



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

**Implementation of Upgraded Consultancy Services for MSMEs thru Consultancy for
Agricultural Productivity Enhancement (CAPE) Program in Region12**

FINAL REPORT

for

**Oblate Galilee Farm
Bugwak, Antipas, Cotabato**

Submitted to

**Department of Science and Technology
Regional Office No. XII (SOCCSKSARGEN)**

Submitted by:

**UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato**

May 2023

Oblate Galilee Farm/2



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Acceptance Sheet

This is to accept the Final Report for Productivity Study of Oblate Galilee Farm conducted by the University of Southern Mindanao under the Consultancy for Agricultural Productivity Enhancement (CAPE) Program in Region 12 submitted to the Department of Science and Technology Regional Office No. XII (DOST XII) on May 2023.

ENGR. SAMMY P. MALAWAN, CESE

Regional Director
DOST Regional Office No. XII

Conforme:

FR. JAY VIRADOR, OMI

Administrator, Oblate Galilee Farm

Report validated by:

BABAI TAGITICAN

DOST XII – SOCCSKSARGEN
Representative



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TABLE OF CONTENTS

	Page
Cover Page	i
Acceptance Sheet	ii
Table of Contents	iii
PROFILE OF THE FARM	1
HISTORICAL BACKGROUND	2
INTRODUCTION	2
Rationale	2
Objectives of the Project	2
Coverage of the Project	3
Background of the Consultant	5
General Productivity Approach	5
METHODOLOGY	6
DOCUMENTATION OF EXISTING SYSTEM	7
Farm Location	7
Production Management	9
Organizational Set-up	10
Production System	10



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
DOST Regional Office No. XII
and
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato



Human Resource Management	10
Management/Personnel	10
Management of Personnel	11
Financial Management	11
FINDINGS AND ANALYSIS	11
Identification of Issues and Concerns	11
Administrative	11
Production Concerns	11
SUMMARY OF INTERVENTIONS/ACCOMPLISHMENTS	14
IMPACT AND COST BENEFIT ANALYSIS	15
Impact of Intervention	15
Cost benefit Analysis	15
PHOTOS	16
FUTURE DOST ASSISTANCE NEEDED BY THE FARM	20



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DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

I. PROFILE OF THE FARM

- a. Name of Farm : Oblate Galilee Farm
- b. Contact Person : Fr. Jay Virador, OMI
- c. Contact Details
 - Cellphone # : 0935-969-4968
 - Email Add :
- d. Office Address : Bugwak, Antipas, Cotabato
- e. Product Lines : Dairy Products, Tilapia, Vegetables
- f. Annual Volume of Prod'n : n/a
- g. Annual Gross Sales : n/a
- h. Total Asset : Php 10,000,000.00
- i. Market : Antipas Community
- j. Total no. of personnel : 7
- k. Date Established : 2018
- l. Type of Organization : Non-Profit
- m. Classification according to
 - i. Capital : Medium
 - ii. Employment : Small

II. HISTORICAL BACKGROUND

The Oblate Galilee Farm is a social enterprise working on the production of choco milk, planting vegetable products, and fish culture. It started in 1993 with a capitalization of PhP150,000.00. In 2014, the farm was under the Oblates Missionary Farm with a capitalization of P7,000,000. It was accredited by the Agricultural Training Institute (ATI) of the Department of Agriculture as a learning site, caters recollection activities and accommodate students that will undergo on-



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

the-job training. The following are also available: forage area, 15 heads of Anglo-Nubian goat, 9 heads of cattle, and vegetables (pinakbet varieties).

III. INTRODUCTION

A. Rationale

This productivity study conducted under the program “Implementation of Upgraded Consultancy Services for MSMEs thru Consultancy for Agricultural Productivity Enhancement (CAPE) Program in Region12” of the Department of Science and Technology is established to assist small and medium farms in the agriculture sector. The program involves the deployment of productivity consultants to conduct an in-depth study of beneficiary farms.

The study was conducted to determine the gaps and challenges in the different areas of the farm/organization under study, and thus indicate possible improvements for the farm. It is expected that such study would help participating farms in streamlining their operations to attain higher productivity. By constantly aiming for greater efficiency, management can find ways and means on how to reduce costs and increase the profitability of the farm.

