



**VSU EXTENSION PROJECT
ANNUAL ACCOMPLISHMENT REPORT**

CY 2022

Project Title: Tilapia Production and Utilization in Selected Municipalities of Leyte

Component 1: Profiling of and Training Needs Assessment for Beneficiaries of the CFAS
Tilapia Seed Dispersal Activity

Component Leader:

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Component 2: Capability-building of Beneficiaries on Tilapia Production and Utilization

Component Leader:

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Component 3: Monitoring and Evaluation of Trainings Conducted for the Beneficiaries

Component Leader:

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Implementing Unit: College of Fisheries and Aquatic Sciences

Cooperating Agencies: LGUs of Mayorga, Dulag, Tolosa, and Tanauan

Project Sites: Backyard Tilapia Ponds of the beneficiaries in the identified LGUs, and VSU
Tolosa for the seminars and trainings

Project duration: February 2022-2024

Financial report for the year under review

- a. **Total approved budget:** 353,153
- b. **Actual released budget:** 100,000
- c. **External support or counterpart funds from cooperating agencies:** NONE
- d. **Actual expenditures:**

TILAPIA PRODUCTION AND UTILIZATION IN SELECTED MUNICIPALITIES OF LEYTE

SUMMARY OF EXPENDITURES			
DATE	OBLIGATION #	PAYEE/NATURE	AMOUNT
JULY			
	MOOE-2022-07-193	ALIEN MODINA Labor and Wages	4,997.20
	MOOE-2022-07-217	LEYTE PAPER WORLD	613.00
	MOOE-2022-07-216	JOEBZ COMPUTER SALES AND SERVICES	4,110.00
	MOOE-2022-07-215	NEW FIVE STAR TRADING AND PRINTING PRESS	201.00
	MOOE-2022-07-214	TACLOBAN TAP COMMERCIAL	2,785.00
		SUB-TOTAL	12,706.20
AUGUST			
	MOOE-2022-08-219	ALIEN MODINA-Labor and Wages	4,410.38
	MOOE-2022-08-237	ALIEN MODINA-Labor and Wages	3,224.47
	MOOE-2022-08-252	ALIEN MODINA-Labor and Wages	5,146.66
		SUB-TOTAL	12,781.51
SEPTEMBER			
	MOOE-2022-09-286	ALIEN MODINA-Labor and Wages	7,056.60
		SUB-TOTAL	7,056.60
OCTOBER			
	MOOE-2022-10-303	ALIEN MODINA-Labor and Wages	2,940.25
	MOOE-2022-10-326	ALIEN MODINA-Labor and Wages	7,606.67
			10,546.92
NOVEMBER			
	MOOE-2022-11-374	ALIEN MODINA-Labor and Wages	7,056.60
		SUB-TOTAL	7,056.60
DECEMBER			
	MOOE-2022-12-392	ALIEN MODINA-Labor and Wages	4,116.35
	MOOE-2022-12-416	ALIEN MODINA-Labor and Wages	3,528.30
	MOOE-2022-12-437	ALIEN MODINA-Labor and Wages	4,704.40
		ALIEN MODINA-Labor and Wages	5,000.00
		SUB-TOTAL	17,349.05
	GRAND-TOTAL		67,496.88

Prepared by:


ANALISA LADRERA
 Clerk Budget Office

TECHNICAL INFORMATION

A. Rationale

Tilapia farming is one of the cultures of choice for sustainable fish farming. It is now growing in some areas of Leyte especially in the municipality of Tolosa. It first gained popularity as an easily farmed fish that could supply cheap but high-quality animal protein in developing countries. Moreover, the success of tilapia farming is mainly attributed to its ease of culture, fast growing and desirable qualities as a food fish

(Suresh, 2003). These include ease of breeding in captivity, tolerance to both crowding and relatively poor water quality and low susceptibility to diseases. Added to this is the fact that it is an acceptable commodity in most part of the country.

