

Supply Chain Analysis of Fruits and Vegetables Produce of the Indigenous People (IP) Farmers in Marilog District, Davao City

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ARTICLE INFO

Keywords: Indigenous People (IP) Farmers, Supply Chain Analysis, Agriculture, Matigsalug, Colaizzi Qualitative Data Analysis

Received : 20, September
Revised : 04, October
Accepted: 05, November

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ABSTRACT

This study explores the farming and marketing challenges faced by the Matigsalug farmers in Marilog District, Davao City, over the past decade. Utilizing focus group discussions (FGDs) and in-depth interviews (IDIs), it captures the lived experiences of the farmers. The study identifies three key themes: Farming Status, Crop Management, and Marketing Approach. These themes underscore the ongoing challenges in sustainable agriculture and access to markets, while also proposing strategic interventions. The findings are aligned with recent efforts to meet the UN Sustainable Development Goals (SDG), particularly Zero Hunger, and emphasize the importance of policies that enhance agricultural inclusivity. The study contributes to the discourse on supporting Indigenous People (IP) farmers and informs contemporary urban, rural, and regional development planning initiatives.

INTRODUCTION

Food security has long been a concern of most of the world's population. According to the Food and Agriculture Organization (FAO), 925 million people, or approximately 12% of the world's population, are undernourished as of 2020 (FAO, 2020). Conforming to the World Food Program of the United Nations (UN), 135 million people experience acute hunger because of the recent intervention of humans, climate change, and economic decline. The UN Sustainable Development Goals (SDG) highlights Zero Hunger as its second goal and mentions that regardless of the famine and hunger suffered by the developing countries.

Filipinos are incapable of accessing the three meals a day, and it has been sought that a significant impact on the Filipinos, especially the local farmers is to develop a sustainable farm-to-market approach for the underprivileged Filipinos (World Wide Fund, 2017). The concept is to advance immediate access to food security by putting up farms sufficing the personal needs and the needs of the adjacent communities that can benefit the market. Thus, realizing a self-sufficient concept while setting up an agricultural business can serve as an additional source of livelihood.

Davao City's agribusiness profile shows that it is predominantly an agricultural city known as the "Food Basket of the Philippines." The 73,086 hectares, or 29.95% of its total land area, are developed as agricultural areas, and 45% can be potentially cultivated for agriculture production (Davao City's CLUP, 2013-2022). Specifically, 44,748.23 hectares is the production area for crops, excluding plantations. This significant factor that drives Davao City to improve its economy can consider an agriculture-led development for the city. This is stipulated in the Davao City CLUP 2013-2022, emphasizing that these potentials persist in the districts of Marilog and Paquibato, also identified as the Marilog-Paquibato Economic Zone.

The agricultural-led development options of Davao City have been considered to include a strategic intervention in improving the value of its products sold both as fresh and processed (Davao City's CLUP, 2013-2022). The same CLUP categorically stated that intensifying the drive to develop Davao City's high-value crops like durian, cacao, rubber, and other agroforestry products is considered one of the significant opportunities to make the city thrive. However, in realizing these initiatives and defining the specific areas wherein these programs will be directed, actual evaluation of the current farming and marketing status in these areas and the local farmers involved are not strongly identified. This is a paramount concern considering that these areas in the city are populated by the Indigenous People (IP)

This study recognizes a group of IPs in the area known as the Matigsalug, specifically its organization, the Matigsalug Council of Elders in Marilog District, Davao City, Inc. (MACOEMADDACI). It is to make a framework where the Matigsalug can sell its products and continue their traditional lifestyle as local farmers belonging to the IP sector. The overriding direction of this study is to provide a framework to develop agricultural inclusivity by supporting small-scale farmers through knowing the most

efficient approach between the Matigsalug and the potential markets and networks in Davao City.

THEORETICAL REVIEW

Supply Chain Management in Agricultural Products

In agriculture, supply chains are essential to transforming raw agricultural products from farms to market-ready produce. Unlike manufacturing, agricultural supply chains are more complex due to the perishability of products, seasonality, and sensitivity to environmental conditions. Effective supply chain management ensures reduced losses, increased efficiency, and optimal delivery times.

Role of Indigenous Farmers in the Agricultural Supply Chain

Indigenous farmers often operate within traditional and resource-restrained systems, contributing valuable cultural practices and sustainable farming techniques to the supply chain. Their knowledge of the local ecosystem aids in growing organic and resilient crops but can also present unique logistical challenges due to remote locations and limited access to modern infrastructure. Understanding the practices and values of IP farmers can help in designing a supply chain that is both efficient and respectful of traditional farming methods.