B. Objectives of the Project

The project has the following objectives:

1. assess existing production, administrative, marketing, human resource management systems;
2. identify strengths and weaknesses of the farm;
3. identify gaps and challenges encountered in the farm;
4. identify areas that needs improvement;
5. recommend solutions for possible implementation.

C. Coverage of the Project

The Consultancy for Agricultural Productivity Enhancement (CAPE) Program in Region12 assists small and medium enterprises (SMEs) in the agriculture sector to attain higher productivity through improvements in the overall



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

operation of the farm. The Department of Science and Technology (DOST) fields' productivity consultancy teams composed of experts in agriculture to undertake productivity consultancy services. Agriculture in the Philippines is an important sector in the economy with crops like bananas, coconuts, pineapples, rice and sugarcanes are being mass-produced for exportation but the challenge remains as it steadily running into deficit amid growing population. In the livestock sector, the goat industry is one of the priority areas of the program. The Philippine dairy goat industry remains a developing sector with fragmented data and information. Among the dairy goat breeds, Anglo-Nubian (94.9%), Saanen (53.5%), and Alpine (25.6%) are predominantly raised. Nearly one-third of the dairy goat farms include upgraded goats in the milk line.

The Philippines is considered one of the world's largest grower of the fish tilapia from farming which contributes about 22% of the total fish production of the country from aquaculture. At present, the culture of tilapia is still an expanding industry in the country. It is grown in about 14,500 hectares of freshwater ponds about 500 hectares of fish cages in lakes and reservoirs throughout the Philippines

The productivity study was conducted at Oblate Galilee Farm located in Bugwak, Antipas, Cotabato. It was established in 1993 with 9.3 hectares wherein 50% is covered with forest trees.



POSSIBLE AREAS OF SCIENCE AND TECHNOLOGY INTERVENTIONS

POSSIBLE AREAS FOR INTERVENTION *			
Management	Techni	Market	Others
Management & Admin Functions: ✓ Organizational structure ✓ Documented rules and regulations with disciplinary action ✓ Job description Personnel hiring, performance appraisal and 201 file ✓ Formulation of VMGO ✓ 5S training	Production System: ✓ Work Instruction and documentation ✓ Production Planning and Control	Marketing Strategies & Sales ✓ Marketing Plan ✓ Marketing expansion ✓ Advertisement ✓ Product differentiation ✓ Market Positioning ✓ Product differentiation and market targeting	Safety: ✓ Basic Occupational Safety and Health (BOSH) Practices ✓ Workplace Fire Safety
	Materials Management ✓ Control and documentation ✓ Materials management		Financial System: ✓ Budgeting ✓ Product Costing/Project Costing ✓ Monitoring and Control ✓ Cost monitoring enhancement ✓ Sales/Revenue Monitoring
	Machineries and Equipment ✓ Equipment acquisition ✓ Preventive maintenance system		Research and Development: ✓ Nitrogen Fertilization Trials for Forage
	Operations ✓ Housekeeping/7s		Energy Management ✓ Equipment audit ✓ Light Replacement ✓ Energy Audit
	Plant/Housing Layout ✓ Housing layout enhancement for existing facility		Supply Chain ✓ Logistics ✓ Supplier Enhancement ✓ Raw Material Supply Maximization
	Materials Handling ✓ Materials handling equipment acquisition		Waste Management ✓ Damage monitoring ✓ Proper disposal of animal manure and forage leftovers ✓ Vermicomposting to utilize animal manure and forage leftover which can be utilized later as soil enhancer/fertilizer to the forages planted




D. Background of the Consultants

Consultant's Profile		
 <p>PROF. JOSEPHINE R. MIGALBIN, PhD</p>		
Name of Consultant	Qualifications/Designations	Specialization
Josephine R. Migalbin, PhD	<ul style="list-style-type: none"> • Professor VI & Director, SOXAARRDEC • Former Dean, College of Agriculture, USM • PhD in Agricultural Science (Major in Animal Science) • Master of Science in Animal Science, minor in Agronomy, USM, Kabacan, Cotabato • Master of Aquaculture, University of Queensland, Australia • BS Agriculture, USM, Kabacan, Cotabato • Humphrey Fellow, University of California Davis, USA • Licensed Agriculturist • Consultant, FAO • Consultant, JICA • Consultant, KOICA • Consultant, DOST-CAPE • In-charge, USM Small Ruminant Project 	<ul style="list-style-type: none"> • Small Ruminants (Goat & Sheep) • Halal Goat Production • Forage Crop Production • Hazard Analysis Critical Control Points • Halal Auditing • Dairy Production and Management • Large Ruminant Production & Management