The Freshwater Hatchery Facility of the College of Fisheries and Aquatic Sciences (CFAS) currently focuses on this sturdy fish. But because of the limited area for grow-out, the existing ponds could only accommodate so much and most of the fingerlings need to be disposed or relocated. Consequently, CFAS implemented the Tilapia seed dispersal activity, which proved advantageous both to the Freshwater Hatchery Facility as this helps maintain the appropriate stocking density of the concrete tanks and fishponds, and to the recipients of the tilapia fingerlings as well. The activity commenced last January 2021 and CFAS has now been able to provide thousands of fingerlings to 35 beneficiaries in seven municipalities to date. However, while the activity seems a success, CFAS still lacks data on the tilapia production and utilization as a result of the seed dispersal activity. Monitoring the results of the seed dispersal activity is very important in identifying the challenges that might have been encountered by the beneficiaries during tilapia culture.

Constituents in this project hope to improve tilapia aquaculture in Tolosa and in nearby municipalities by addressing the problems in seed production and grow-out culture of the beneficiaries. It also hopes to create additional opportunities for increasing income of tilapia farmers through fish processing as a means of sustaining the market for cultured tilapia in the said municipalities and in the whole region.

B. Logical Framework

	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
GOAL: Improve tilapia production and utilization capacity of stakeholders	Lesser mortality of raised tilapia decreased damaged and spoiled tilapia	Record books,	Beneficiaries are willing to participate in the capacity development activities
PURPOSE: Increase revenue of tilapia producers and processors	Increased volume of sales	Invoice, receipts (Data on sales)	Preference of consumers on fish over other sources of meat
OUTPUTS: Trained and assisted tilapia farmers and farm operators	No. of beneficiaries trained	Certificates of completion, accomplished training evaluation forms, attendance sheets	Beneficiaries are willing to be trained Trainees are able to complete the required no. of days
Training manuals on tilapia production and fish processing	No. of training manuals developed	Copy of training manuals	Availability of materials needed for the production of training manuals
Tilapia products	Published article		Acceptance of article

Publication (Scientific Article)		Copy of published article	
ACTIVITIES: 1.1. Manual (subsets) 1.2. Training (subsets) 1.3. Tilapia products (subsets) 1.4. Profiling of beneficiaries Training Needs Assessment Conduct of trainings Monitoring of beneficiaries after training	Preliminary data from beneficiaries processed TNA conducted No. of trainings conducted (no. of participants) No. of monitoring activities conducted (Data Completeness)	Database of beneficiaries, Profile report Activity report, TNA data, component report Training report, attendance sheets, training recordings, Monitoring reports, component report	Cooperation of beneficiaries to the profiling and TNA activities Prompt procurement and delivery of supplies for training. MOA with LGUs re: conduct of trainings have been executed. Lesser stringent travel restrictions imposed during on-site assessments and monitoring schedules

C. Methodologies

Component 1: Profiling of and Training Needs Assessment for Beneficiaries of the CFAS Tilapia Seed Dispersal Activity

Preliminary information from the beneficiaries obtained through the Fingerling Request Form from January to September 2021 will be processed and transformed into a database for purposes of monitoring. This information will also be used as inputs to the Training Needs Assessment. In addition, a survey and interview will also be conducted to find out what type of assistance they need as well as what issues and concerns they have encountered throughout the process of tilapia production and marketing.

Component 2: Capability-building of Beneficiaries on Tilapia Production and Utilization

Training, workshops, consultation services, and other capability-building activities will be conducted and provided to the beneficiaries as have been identified through the results of the Training Needs Assessment. This component, however, will focus on the technical expertise and services that VSU-Tolosa has in terms of tilapia production and utilization.

Component 3: Monitoring and Evaluation of Trainings Conducted for the Beneficiaries

This component will focus on monitoring and evaluation of extension services provided through Component 2 with the ultimate goal of providing tilapia farmers with sustainable livelihood.

D. Accomplishments

Tilapia Seed Dispersal

The Visayas State University-Tolosa, especially the College of Fisheries and Aquatic Sciences has been engaged in various research and extension activities for quite some time now and it is not new for the department the conduct of

extension projects to its stakeholders, the community. It was just this year, 2022, when the proposed extension project entitled “Tilapia Production and Utilization in Selected municipalities in Leyte” was approved by the Visayas State University Main Campus. Figure 1 shows the notice to proceed from the VSU main campus as an indication that it is ready for implementation.


