to economic development and sustainability in Tarlac Province.

To realize the vision, TAU has responded to the call for the proposal of the DOST-PCAARRD RAISE Project facilitated by CLAARRDEC. The lack of technical skills, facilities, and entrepreneurial mindset, the limited capital resources and market reach as well as the lack of IPR-protected technologies have caused a compounding need of proposing the establishment of the TAU IP-TBM.

Objectives:

General: To establish the TAU IPTBM and intensify the Intellectual property (IP) management and technology commercialization activities of TAU.

Specific Objectives:
1. Further capacitate the IPTBM personnel of TAU on IP, technology commercialization, and promotion;
2. Improve the IP management of the University through effective management of its existing agri-aqua technologies and other IP assets;
3. Advance the technology promotion and network-building capabilities of the University to intensify its technology commercialization efforts; and
4. Enhance and harmonize the existing IP policy and technology transfer protocol of TAU with those of other Consortium Member Institutions (CMIs) in the region.

Methodology:

Pre-Implementation Phase

A.   Team Formation

1. Identification of essential team members and their respective roles
2. Creation of organizational structure
3. Application for a BOR Resolution approving the establishment of TAU IP-TBM

B.   Collaborative Meeting

A collaborative meeting with the external governing body or consultants such as government agency representatives, business partner representatives, private partner representatives, and product owners to discuss their roles, and the plans and activities of the IP-TBM.

C. Benchmarking
A scheduled visit to universities with established IP-TBM to learn from their practices in terms of management, policies, guidelines, forms etc. for an efficient and successful implementation of the IP-TBM

D. Commitment Meeting
- Inception meeting
- Securing Letters of Commitment from partners, product/process owners, and other stakeholders as regards their role/responsibilities, benefits, expectations, and limitations, cooperation, etc.

- Forging of business partnership and development through MoU signing

E. Resource Assessment
- Project Procurement and Management Plan
- Inventory of existing technologies for IP protection
- Hiring of project staff

Implementation Phase

1. Setting up the TAU IP-TBM

Construction/ renovation of the HUB inside the campus. The space and financial remuneration of the IP-TBM Management staff will be the counterpart of TAU. The Hub will be the center for all commercialization endeavors of TAU technologies. It will also provide rental spaces for emerging technopreneurs. It will also house training and meeting rooms that will be used in enhancing the skills of incubators and in meeting clients and potential industry partners. TAU R&D Centers and Laboratories will be available for technopreneurs as needed. A Manager that will oversee the operation of the whole Center will spearhead the TAU IP-TBM. Thus, a TAU employee shall be given credit with at least 70% workload/ time allotment in the Center. The Manager shall prepare the work plan for the hub.

2. Crafting of functional systems, processes, and procedures to operationalize the hub

a. Establish systems and policies as regards social enterprise, business programs, consultancy, and technical assistance.
b. Creation of an operational manual. The manual will include a screening of potential incubators, fees, intellectual property issues, incubation period, etc.
c. Crafting of policy on screening

c.1. Pre-qualification of business entrepreneur
- Business Plan- A simple business plan will be helpful in realizing the vision of the entrepreneur. It will serve as a guide to the owner and at the same time as a monitoring and evaluation tool for the Hub.
- Needs assessment- it will serve as the basis for crafting a development plan for technopreneurs including technical skills and soft skills, and for the business.

3. Packaging of customized business portfolios for faculty, students, and other stakeholders

a. Assess the needs of the incubatees
b. Assist the incubators to conduct environmental scanning
c. Package a development program for the incubatees depending on their needs
d. Extend training on technical and business skills needed by the incubatees
e. Facilitate the commercialization of TAU matured technologies

4. Conduct of pre-incubation and incubation activities

Activities for the pre-incubation include the provision of assessment, referrals and mentorship, and determining rental fees, club membership etc. Moreover, incubation activities will focus on short courses, mentorship, supply chain or networking, business plan preparation, and technical expert consultations.