D. Background of the Consultant

Consultant's Profile		
		
PROF. JALALODEN B. MAROHOM, PhD		
Name of Consultant	Qualifications/Designations	Specialization
Jalaloden Marohom, PhD	<ul style="list-style-type: none"> • DOCTOR IN BUSINESS ADMINISTRATION • ASSISTANT PROFESSOR II • TRAINERS METHODOLOGY LEVEL I • MOST OUTSTANDING IN AN ORAL INTERVIEW – TM Level 1 • NATIONAL COMPETENCE III (NC III) – BOOKKEEPING • MOST OUTSTANDING MARKETING EDUCATOR (Ateneo de Davao University-Facilitator • Member, PHILIPPINE MARKETING ASSOCIATION COUNCIL OF MANAGEMENT EDUCATORS AND PRACTITIONERS IN THE PHILIPPINES • Member, USM FACULTY ASSOCIATION • Member, INTERNATIONAL ASSOCIATION OF SCHOLARLY PUBLISHERS, EDITORS & REVIEWERS, INC • Member, INTERNATIONAL ASSOCIATION OF RESEARCH ETHICS ACROSS DISCIPLINES • Member, IAMURE MULTIDISCIPLINARY RESEARCH 	<ul style="list-style-type: none"> • MARKETING AND BRAND MANAGEMENT • BRANDING AND LABELLING • CORN PRODUCTION AND MANAGEMENT • ENTERPRISE DEVELOPMENT • TRAINING SIMPLE BOOKKEEPING AND ACCOUNTING • BUSINESS PLAN MAKING •



E. General Productivity Approach:

The Consultants had a face to face interview approach in conducting the productivity study at Oblates Galilee Farm. The Consultants visited the farm and evaluated the existing condition of the farm, identifying the strengths and weaknesses of the farm. The areas considered in the evaluation include production management, marketing management, human resource management, financial management and other areas of the farm deemed necessary for inclusion in the report. Areas for improvement were identified and recommendations were formulated in order to increase productivity in the farm. Recommendations were discussed with the Farm Manager and the farm workers.

F. Methodology

The consultancy project was carried out through a face to face interview with the Farm Manager of the farm and the workers while an online interview was done with the Farm Administrator, Fr. Jay Virador, OMI in order to gather data to be processed and analyzed to come up with recommendations for possible implementation in the farm. For additional information, the consultants made contact with one of the farm employees through Facebook Messenger since the farm has internet connectivity.



Interview with the Farm Manager by the CAPE consultants, Dr. Josephine R. Migalbin and Dr. Jalaloden Marohom on their first visit.