	VISAYAS STATE UNIVERSITY	OFFICE OF THE DIRECTOR FOR RESEARCH, EXTENSION, INNOVATION AND COMMERCIALIZATION <small>Visayas State University – Tolosa Maharlika Highway, Tanghas, Tolosa, Leyte Email Address: tolosa_reic@vsu.edu.ph Contact No.: 09176230735</small>
March 1, 2022		
Memorandum No. 01 Series of 2022		
TO:	QUENSTEIN D. LAUZON SHEREEN A. MERRO MARY ANN B. MADEJA BRANDON BRIGGS C. SILVANO MARIA DULCE L. ALIBANGBANG RIZA R. REGATO RYAN GERALD MERCADO ROSELYN P. SARTE GESTON PEREZ	
RE:	MEETING	
Good day		
This is to officially inform the proponents of the extension proposal entitled “Tilapia Production and Utilization in Selected Municipalities of Leyte” that this proposed project is already approved and is now good for implementation. With this, I would like to enjoin everyone to an online meeting on March 2, 2022 at 2:00 pm with the following agenda:		
<ol style="list-style-type: none"> 1. Review of the project activities and timeline. 2. Craft logical framework for each project components. 3. Assigning of Tasks. 4. Other matters. 		
Looking forward to your much needed presence. Thank you.		
Respectfully,		
JUNE REY A. MONTAJES, Ph.D. <small>Director- Research, Extension, Innovation, and Commercialization</small>		
Approved by:		
QUENSTEIN D. LAUZON, Ph.D. <small>Chancellor</small>		
Vision: Mission:	A globally competitive university for science, technology, and environmental conservation. Development of a highly competitive human resource, cutting-edge scientific knowledge and innovative technologies for sustainable communities and environment.	
		Page 1 of 1 No. 12-032

Figure 1. Notice to proceed.

The Freshwater Hatchery Facility of the College of Fisheries and Aquatic Resources distributed a total of 8300 fingerlings to 16 beneficiaries from February to June 2022. The distribution was based on the request form given to them by the college. The form indicates basic information and the number of seeds requested by the beneficiaries which will be generated to a data base for Trainings Needs Assessment that are mostly coming from the municipalities of Tolosa, Tanauan, Dulag and Mayorga.


 VISAYAS STATE UNIVERSITY TOLOSA, LEYTE		COLLEGE OF FISHERIES AND AQUATIC SCIENCES <small>271 NACA (New Administrative Building) 9202 Talibao, Talibao, Tolosa, Leyte 6701 Email Address: info@vsa.edu.ph Phone No. (053) 540-1000 to 1005</small>
Tilapia Seed Dispersal Form		
Name of client/organization <i>Archie G. Azala</i>	Address: <i>Baybay, Talibao, Tanauan, Leyte</i>	
Sex: <i>Male</i> Age: <i>29</i>	Contact number: Email address: <i>0956 6979109</i>	
Purpose of request:	Type of Project: (Pis. write a "✓" mark) Private: <input checked="" type="checkbox"/> Government: <input type="checkbox"/> Others (pls. specify): _____	
Type of structure: (Pis. write a "✓" mark) a. Pond: <input checked="" type="checkbox"/> b. Fish cage: <input type="checkbox"/> c. Tank: <input type="checkbox"/> d. Others (Pis. specify): _____	No. of compartments (units): _____ a. Height: _____ b. Length: _____ c. Width: _____ Total area (sq. m): <i>48</i>	
Type of operation: (Pis. write a "✓" mark) a. Grow out: <input checked="" type="checkbox"/> b. Hatchery: <input type="checkbox"/> c. Others (Pis. specify): _____	Culture method: (Pis. write a "✓" mark) a. Monoculture (single species): <input checked="" type="checkbox"/> b. Polyculture (two or more): <input type="checkbox"/>	
Water source: (Pis. write a "✓" mark) a. Pump (deep well): <input checked="" type="checkbox"/> b. Spring/river: <input type="checkbox"/> c. Rain: <input type="checkbox"/> d. Other water: <input type="checkbox"/> e. Others (Pis. specify): _____	Food type used: (Pis. write a "✓" mark) a. Natural foods only: <input type="checkbox"/> b. Mixed commercial and natural food: <input type="checkbox"/> c. Pure commercial feeds: <input checked="" type="checkbox"/>	
To be checked by VSAU only: a. Feeding method: _____	No. of fingerlings requested (total): <i>500</i> Size: <i>2.00</i> Finger: _____ Price (PUS): _____ WHI cost (PUS): _____ Pickup date: _____	
Production Data to be filled up if applicable: No. of fingerlings requested: _____ Date of last stocking: _____ No. of fish sold (PUS): _____ No. of fish harvested: _____ Harvest schedule: _____ No. of fish: _____ Price per kilo (PUS): _____	Certified Available: <input checked="" type="checkbox"/> <i>GERALD MERCADO</i> Farm Worker/Caretaker	
Requested by: _____ Position and Designation: _____	Recommendation Approval: <input checked="" type="checkbox"/> <i>PROF. TERESITA G. JACOBSON</i> Farm Manager/Officer in Charge	
Challenges encountered during the culture period: _____ _____ _____	Approved: <input checked="" type="checkbox"/> <i>DR. GERARDO B. LAZARON</i> Director, College of Fisheries and Aquatic Sciences	