5. Drafting of a sustainability plan for IP-TBM activities

Conduct activities for revenue generation through: (a) club membership,(b) imposing of rentals, (c) provision of short courses, (d) coaching and mentoring sessions, (e) supply chain or networking, (f) business plan preparation, (g) technical expert consultations, and (h) capability training.

Monitoring and Evaluation

Periodic meetings among project team members shall be done (monthly) to present plans, set activities, and discuss the progress and encountered challenges during project implementation. Submission of accomplished monitoring and evaluation form such as the following:

- Commitment Letters
- IP Policy and Technology Transfer Protocol Status of CMIs
- IP Inventory (of each CMI)
- List of IP Filings (of each CMI)
- Promotional Activities (of each CMI)
- Linkages and Partnership Agreements (of each CMI)
- Number of Technologies Commercialized (of each CMI)
- IEC Materials (of each CMI)
- Activity Report and Evaluation
- Photo-documentation
- Number of Trainees
- Attendance Sheets

Expected Outputs (6Ps):

6Ps	Year 1	Year 2	Total
Publication	• 1 IEC	• 2 IECs	• 3 IECs
Patent	• 2 IP applications (UM & Patent only) • 1 IEC	• 3 IP applications (UM & Patent only) • 2 IECs	• 5 IP applications (UM & Patent only) • 3 IECs (copyrighted)
Product	• 2 PAS Reports • 1 updated IP inventory • 1 inventory of knowledge resources prepared and updated • Prepared and updated 1 CMI Commplan developed & implemented • 1 Tech Commplan developed and implemented • 1 technology with pre-comm reports • 1 technology pitched	• 3 PAS Reports • 1 updated IP and technology inventory • 1 inventory of knowledge resources prepared and updated • 1 CMI communication plan developed & implemented • 1 Tech Commplan developed and implemented • 1 technology pitched • 1 technology commercialized	• 5 PAS Reports • 1 updated IP and technology inventory • 1 inventory of knowledge resources prepared and updated • 1 CMI communication plan developed & implemented • 1 Tech Commplan developed and implemented • 1 technology with pre-comm reports • 2 technologies pitched • 1 technology commercialized
People and Services	• 2 CMI staff trained in national IPMC • 2 CMI staff trained in national ABMS • 2 CMI staff trained in national TCMS • 2 CMI staff trained in national TPMS • 2 CMI staff attended reg'l IP Audit and Inventory Workshop • 2 CMI staff attended reg'l IP Policy/Tech Trans Protocol Review • 2 CMI staff attended reg'l CommPlan Workshop • Participated in content build up of RTMS	• 1 Institutional Echo Seminar conducted • Trained at least 10 staff on echo seminars • Participate in content build-up of RTMS	• 2 CMI staff trained in national IPMC • 2 CMI staff trained in national ABMS • 2 CMI staff trained in national TCMS • 2 CMI staff trained in national TPMS • 2 CMI staff attended reg'l IP Audit and Inventory Workshop • 2 CMI staff attended reg'l IP Policy/Tech Trans Protocol Review • 2 CMI staff attended reg'l CommPlan Workshop • 1 Institutional Echo Seminar conducted • Trained at least 10 staff on echo seminars • Participate in content build-up of RTMS
Places and Partnerships	• 1 Commitment Letter for the national trainings	• 1 partnership agreement with Business/Trade Institutions • 1 Commercialization Agreements	• 1 Commitment Letter for the national trainings • 1 Partnership agreement with Business/Trade Institutions

			• 1 Commercialization Agreement
Policy	• Crafting/enhancement of IP Policy	• Crafting/enhancement of technology transfer protocol	• Crafting/enhancement of IP Policy • Crafting/enhancement of technology transfer protocol

Potential Outcomes:

The proposed project targets to establish and sustain TAU IP-TBM. At the end of the implementation of the project, the following outcomes are expected:

• One functional IP-TBM equipped with an office, function hall, showcase/display hall, conference room and food processing lab, furniture and fixtures.
• Capacitated IP-TBM Staff on technology transfer.
• Availability of IP protected and commercialized agri-food products of TAU and of other incubatees

Potential Impacts (2Is):

The following are the specific potential Social and Economic Impacts of the present project:
• Income and job generation and livelihood security
• Availability of healthy and affordable agri products in the market
• Improve the socio-economic well-being in the communities
• Increased productive participation of women, children, and youth, and other marginalized sectors.