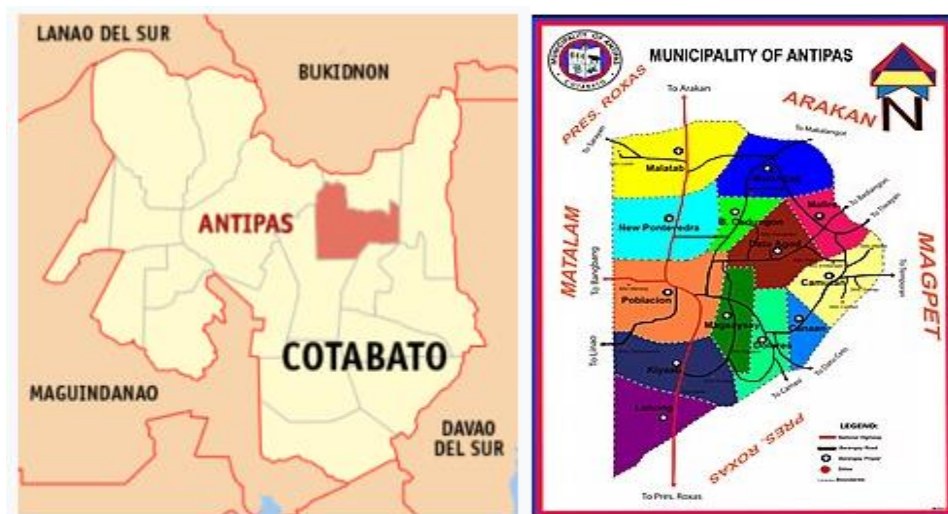


The Farm Manager and the Milk Processing Staff with the CAPE consultants, Dr. Josephine R. Migalbin and Dr. Jalaloden Marohom on their last visit.

. Appropriate data gathering tools such as actual farm observations, photo documentation, interview and discussion with the owner and farm worker were undertaken. Data gathered were then processed and analyzed. Based on the findings, recommendations were crafted for possible implementation.

IV. DOCUMENTATION OF EXISTING SYSTEM

A. Farm Location



Source: Google Maps and Google Images



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

The farm is located in Bugwak, Antipas, Cotabato. **Antipas**, officially the **Municipality of Antipas** (Hiligaynon: *Banwa sang Antipas*; Cebuano: *Lungsod sa Antipas*; Tagalog: *Bayan ng Antipas*; Maguindanaon: *Inged nu Antipas*, Jawi: انتيفاس نو ايغايڍ), is a 2nd class municipality in the province of Cotabato, Philippines. According to the 2020 census, it has a population of 26,817 people.

The Municipality of Antipas long before its creation into a regular municipality was just a mere sitio called Buru-Buruan of Barangay Kiyaab of the Municipality of Matalam which is inhabited mostly by Manobos. Due to continuous influx of Christian settlers in the area, the Municipal Council of Matalam passed a resolution in 1963, approved by the defunct Provincial Board of Cotabato and then was consequently recognized as one of the regular barangays of Matalam, Cotabato bearing the name of ANTIPAS.

The name *Antipas* was derived from "anti" from the word antique and "pas" from Passi, two places found in Panay Island. The enthusiasm of the natives and their determination to run their own affairs coupled with the fertility of the soil and a promise of a brighter future of the area brought forth the unified will of the people when they petitioned the National Government through the Provincial Government headed by Governor Carlos B. Cajelo and represented by Assemblyman Jesus Amparo of the Batasang Pambansa. On October 14, 1980, by virtue of Batas Pambansa Bilang 88,^[5] approved by President Ferdinand Marcos, ratified by the people of the Municipality of Matalam on December 6, 1980, and ultimately inaugurated on March 7, 1981, Antipas was created as the 15th municipality of Cotabato.

Antipas is centrally located at the heart of Arakan Valley. It is bounded on the southeast by the Municipality of Magpet, on the north-east by the Municipality of Arakan, on the north by the Municipality of President Roxas (north) and Arakan River, on the west by its mother municipality, Matalam and on the south



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
DOST Regional Office No. XII
and
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

by President Roxas (south). Antipas is politically subdivided into 13 barangays. Each barangay consists of puroks while some have sitios.

B. Farm Layout and Structures



Aerial view of Oblate Galilee Farm (Source: WordPress.com)