Figure 2. Sample tilapia dispersal form issued by the department.

The department also has photo documentation of some beneficiaries receiving their requested number of fingerlings spearheaded by Mr. Gerald Mercado, farm worker/caretaker.



Figure 3. Seed dispersal from March-June 2022 at the Freshwater Hatchery Facility

Additional fingerlings were distributed on July 27, 2022 at the Freshwater Hatchery Facility to 4 beneficiaries with a total of 2000 seeds. These beneficiaries were mostly from the municipality of Dulag, Leyte and added to the number of beneficiaries of the Training Needs Assessment to be held this year.



Figure 4. Seed dispersal from July 27, 2022, at the Freshwater Hatchery Facility

Demographic Profile

The activity attained a total of 62 recipients including 1 association from January 2021 to June 2022 and an additional 4 individuals on July 27, 2022 (based on the requests received by the department). However, some beneficiaries were not able to provide information and training needs during the survey due to some challenges and difficulties in reaching them. Thus, the activity has brought the number of beneficiaries to a total of 30 and generated the data gathered to identify the training needs of everyone.



Figure 2. Photo documentation of the survey conducted by the department.

Most of the beneficiaries were all coming from nearby towns, especially Tolosa where a huge number of people were interested in the activity. It is followed by Dulag, in which 4 of them were recently added on July 27, 2022, and Tanauan came third with almost 1/4 of the number of beneficiaries and lastly is Mayorga with 1 beneficiary alone.