Challenges in the Fruits and Vegetables Supply Chain for Indigenous Farmers

Indigenous farmers in remote areas face multiple challenges:

- a. Transportation and Accessibility
- b. Market Access and Intermediaries
- c. Storage and Post-Harvest Losses

Theoretical Framework

The theoretical framework of this study is anchored on the Sustainable Development Paradigm as articulated in the seminal Brundtland Commission Report titled "Our Common Future," published in 1987 by the UN. Aligning with the Philippine Development Plan and the AmBisyon Natin 2040, this framework emphasizes sustainable agricultural productivity, support for local farmers, and equal access to land, technology, and markets, aiming for agricultural inclusivity and community empowerment.

METHODOLOGY

Research Design

The research design of this thesis employs a qualitative exploratory case study approach to investigate the farming and marketing practices of the Matigsalug farmers in Marilog District, Davao City. Grounded in relativist ontology, the study embraces the notion of multiple realities as perceived by participants. Data was collected through in-depth interviews (IDI) and focus group discussions (FGD) with farmers, facilitated by semi-structured interview guides to capture detailed narratives. Purposive sampling, specifically snowball

sampling, was used to select participants, ensuring a diverse representation of perspectives. Data analysis was conducted using thematic analysis and Colaizzi's method, allowing for the extraction and aggregation of significant statements into themes.

Locale of the Study

The study was carried out in the Marilog District, where the members of the Matigsalug are dominantly situated. Marilog District is one of the administrative districts under the third congressional district of Davao City, also identified as entirely a Certificate of Ancestral Domain Titles (CADT) Area, specifically an Ancestral Domain (AD) of the Matigsalug-Manobo Tribe. Marilog District has an estimated land area of 63,885 hectares, or 0.26% of the total land area of Davao City (Davao City's CLUP, 2013-2022). Further, Marilog District also belongs to the Marilog-Paquibato Economic Zone, which is considered the area where agroforestry in Davao City.

Unit of Analysis

The unit of analysis in this thesis is the Matigsalug farmers and their leaders or elders within the Matigsalug Council of Elders in Marilog District, Davao City, Inc. (MACOEMADDACI). This study focuses specifically on these individuals as they represent a critical demographic whose livelihoods depend entirely on farming and marketing activities. By examining their farming practices, marketing strategies, and challenges, the research aims to develop a sustainable framework that can enhance agricultural productivity and market access for this indigenous group. The Chief Datu of the Matigsalug facilitated the selection of these participants, ensuring that ordinary members and leaders were included to capture a comprehensive range of perspectives within the community.

Ethical Considerations

Ethical considerations were rigorously adhered to throughout the research to ensure the protection and respect of the Matigsalug participants. It included securing informed consent, ensuring voluntary participation, and maintaining confidentiality. Participants were fully informed about the study's purpose, procedures, and right to withdraw without detriment (Orb et al., 2001; Richards, 2002). Given the cultural sensitivity, special attention was paid to avoid any harm or discomfort, with researchers being discreet and respectful of the indigenous cultural norms and practices (Sanjari et al., 2014). Additionally, ethical clearance was obtained from relevant authorities, and all data was anonymized to protect participant identities.

RESULTS AND DISCUSSION

This section presents and interprets the data gathered from the participants who experienced data gathering in a hybrid learning environment.

Situation of Farming among Members of the Matigsalug

The Matigsalug Farmers were able to describe their farming status through the resulting emergent themes, which are (1) Mode of access to water, (2) Application of conventional farming technique, and (3) Basis for crop selection, as shown in Figure 1. Hence, this results in the overarching theme of "farming status."

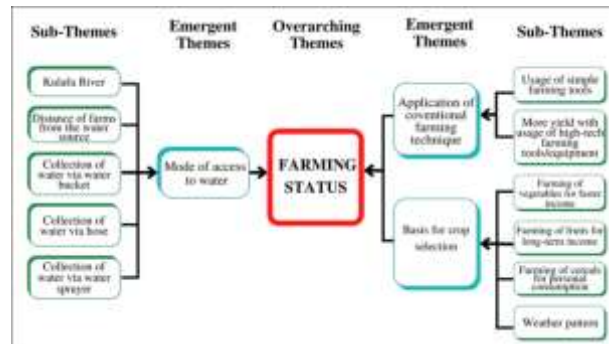


Figure 1. Thematic Map of the Overarching Theme "Farming Status"

Mode of Access to Water

The majority of the Matigsalug Farmers experience these cases, whereinto specify, they encounter issues due to inaccessible water sources. Most of their farms are located in higher elevations, requiring them to manually collect water down in the river going to their farms. It is imperative to know that this problem exists, knowing that according to the US Center for Disease Control and Prevention (2016), a decrease in applied water can cause production and yield to decrease. Moreover, the World Bank (2020) emphasized that water access in agricultural production is vital for attaining food security. The concerns on water source access were emphasized by the Matigsalug Farmers through their narratives, as follows:

"Ginahakot namo ang tubig. Among ginagamit kay water sprayer na rechargeable. Usahay balde-balde." (R1, Sheet 1, L26-28)

[We often manually collect water using a rechargeable water sprayer or water bucket.]