Training Hall of Oblate Galilee Farm



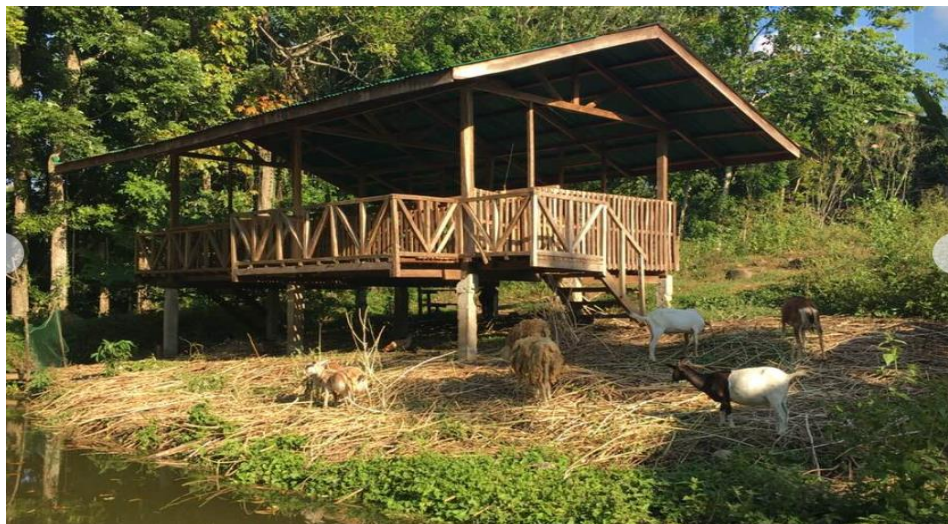
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DOST Regional Office No. XII
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Kabacan, Cotabato



Aerial view of the crop production area of Oblate Galilee Farm



Entrance of the farm with their signboard





C. Production Management

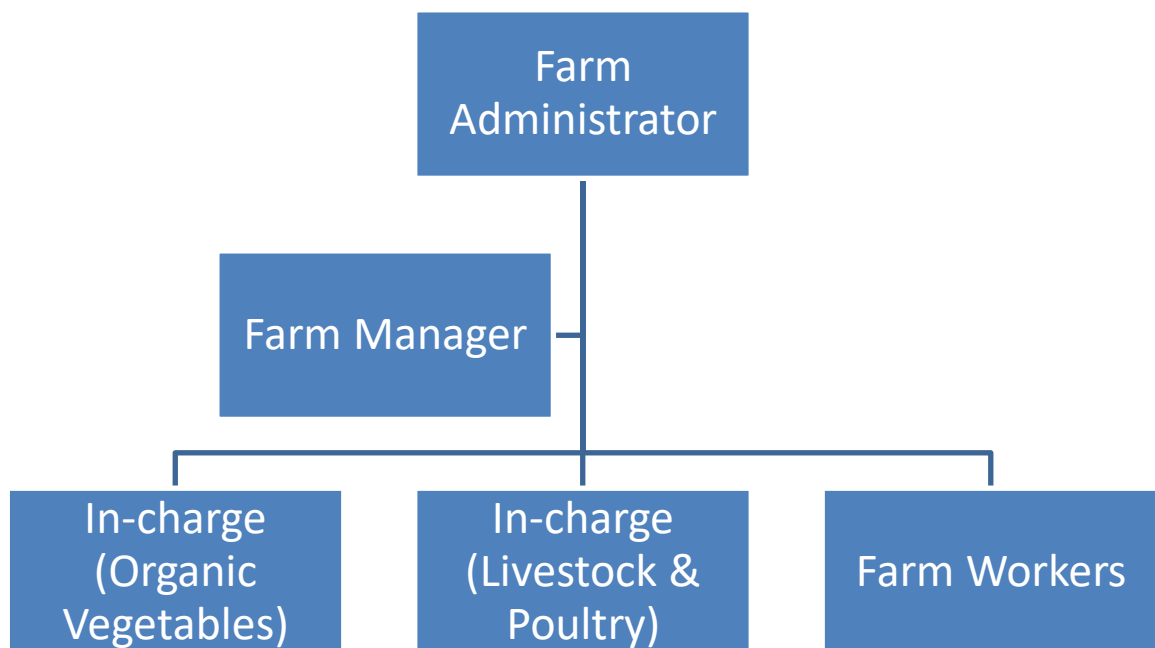
1. Organizational Set-up

1.1 Number of personnel

Oblate Galilee Farm is a social enterprise managed by seven personnel.

The farm has an administrator in the person of an OMI Priest Fr. Jay Virador, OMI. The farm is supervised by the farm manager and with him are the milk processing in-charge cum livestock project in-charge, vegetable project in-charge and the tilapia project in-charge. The remaining three are farm workers.

1.2 Organizational Chart



Organizational structure of the Oblate Galilee Farm showing the line of command. Since Fr. Jay Virador holds a church, the management of the different activities in the farm is handled by the Farm Manager, Mr. Jose Salgado.