Target Beneficiaries:

The target beneficiaries who may be directly or indirectly benefited from the project are the following:

• TAU IP-TBM personnel
• TAU researchers, technology generators, and other makers
• Technology generators/owners
• R&D partners and the private sector
• Sweetpotato, free range chicken, Kamlong, and Bamboo R&D and industry
• Students
• Faculty
• Researchers
• Entrepreneurs
• Start-Ups SMEs

Sustainability Plan:

The lack of a sustainability plan for a business incubation may be considered as one of the main hurdles in the successful operation of an incubator. There are several factors that can beset a IP-TBM that when unchecked may lead to unmet goals and targets, and lack of growth. These factors are the incapability to raise funds, employment of unqualified people, weak partnerships, lack of shareholders, lack of space, and many more.

Relative to overcoming the challenges of sustainability, the TAU Administration intends to craft a short and long-term sustainable plan. The plan includes strengthening the following domains: 1) Human Resource, 2) Physical Facility, 3) Entrepreneurial Management 4) Access to Technological-Based Facilities 5) Access to Funding and Scholarship, 6) Partnerships and Networks, 7) Policies, Systems, and Procedures, and 8) Entry and Exit Programs

Human Resource
The Tarlac Agricultural University shall install a competent BI Management staff that is composed of the Manager, Assistant Manager, ITSO Representative, University Business Program Representative, Resident Entrepreneur, and Business Expert and Technical Experts. The majority of the Management Team are experts in the field of Business Management and Entrepreneurship. All these staff occupy plantilla positions in the University and hence prevent the occurrence of frequent turnovers. The appointed Manager is highly competent to lead the IP-TBM as she handles the business plan development and implementation of the BS Entrepreneurship students for a long period. The Assistant Manager, who is a finance expert can greatly help in the financial operation. Both the Manager and Assistant Manager will be deloaded. An additional focal person who is a subject specialist shall be appointed to assist in handling the incubation of a specific commodity. This focal person should be the head of the center or project who has developed the technology of the said commodity. Additionally, the project management staff who

are equally competent and mostly hold a leadership role in the University. Thus, the TAU IP-TBM is manned with a strong human resource team that can provide direction, technical support, and consulting services to a new developing enterprise.

Physical Facility
The TAU Administration shall render an office space in the Business Center Building of the University dedicated to the TAU IP-TBM. Thus, the incubator shall not rent a space for its incubation. In the case where the University Business Program shall require the incubator to pay rentals, the administration shall ensure that payment shall succinctly be made in a minimal amount. In most cases, BI services, including office space, laboratories, training rooms, etc. shall collect a reasonable and minimal rental fee to sustain some of the operations of the TBI.

Entrepreneurial Management
For the TAU IP-TBM to gain long partnership and sustainability, the incubator shall ensure the (1) assigning of project staff to govern incubator activities, (2) installing or hiring experienced and knowledgeable staff members, (3) immersing the OJT students of BS Entrepreneurship Program to assist the management staff in carrying out the activities for the incubates, (4) attracting investors and sponsors initially from the public sector funding then later on from private funding, (5) collaborating or partnering with government agencies such as TESDA, DTI, ATI etc. While funding from the public/government sector is very important and feasible during the setting up of the IP-TBM until it becomes operational, external support usually ceases when the TAU IP-TBM is already established. Hence, the incubator must identify sustainable and flexible revenue streams by utilizing various business models. One is the rent model. TAU IP-TBM can request a reasonable rental charge to clients as a source of funds. While the incubator is still funded by government agencies, the rental may be subsidized if possible. If not, then the incubator will require the tenants to pay the rental charge. Another strategy that can be utilized is through royalty to which revenues earned by the client will legitimate a royalty payment for the incubator as per the policy of the University. Deferment of the debt of the client can also be used. The services provided to the client are valued along with the incubator's overhead and then charged in the incubation fee. TAU IP-TBM can also conduct social enterprise-like training or capacity building programs like setting up farm schools and tying up with TESDA, farm ecotourism program and link with DOT, and learning site for start-up business training and link with DA ATI and OWWA. These activities and initiatives can generate funds and attract clients and investors.