"Sigeg hakot. Labi nag tulo ka adlaw init, ma'am. Wala pay ikatulo, mangbisbis naka. Labi na nang pechay kinahanglan taga adlaw bisbis." (E1, Sheet 3, L179)

[We always transport water manually. We have to water our crops when it has been three (3) days of the successive dry season. Especially the Chinese cabbage requires to be watered daily.]

Application of Conventional Farming Technique

Another farming practice of the Matigsalug Farmers is the application of the conventional farming techniques by using their usual farming tools, which

also includes the use of synthetic chemicals, fertilizers, pesticides, and herbicides.

"Kung unsa ang sauna kay through experience naman gud na sauna. Kasagaran sa amoa. Experience sa mga katigulangan. Mao lang gihapon among ginasonod karon." (R1, Sheet 1, L36&38)

[The traditional farming techniques practiced by our forefathers are still the same techniques that we apply.]

"Mas dugay lang gyud tung tradition na pag-uma kesa sa mga high-tech na karon pero mabuhi lang man gihapon mi. Mas daghan lang jud to ug kuha." (R1, Sheet 1, L68)

[Although it is manageable, it is just that it takes us longer to farm using traditional farming techniques than when we use high-tech equipment for farming. It will be more efficient.]

"Wala mi ginagamit na makina as pag-uma. Sa uban kabaw na." (E3, Sheet 3, L61&63)

[We do not use machinery for farming, although others use Carabaos (for plowing).]

Basis for Crop Selection

The last emergent theme raised was the basis of the Matigsalug Farmers in terms of their crop selection. It was described why they chose to farm vegetables, fruits, and cereals and how the weather pattern influences their farming system.

"Sa mga gulay ma'am, among ginatanom kay pechay, ampalaya, talong, sayote, alugbati, kolikot. Sa prutas kay Rambutan, Lanzones, Durian, ug lubi." (R1, Sheet 1, L18)

[We usually plant Chinese cabbage, bitter gourd, eggplant, chayote, Malabar spinach, and wild chili with the vegetables. We plant Rambutan, Lanzones, Durian, and coconut with the fruits.]

"Kasagaran gyud namo itanom maam kanang pechay gyud kay dali ra ma harvest. Kasagaran pechay, pipino, ug batong kay dali ra sya. Mao ra gyud na sya maam kay within just 45 days raman gud sya ma harvest na nimo sya." (F1, Sheet 4, L8,10&12)

[We usually plant Chinese cabbage, cucumber, and string beans because it will just take us 45 days to harvest.]

Challenges Encountered by the Matigsalug in Ensuring Sustainable Farming and Marketing in terms of Crop Management

Another overarching theme, "crop management," was formulated from the emergent themes classified such as (1) Application of maintenance for the crops' quality, (2) Procurement of good quality seeds/seedlings, and (3) Water control, which is shown in Figure 2.

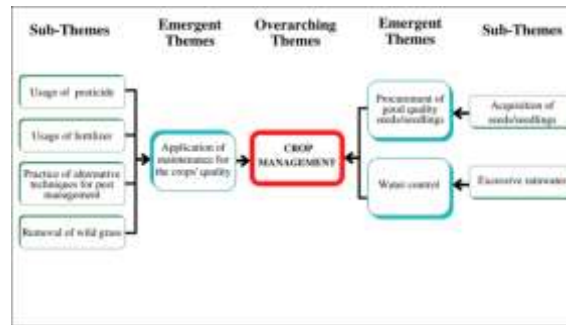


Figure 2. Thematic Map of the Overarching Theme "Crop Management"

Application of Maintenance for the Crops' Quality

The high costs of pesticides and herbicides add up to their harvests' operational expenses, resulting in the need to raise the prices of their produce. However, since they have to ensure that their products are of good quality, these interventions are inevitable for them. As Aktar et al. (2009) describe, the immediate benefit of pesticides is the consequences of their effects, which means that preventing pest infestations will result in an abundant yield.

"Dili jud malikayan, Ma'am. Daghan army worm and cutworm, na naga atake sa among tanom" (R1, Sheet 1, L54,56, and 58)

[It is imminent (pest infestation). Common pests are armyworms and cutworms.]

"Nagabutang mig mga medisina. Usahay malugi gani, Ma'am. Dili makontra kung wala kay ikagasto ipalit ug medisina. Pero ok ra man, makaya ra gihapon". (R1, Sheet 1, L60&62)

[We use medicines (pesticides). But we have no choice because the pests are inevitable. Although sometimes we can manage our expenses, there are times that we cannot gain profit.]