2. Production System

2.1 Tilapia Culture

Tilapia which is considered as the fish for rural development in the Philippines by the Bureau of Fisheries and Aquatic Resources (BFAR) is cultured in the Oblate Galilee Farm. Tilapia culture is intensive where commercial feeds for tilapia are provided. Tilapia are cultured for 3-4 months or whenever at least



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
DOST Regional Office No. XII
and
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

three tilapia will constitute One kilogram. The harvest is usually sold in the market of Antipas every Sunday.



Harvested tilapia ready for market

The farm sources its water for their ponds from a spring. The ponds are surrounded with coconut trees of which the nuts are harvested every three months.



Main pond for tilapia production at Oblate Galilee Farm



Another fishpond at the Oblate Galilee Farm



Integration of goat production with fish production at Oblate Galilee Farm



One of the fishponds prepared for stocking of tilapia

2.2 Goat Production

The Oblate Galilee Farm raises Anglo-nubian goats for milking. There are 15 dairy goats with two bucks in the farm. The goats are fed with napier grass,



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
DOST Regional Office No. XII
and
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

trichantera and paragrass. Milking is done twice a day. Milk is processed into chocomilk which is sold in the barangay.



Main goat barn at Oblates Galilee Farm



Another goat barn at the Oblate Galilee Farm



A goat barn near a tilapia pond



2.3 Dairy Cattle Production

Since the farm is an ATI-Learning site, a milking barn was also provided by ATI. About five milking cows are milked everyday.



Milking Area for dairy cattle at Oblate Galilee Farm



Cattle barn adjacent to the goat barn.



Area planted with forage grasses for livestock (cattle and goats)



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
DOST Regional Office No. XII
and
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato

2.4 Vegetable Production

An area is planted with vegetables like okra, beans, eggplant, pechay for human consumption and seed production. The vegetables are planted in between calamansi trees. However, cost analysis in vegetable production intercropped with calamansi should be done to determine profit of the farm from vegetable production.



Dr. Migalbin interviews the In-charge of the vegetable production area of Oblate Galilee Farm



Vegetable production area of Oblate Galilee Farm



Area planted with vegetables

2.5 Milk Processing

Milk harvested from the goats and cattle in the farm are processed into chocomilk and sold in the community. Ms. Marilou Toriales Baculna is In-charge



Milk processing facility at Oblate Galilee Farm





Another perspective of the milk processing facility.



Inside the milk processing facility



Chocomilk produced at Oblate Galilee Farm (left) and label of the product

2.6 Swine Production

Oblate Galilee Farm is also into swine production. The animals are used not only for production purposes but for training of On-the job students and out-of-school youth since the Oblate Galilee Farm is an ATI Learning Site.

The production system is semi-intensive. The animals are raised in full-confinement with housing made of concrete and iron bars.

Commercial feeds are given to the animals in the morning and afternoon. Fresh and clean drinking water are provided at all times. Health care and



management is a challenge since the farm does not have an established livestock health program.



Part of the stock of the piggery at Oblate Galilee Farm

Manure from the animals are dried and utilized as additional fertilizer to the forages. After drying, the manure are placed in sacks and stored. Manure are broadcasted in the forage production area on a regular basis, every three months. Manure is broadcasted liberally since it doesn't cause toxicity to the forage crops.

Since some of the pig pens need repair, the consultants recommended repair of the existing pens of which the management have accepted the recommendations.



Pig pens under repair



2.7 Calamansi Concentrate Production

Since the farm has calamansi trees, the fruits are processed into calamansi concentrate sold at 100/1 liter. The concentrates are processed in the same facility where chocomilk are produced.



Sample of Calamansi concentrate

3. Human Resource Management

Vision and Mission statements of the farm are not strategically posted. The workers have attended intensive training courses in livestock and poultry and tilapia culture. The farm workers are paid with minimum wage based on government compensation law. The farm workers have documented job description and specifications. Activities are recorded but not regularly done. Employee 201 file is available and the workers are provided with SSS, Insurance benefits and others. An Appraisal System is established to evaluate the performance of the farm worker/employee performance.