Access to Agri-Food Technological-based Facilities (Prototype)
Some businesses have limited access to technology-based facilities and face difficulties in gaining access to resources. Hence, the TAU IP-TBM plans to provide technology-based facilities to meet the demand of SME's by offering technology support and assistance in obtaining financing necessary for the start-ups sustainable growth, by offering shared basic business services and equipment, and providing technical assistance. These strategies can attract the niche of clients needing access to technology.

Access to Funding and Sponsorship
Since TAU IP-TBM is a public BI, we intend to be financially incubated during our initial stage from government funding and receive standard fees from the incubatees. The fund may come from the university budget, grants, service contracts, sponsorship and university endowment fund. Through the conduct of a business forum where we can showcase our developed and matured technologies, we intend to attract public and private sponsors.

Partnerships and Networks
Through strengthening our efforts on the social enterprise (conduct of trainings/capacity building on Farm School, Farm Tourism, Technical Skills Learning Site etc) we intend to forge partnership with government agencies (i.e. TESDA, DOT, DA ATI, OWWA) and at the same time attract more clients

Policies, Systems, and Procedures
The TAU will craft operational guidelines and policies of the TAU IP-TBM in accordance with the statutory rules and regulations such as public procurement rules, ownership of intellectual property (IP), restrictions on outside employment or entrepreneurship activities, etc. A clear system and procedures on building and operating an effective IP-TBM program will be crafted and will be discussed to the clients/tenants. These policies, systems and procedures are subject to revision.

Entry and Exit Programs
The TAU IP-TBM shall provide an effective pre-incubation program and post incubation support to its client to ensure a successful business incubation engagement.

Gender and Development (GAD) Score: 12.5

(9) Workplan (Please see attached Form 5)

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

In order to facilitate the success project implementation, the project team shall be composed of the following staff:

One (1) Project Leader
- Oversee the overall project implementation;
- Spearhead the execution of all activities leading to attaining the project deliverables, especially all relating to technology commercialization;
- Attend and represent the University in meetings, reportings, and other activities
- Lead the approving of proposed project and risk action plans and monitoring of activities' progress; and
- Supervise the addressing of other project-related concerns.

One (1) Project Staff Level 2
- Oversee, separately, the implementation of subprojects 1 and 2;
- Attend and participate to regular team meetings;
- Assist the project leader in the planning, executing, and monitoring of all project activities leading to attaining the project deliverables – especially all relating to their respective subproject focus;
- Spearhead the successful conduct of training/ patent mining/ tech. transfer activities.

One (1) Project Technical Aide VI
- Regularly update the internal IP inventory of TAU;
- Assist in the preparation and updating of TAU technology portfolio;
- Prepare relevant documents and conduct of technology transfer and commercialization activities;
- Identify commercial strategies for transferring technologies to industry/technology adopters;
- Design and create IEC materials for the promotion of TAU technologies;
- Handle and respond to all IP-TBM related email/ queries;
- Manage the TAU IP-TBM Facebook page;
- Prepare relevant communications and maintain required office files;
- Assist in the preparation of patent drafts for IP application; and
- Perform other tasks identified as needed during the project implementation.

Three (5) Technical Support Staff
- Plan and monitor the budget for the project implementation;
- Prepare project procurement management plan (PPMP) and facilitate purchase requests;
- Keep inventory of project supplies and ensure that project equipment are all kept in working order;
- Carry out basic clerical tasks such as typing correspondence, checking and sending out emails, and preparation of basic report materials;
- Perform all administrative tasks relating to the project;
- Keep records and file project documents; and
- Perform other tasks identified as needed during the project implementation.

III. OTHER SUPPORTING DOCUMENTS REQUIRED (Please refer to page 2 for the additional necessary documents.)