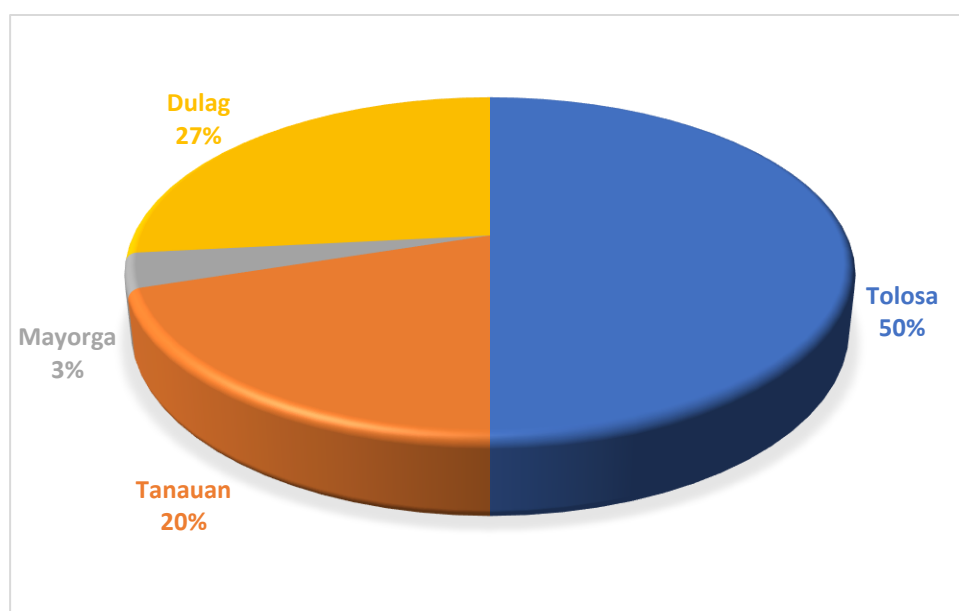


Figure 5. The percentage distribution of each municipality.

In the graph presented (figure 6), 12 of them aged from 26-40 years old, 8 are 51-60 years old, 7 of which are 41-50 and 2 are 61-above. This just indicates that tilapia growing does not just limit to people that aged from 40 years old and above but also has caught the interest of people in 20's (see graph below).

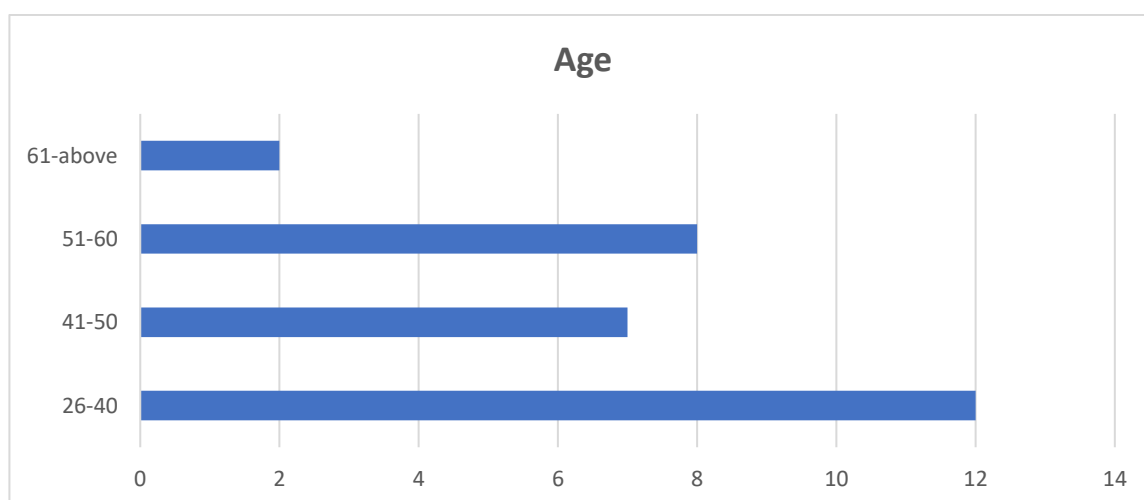


Figure 6. The range of ages of the beneficiaries.

The 30 beneficiaries are consisting of 90% Male and 10% Female. Most tilapia grower are males and are present in all municipalities whereas female growers only accumulated 10% of the total percentage and is very far from the figure of the male grower (see figure 7 for details).

