

PROJECT PROPOSAL

2021 DOST-GIA FUNDING

I. PROJECT PROFILE

(1) Project Title: Corn-based Feed Formulation and Production for Hog (<i>Sus domesticus</i>) and Poultry in Occidental Mindoro				
(2) Project Leader/Sex: Livelyn F. Castillo / Female, Chairperson Agency: Samahang Gumagawa Tungong Tagumpay Multi-Purpose Cooperative (SAGUTT MPC) Address/Telephone/Fax/Email: SAGUTT MPC, Brgy. Paetan, Sablayan, Occidental Mindoro				
(3) Cooperating Agency/ies:				
(4) Site/s of Implementation (Municipality / District / Province / Region) Base Station: SAGUTT MPC, Brgy. Paetan, Sablayan, Occidental Mindoro Other Implementation Site (s): _____				
(5) Project Duration: 2022 – 2025				
(6) Total Project Cost: (indicate Counterpart Funds; use Form A for the Line-Item Budget)				
Source of Fund / Site(s) of Implementation	PS	MOOE	EO	Total
A. DOST-MIMAROPA	198,820.00	331,886.40	713,255.00	1,243,962.20
B. SAGUTT MPC	-	330,000.00	-	330,000.00
TOTAL	198,820.00	661,886.40	713,255.00	1,573,962.2

II. PROJECT SUMMARY

<p>(7) Rationale (Not to exceed one page)</p> <p>Livestock and poultry make up two of the most important subsectors in the Philippines' agricultural sector. Of all the animals reared for human consumption, hogs and chickens were the most common, making up a majority of the production volume of livestock in the Philippines. Livestock and poultry were the only agricultural sectors in the Philippines with positive growth in gross value added in 2018, with poultry growing by nearly six percent and livestock by almost two percent compared to the previous year (https://www.statista.com/topics/7001/livestock-and-poultry-sectors-in-the-philippines/).</p> <p>In 2017, MIMAROPA recorded an annual livestock production of 104,908 MT on which 80% are contributed by swine industry. Meanwhile, 11,120 MT of hogs were produced by the province of Occidental Mindoro which is equivalent to 13% of the total annual hog production of the region in the same year (https://openstat.psa.gov.ph/Database). With the given average volume of hogs produced, it indicates that large volume of feeds is consumed in Occidental Mindoro annually.</p> <p>Corn is considered as second most important crop in the country next to rice. This crop, as practiced by the farmers is planted once a year during dry season. The most extensive corn areas are in Sablayan, Sta Cruz, Mamburao, Abra de Ilog and particularly in San Jose where it is easily marketed due to the available seaport. On the other hand, the remaining municipalities produce corn at a very minimum volume (<i>Occidental Mindoro Provincial Development and Physical Framework Plan, 2014-2023</i>).</p> <p>In 2017, MIMAROPA recorded an annual corn production of 121,098 MT. Meanwhile, 92,120 MT were produced by the province of Occidental Mindoro which is equivalent to 76% of the total annual corn production of the region in the same year (https://openstat.psa.gov.ph/Database).</p>

SAMAHANG GUMAGAWA TUNGONG TAGUMPAY MULTI-PURPOSE COOPERATIVE (SAGUTT MPC), established on October 19, 2005 at Barangay Paetan, Sablayan, Occidental Mindoro, is engaged in the following: Relending for Palay and Corn Production; buying and selling of agricultural products such as rice, corn and agricultural inputs; providing services of Pre and Post-harvest facilities; hog and poultry production; Hollow Blocks making; consumer store; and Trucking Services.

The cooperative has 218 members which consist of 122 males and 96 females. 155 of the members are farmers with total farm area of 335.7 hectares which are planted with corn. SAGUTT MPC is among the most active cooperatives in the municipality of Sablayan.

Based on initial assessment of PSTC-Occidental Mindoro, the cooperative recorded corn production at an average of 2,752.74 MT which are being sold to Soro-soro Ibaba Development Cooperative (SIDC) and Limcoma MPC at a maximum price of Php 16.50 per kilogram. These are processed by these cooperatives into animal feeds which are being sold to SAGUTT MPC at relatively high prices ranging from Php 1,300.00 – Php 1,500.00 per bag.

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

OBJECTIVES (General and Specific)

Generally, the project aims to provide technology interventions on the production of low-cost locally formulated and produced corn-based feeds for hog and poultry raisers in Occidental Mindoro.