4. Management of Personnel

The Farm Administrator, Fr. Jay Virador oversees the management of the personnel in the farm in coordination with the Farm Manager who has direct supervision to the other personnel/workers in the farm. Additional workers are hired on occasional basis if there are a lot of work in the farm.



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DOST Regional Office No. XII

and

UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, Cotabato

5. Financial Management

Since the farm is a social enterprise, financial management is an important part of the over-all management in the farm. Fr. Jay Virador oversees the financial status of the farm.

6. Others

Oblate Galilee Farm accepts students who will undergo on-the-job training and out-of-school youth to be trained in agriculture.

V. FINDINGS AND ANALYSIS

A. Identification of Issues and Concerns

1. Administrative. Since the Oblate Galilee Farm is a social enterprise, a visible organizational structure should be displayed in their office for people to know the personnel in the farm. Vision and mission statements should be placed in areas that are visible to the community and visitors.

2. Production Concerns

2.1 Nutrition and feeding. Proper feeding and nutrition is a key to high productivity in livestock as well as to allow expression of their genetic potential especially for milk production. It is well known that dairy animals in Asia (and also other regions) are managed under a wide variety of production systems, ranging from small herds grazing public land to mid-size and large scale industrial farms. Thus, feed resources available for dairy animals vary not only from farm to farm but also among seasons – particularly on small farms.

At Oblate Galilee Farm, improved forage like Napier grass is fed to their livestock (goat and cattle), however, there is a need for management to formulate concentrates for better growth, maintenance and reproduction of the existing stocks. Ingredients for the concentrates to be formulated can be bought locally like rice bran, corn bran, copra meal, fish meal, and oyster shell flour in addition to their existing source of protein. Pearson Square Method or Trial and Error



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DOST Regional Office No. XII

and

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Kabacan, Cotabato

Method can be used in the formulation of concentrates. Concentrates to be provided will depend on the age of the animal and stage of growth/production.

Forages should be given in *ad libitum* but it is important to note of the dry matter requirement of the animals and the dry matter content of the forage that will be provided to the animals. Dry matter requirement of the animals ranges from 3.0 to 3.5% of the bodyweight of the animals.

2.2 Improvement of Foundation Stock. The goat stock raised by the Oblate Galilee Farm is Anglo-Nubian. In order to have higher milk productivity, some of the animals that are already beyond productive age should be culled and replaced with new ones. The bucks (male breeder goat) should be changed every two years to avoid inbreeding. The consultants were informed that the Department of Agriculture will be providing purebred dairy goats to the farm.

2.3 Inadequate Supply of Forages. The Oblate Galilee Farm intends to increase the number of their animals including cattle, however, forage supply might be a challenge. There is a need to expand their area for forage production. It was recommended that increasing the feed supply will benefit the farm and will lead to a better goat and cattle productivity. Management adhered to the recommendation and an area was identified for the production of improved grasses.

2.4. Low Herbage Yield of Forages. Low herbage yield of forages was discussed during the consultations. It was recommended that fertilizer should be applied at the rate of 400 kg N/ha to be applied twice a year. Dried goat or cattle manure can also be applied liberally as additional soil amendment.

2.5 Record Keeping. Record keeping is occasionally practiced in the farm. Record keeping can be a key to farming success. Not only do records help the farmer/owner keep on top of production, feeding, and profitability, records also ensure food safety and traceability requirements are kept. Most importantly, though, they're a great tool for continuous improvement of the herd and the farm.



Although record keeping differs from farm to farm, it doesn't have to be a complicated undertaking. It can be easy to get started – and the benefits will soon start making the efforts worthwhile. It was highly recommended that record keeping be a part of production management to track the status of the farm.

2.6. General Husbandry Practices. It was observed that there is no established general husbandry practices employed in the farm like hoof trimming, deworming, etc. It is recommended that regular hood trimming, deworming and other husbandry practices be in place. Moreover, a biosecurity program should be crafted for implementation in the farm to prevent livestock and poultry diseases.

2.7 Product Processing Facility

The milk processing facility is not FDA-compliant. Moreover, it is also the same facility where the calamansi concentrates are produced. It is recommended that an FDA-compliant facility for milk processing and calamansi concentrate processing facility be constructed. Equipment can be provided by DOST XII if the farm applies for fund support.