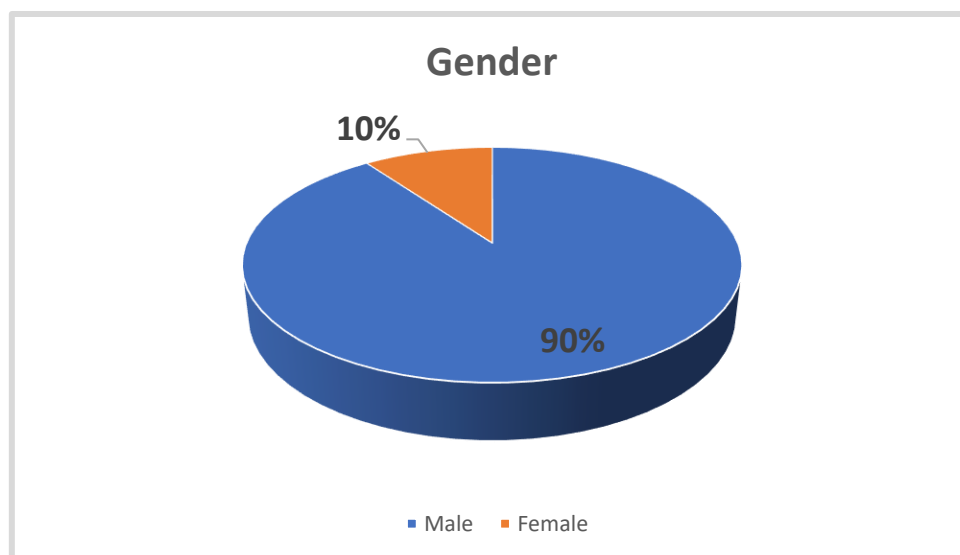


Figure 7. Gender distribution of the beneficiaries.

Growing tilapia for most of the beneficiaries is for the purpose of food consumption and additional income, etc. and most of them are married people who get to see the potential in this activity. They would use this activity to sustain the needs of the family especially since 63% of them are married and 33% of which are single but with the same purpose and 3% are widowed (see figure 8 for details).

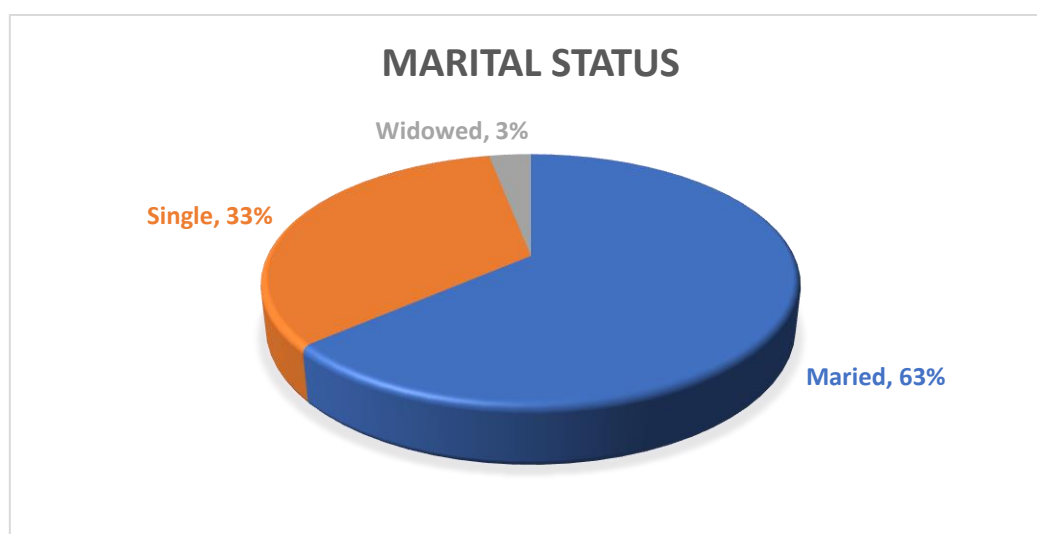


Figure 8. Marital Status

Training Needs Assessment

The survey that was conducted by the department also includes four areas namely Aquaculture, Post-harvest, Processing, and Commercialization. By this time, the beneficiaries get the pen and fill out the form by ranking it based on interest and activities they want to learn. Upon extraction, we have identified the training needs through weight average ranking in the four areas. (See figures below for details.)

the item which ranks first, then "2" for the item that rank second, and so on. Write your number in the space provided before each item.

a. Production

Activities	Priority	Rank
Feed Formulation and Feeding Management	/	1
Pond Preparation	/	2
Fish Health Management	/	3
Genetics and Breeding		
Water Quality Management		
Tilapia Economics		

b. Post-harvest / Fish Utilization

Activities	Priority	Rank
Proper post-harvest handling	/	1
Food Safety Management	/	2
Fish Processing and Preservation	/	3
• Drying		
• Salting		
• Canning		
• Fermenting		
• Marinating		
• Smoking		
• Minced Fish Products		
Packaging and Labelling		

c. Commercialization

Activities	Priority	Rank
Simple bookkeeping	/	1
Simple accounting	/	2
Business planning and organization	/	3
Simple marketing	/	4
Financial management	/	5

Additional Information/Comments:

Figure 9. The last portion of the questionnaire shows where the four areas are located.