Specifically, the project aims to:

1. Provide technology interventions on corn-based feed formulation and production including feed milling, mixing, and pelletizing;
2. Establish feed production facility to produce low-cost locally formulated and produced corn-based feeds;
3. Capacitate the cooperative through the provision of relevant trainings;
4. Reduce the cost of animal feeds by at least 7% from Php 1,400.00 to Php 1,300.00; and
5. Increase cooperative's profit by approximately Php 1.19 per kg of corn.

METHODOLOGY

Establishment of corn-based feed production facility for SAGUTT MPC will require strict supervision, technical assistance, and necessary supplies and materials.

DOST-MIMAROPA, thru PSTC-Occidental Mindoro, will assist the cooperative through the provision of funds for the equipment needed in the establishment of corn-based feed production facility. DOST-MIMAROPA will also help in capacitating the cooperative through the provision of technology assistance and relevant trainings.

SAGUTT MPC will provide funds for the equipment's shelter, maintenance, safekeeping, and operating expenses. With the help and assistance of DOST-MIMAROPA, SAGUTT MPC will attend technical capability-building activities for proper operation, maintenance, and management of the feed production facility.

Locally-available Hammer Mill, Horizontal Feed Mixer, and Feed Pelletizer will be utilized and feed formulation will be based on locally-available raw materials, **to include corn, rice bran, copra meal/meat, fermented fruit juice/fermented plant juice, carbonized rice hull, silage, and rock salt.**

As soon as the project is approved and funds are released, the DOST MIMAROPA, through the PSTC-Occidental Mindoro in coordination with the proponent/beneficiaries, would facilitate the procurement of the materials needed in the corn-based feed production facility. A staff from PTSC will oversee the implementation of the project, monitor the implementation of the project and provide technical assistance for the project's improvement.

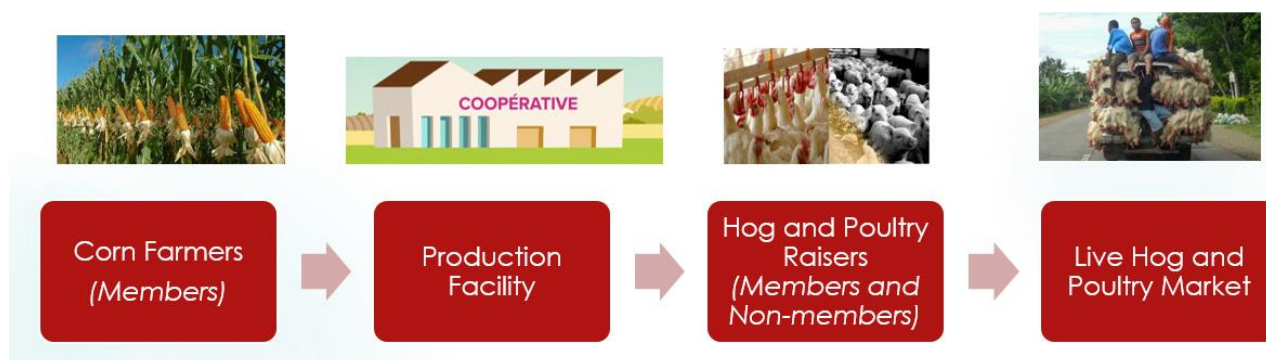
Experts from the Agricultural Training Institute (ATI) and the International Training Center on Pig Husbandry (ATI-ITCPH) will be tapped to provide technical knowledge on the emerging feed formulation technology.

Volume of raw materials and prices, volume of feeds sold and selling price, volume of hogs sold, weight, and selling price, employment generated, markets and market outlets, and other relevant information would be gathered during the project implementation. **A comparative study between the existing commercial feeds and the locally-formulated feeds will be conducted.**

Gaps and Needs

Process / Existing Practice / Problem	Proposed S&T Intervention-Related Equipment / Skills Upgrading	Impact
Due to lack of feed production facility, produced corn are being sold directly (at a maximum price of Php 16.50 per kilogram) to Soro-soro Ibaba Development Cooperative (SIDC) and Limcoma MPC who produces animal feeds which are sold at relatively high prices ranging from Php 1,400.00 – Php 1,500.00 per bag.	<ul style="list-style-type: none"> ➤ Provision of 1-unit Hammer Mill (300kg/hr), 1-unit Feed Mixer (250kg/hr), and 1-unit Feed Pelletizer (200kg/hr); ➤ Training on proper operation, maintenance, and management of corn-based feed production equipment; and ➤ Technology training on feed formulation and production 	<ul style="list-style-type: none"> ➤ Availability of low-cost animal feeds for hog and poultry raisers in the province ➤ Provided at least 20% value added. ➤ Generate additional profit of approximately Php 1.19 per kg of corn.