2.8 Dilapidated Buildings

Dilapidated buildings should be demolished while livestock barns/pens/housing that need repairs should be repaired. The consultants were informed that management has already plans for the repair of barns and dilapidated building will be replaced with new ones.



SUMMARY OF INTERVENTIONS/ACCOMPLISHMENTS

Areas for Improvement	Recommendations	Plan of Action
Improvement of Existing Stock	Recommended to contact Department of Agriculture for possible source of high quality breeding stock.	Beneficiary has been included in the program of the Department of Agriculture-NDA as beneficiary.
Housing	Additional goat barn be constructed for the incoming stock; good ventilation shall be taken into consideration in the construction of the new barn. Repair of existing barns	A new goat barn will be constructed taking into consideration the recommendation of good ventilation. Existing barns are in the process of repair
Dilapidated Buildings	Dilapidated buildings must be condemned.	Dilapidated buildings had been demolished and replaced with new buildings.
Nutrition and Feeding of Animals	Concentrates should be formulated to satisfy nutritional requirements of animals.	For implementation as agreed upon by the farm manager
Inadequate supply of forages	There should be additional area for forage production	An area under coconuts was already planted with improved grasses.
Low yield of forages especially improved grasses	Application of fertilizer (46-0-0) at the rate of 400kg N/ha applied twice a year. Goat and cattle manure can be dried and applied as soil amendment.	Recommendation has been followed that resulted to the better growth and yield increase of improved grasses.
Record Keeping	Record keeping should be practiced in the farm. The following records should be kept in the farm: livestock inventory, feeding, health/vaccination/treatment, breeding, general husbandry practices, etc.	Record keeping will be implemented immediately.
Vegetable production area	Area should be fully utilized taking into consideration recommended crop production practices,	For implementation



	integrated pest management and good agricultural practices.	
Milk processing Facility	Not FDA-compliant	Recommended for FDA compliance

Additional Management Targets

1. Access funding support
2. Improved facilities and processing equipment
3. Capacitated personnel
4. Increased number of livestock and higher productivity
5. Tourism site and training center

IMPACT AND COST BENEFIT ANALYSIS

Impact of Intervention

Indicators	Before	After	Remarks	Cause/Effect
Forage Supply	Inadequate	Substantial	Additional area was planted with improved grasses	Increased feed supply and dry matter intake of goats.
Goat Housing/Space Requirement	One barn only	Additional barn was constructed but not yet finished	Additional barn is being constructed with better ventilation.	Better living condition for goats that will lead to increased productivity
Herbage yield	Low	High	Fertilizer application at the rate of 400 kg/N applied twice a year has been followed.	Ample supply of feed for goats in the farm

Cost benefit Analysis

Not applicable for now. Acquisition of additional heads of dairy animals, feed mixer; training in artificial insemination, business planning and management practices of dairy goats are the goals of the management in the next few years. In



like manner, cost benefit analysis for tilapia production, vegetable production and calamansi concentrate production are not available.

PHOTOS/DOCUMENTATION

a. Before CAPE Intervention



Dilapidated buildings at the Oblate Galilee Farm



Pathways that need repair



b. After CAPE Intervention



Pig pens were repaired using concrete materials and iron bars.



Pig pen undergoing repair



Pathways/walkways are cemented



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Ground beautification at Oblate Galilee Farm



New building constructed after the old one was demolished



Well-landscape area at Oblate Galilee Far



FUTURE DOST ASSISTANCE NEEDED BY THE FARM

Since the Oblate Galilee Farm aims to produce milk and other dairy products, the Department of Science and Technology may assist the farm in its need to put-up a dairy processing plant with the following equipment:

Equipment	Purpose
Milking Machine	To be used in easier and faster milking of animals instead of manual milking which is laborious.
Pasteurizer	For pasteurization of Milk
Freezer	For freezing of dairy products such as chocomilk
Milk buckets	For milk collection

For better performance of the dairy goats in the farm, nutrition of the animals is of paramount importance. As such the following should be provided:

Equipment	Purpose
Forage Chopper	For chopping of forage into appropriate size for better digestibility
Concentrate Mixer	For mixing of different feed ingredients for the formulated concentrate for dairy goats.

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