The result of the aquaculture activities wherein Pond Management ranked first with an average weight of 3.8 and followed by Fish Health Management 2.73, Feed Formulation 2.76, Water Quality Management 2.47, Genetics and Breeding 2.1, and lastly Tilapia Economics with 1.97 (see figure 10).

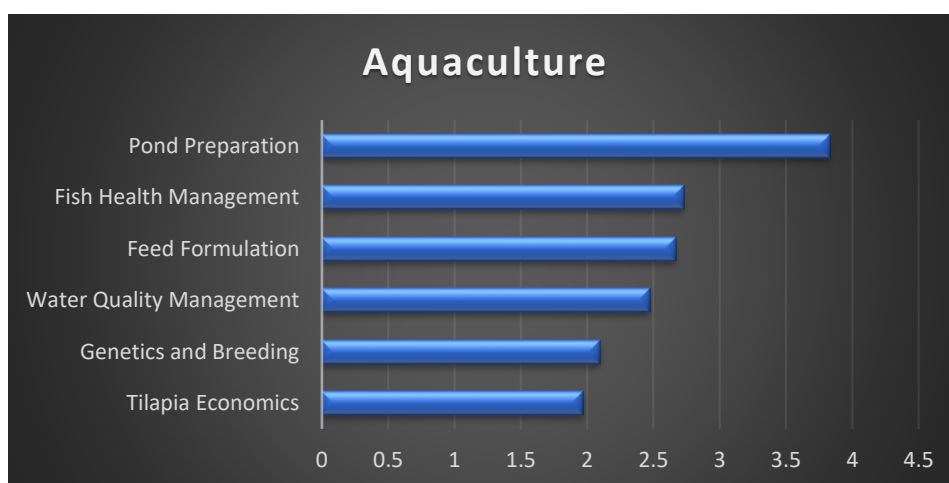


Figure 10. Aquaculture

Post-harvest activities include Proper handling, Food safety and Processes before consuming or marketing. The department identified the training needs of the

beneficiaries through the surveys and phone calls conducted during May, June, and July 2022. Ranked first is the post-harvest handling wherein it got 15 out of 30 interested people to learn and an average weight of 5, followed by Food Safety Management 3.5, Drying 3.37, Salting 2.6, Fermenting 2.23, Canning 1.77, Minced Products 1.57, Marinating 1.53, Smoking 1.4, and Packaging and Labeling 1.1 (figure 11).



Figure 11. Post-harvest Activities

Commercialization includes accounting, finance, marketing and more. The survey has allowed us to get the number of interested people to learn about the area. Simple accounting weighted 1.3, 1.2 for financial management, and so on (see figure 12). This area has the least number of interested people to learn.



Figure 12. Commercialization

E. Problems Met and Recommendations

1. Some beneficiaries were out of reach.
2. There were no culture ponds available for some of the beneficiaries.

Recommendations

1. There should be a regular monitoring of culture activities/progress after seed distribution.
2. People who requested for fingerlings should undergo a thorough inspection before the release of the fingerlings.
3. Upon extraction of data, we have learned that most of the beneficiaries lacked the basic knowledge of pond preparation because some of them were experiencing pest infestation and it must be the first thing the department should teach these growers.

F. Plans and Target for the next year

- Conduct training and seminars for beneficiaries and non-beneficiaries (participatory activities)
- Continuous Tilapia Dispersal Program (TDS)
- Collaboration with Non-Profit Organizations (Partnership)
- Expansion of Tilapia Extension Program to interested municipalities in Leyte.
- Secure LGU Agreements and Collaborator Agreements (MOA)

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Noted:

SHEREEN A. MERRO

Component Leader

Recommending Approval:

QUENSTEIN D. LAUZON, Ph.D.

Project Leader

Approved:

JUNE REY A. MONTAJES, Ph. D.

Director, REIC

cc: Director for Extension, RDE
CFAS
ODREIC