Project Framework



EXPECTED OUTPUTS (Not Applicable)

Publication
 Patent/Intellectual Property
 Product
 People Service
 Place and Partnership
 Policy

EXPECTED OUTCOMES

- Established feed production facility to produce low-cost locally formulated and produced corn-based feeds.
- Members properly-trained for animal feed formulation and production.
- Reduced cost of animal feeds.
- Provided at least 20% value added.
- Generate additional profit of approximately Php 1.19 per kg of corn.

PERCEIVED IMPACT

Sociological

- Availability of low-cost animal feeds for hog and poultry raisers in the province.

Economical

- Value-added commodity
- Established additional income generating project for the cooperative for the benefit of its members and other hog & poultry raisers in the province.

SUSTAINABILITY PLAN

- The corn-based feed production facility will be operated and maintained by SAGUTT MPC. Monitoring and site visits will be made regularly by PSTC-Occidental Mindoro.
- SAGUTT MPC will encourage members to support the developed product by developing policies and guidelines. Corn-based feeds will be sold by SAGUTT MPC to members and non-members at Php 1,300.00 per 50-kg bag and Php 1,400.00 per 50-kg bag, respectively.
- **SAGUTT MPC will continue hog raising program for its members and produce approximately 9,000 bags of feeds to sustain the program and its members.**
- SAGUTT MPC also plans to continuously seek trainings and consultancies relevant to hog and poultry raising, as well as feed formulation and production.
- SAGUTT MPC will also establish its linkages to other hog and poultry in neighboring municipalities, local buyers, and government agencies, particularly the Department of Agriculture (DA).

Profitability Analysis *(based on current hog & livestock production, 1% of total corn production)*

PARTICULARS		VALUE (PHP)
Volume of Corn Feeds Required for 182 fatteners and 1400 chickens	37,380.00 kg	616,770.00
Additional Raw Materials (15%)		92,515.50
Labor Requirement		84,000.00
Overhead Cost		9,718.80
Operating Cost		125,000.00
TOTAL EXPENSES		928,004.30
Expected Sales		972,400.00
Profit		44,395.70
Value Added		128,395.70

Discussion on the results of related project handled by the same proponent (if any)

- In 2011, the SAGUTT MPC received a farm tractor from the Department of Agriculture (DA) under 60/40 scheme. In 2012, the cooperative was able to procure their own corn sheller to help its members who are engaged in corn production.
- In 2013 and 2015, the cooperative continued investing modern farm equipment such as combine rice harvester, farm tractor, and trailers which came from their own income.
- In 2016, the cooperative was able to qualify as one of the beneficiaries of the Department of Agrarian Reform's (DAR) Livelihood Program in which they are given building for the processing of salted egg.
- Year 2017 when SAGUTT MPC was able to procure mobile grain dryer, 2 flatbed dryers, 3 additional combine rice harvesters with trailers, and construct a multi-purpose building. It was also in the same year when the cooperative received a shredding machine from the DA amounting to Php150,000.00 to implement the cooperative's Organic Agriculture Program in preparation to the ASEAN INTEGRATION. In addition, the cooperative became a beneficiary of the Department of Trade and Industry's (DTI) P3 (Pondo para sa Pag-asenso at Pagbabago) in which the members were given financial capital to start alternative business other than farming.

- In 2018, a corn planter was awarded by the DA to modernize corn planting procedures. In the same year, the cooperative became a conduit of the Agricultural Credit Policy Council (ACPC) under the Production Loan Easy Access (PLEA) and Survival and Recovery Assistance Program (SURE Aid).
- In addition, the cooperative was also able to procure a hauling truck which is used in hauling dried corn to Batangas, tricycle which is used as service vehicle, 2 flatbed dryers, and L300 van which is used in delivering salted organic eggs.

(9) Workplan (See Form B)

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

The project will be implemented and managed by SAGUTT MPC in close supervision of DOST-MIMAROPA through the Occidental Mindoro Provincial Science and Technology Center. Project staff from PSTC-Occidental Mindoro will oversee and ensure successful implementation of the project.

Members of the cooperative will also be strictly required to support the project by implementing policies and guidelines.

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