"Spray kanang pangpatay sa sagbot. Harmful gud sya sa tao hayop ug yuta dili gud unta sya advisable pero mao may kuan sa mag uuma para mudako gyud ilang tanom gina spray kay mahal man pa guna." (F4, Sheet 4, 80,82,&87)

[We use herbicides to get rid of the wild grass. We know that using this can cause harm to people and the environment. But we farmers opt to do this instead because it will cost us more to pay for labor to remove the wild grass manually.]

Procurement of Good Quality Seeds/Seedlings

The primary source of living for the Matigsalug is farming. Moreover, to have a high chance of abundant harvest, they should start by having a good quality of seeds to plant. Choosing a good quality seed still costs the Matigsalug

Farmers more, but it is one of the essential factors in increasing agricultural production.

"Ang similya pud mahal" (R1, Sheet 1, L73)

[The seedlings are expensive]

Water Control

The impact of water in agriculture is significant. Changes in the availability of water, especially with the influence of weather, can impact the productivity and revenue of agriculture (Torres et al., 2019). However, extreme rainfall has different effects on the crops, especially in the farming pattern and physical damage to the crops.

"Magkaproblema mi sa pag-uma kung ting-ulan." (R2, Sheet 2, L134)

[We experience problems in farming during the rainy season.]

"Aduna gyuy panahon na...kanang depende man gud sa sitwasyon sa panahon. Ang kani man gung pag-uma adunay panahon na maayo..naay dili. So ting-init mao nang ting limpyo. Limpyo nang ting-init. Ing-aron na ulan-ulan mao pay pag tanom." (E3, Sheet 3, L10)

[Our situation in farming varies and greatly depends on the season. During the dry season, we till our lands, and then during the wet season, we start to plant.]

Marketing Approach of the Matigsalug towards their Produce

Among the overarching themes produced about the narratives of the Matigsalug Farmers, this last theme (shown in Figures 3 and 4), "marketing approach," narrates the experiences of the Matigsalug Farmers, predominantly their experiences in marketing their produce. The emergent themes of this section are the following (1) Selling of crops in Bankerohan Public Market, (2) Risking in selling the crops despite the uncertain income generation, (3) Spending on crops carriage, (4) Unsold products, (5) Idea on establishing partnerships that will help the Matigsalug Farmers, and (6) Farmers to traders arrangement.



Figure 3. Thematic Map of the Overarching Theme "Marketing Approach"



Figure 4. Thematic Map of the Overarching Theme "Marketing Approach" (continuation)

Selling of Crops in Bankerohan Public Market

Marilog District is one of the largest agricultural areas in Davao City. It is also identified as one of the leading vegetable-producing areas in the Davao Region (Davao City's CLUP, 2013-2022), and the Matigsalug Farmers can corroborate this advantage.

Based on the study conducted by the Australian Centre for International Agricultural Research (ACIAR) (2016), temperate vegetables thrive in Kapatagan, Bukidnon, and Marilog. These vegetables are sold in Bankerohan Public Market, likewise with the produce of the Matigsalug Farmers. After harvesting, they transport the crops weekly to Bankerohan through a hired jeepney. These farmers who directly transport their products are those who are renting space in Bankerohan. They can get more profit when they directly sell it to the market than when selling their produce to traders. They are also affirmed by ACIAR (2016) that the number of farmers who rent space in Bankerohan is increasing. The following statements highlight the Matigsalug Farmers' experience in selling their crops.

"Akong papa lang ang tiga reto sa Davao. Among mga stock, siya pud mukuha. Kami ra gihapon mudala sa Bankerohan, Ma'am. (R1, Sheet 1, L40)"

[My father sells our harvests in Davao (Bankerohan). He directly transports our stock to Bankerohan.]

"Usahay ma'am kay tanan. Tanan mabaligya sa bankerohan. For example sa ampalaya namo, duha ka sako. Pechay, tulo ka sako. Sa talong, isa ka sako. Mao among mabaligya sa bankerohan, ma'am." (R1, Sheet 1, L89)

[We sell all of our harvests straight to Bankerohan. For instance, the number of our harvests is sometimes two (2) sacks of bitter melon, three (3) sacks of Chinese cabbage, and one (1) sack of eggplant.]

"Ako mama naay pwesto sa bankerohan. Kami ang mabaligya didto." (R2, Sheet 2, L82)

[My mother has a stall in Bankerohan. We are the ones who sell our harvests there.]

"Dili namo ginabaligya sa traders among harvest. Dili namo ihatag kay mas dako-dako among income ba." (R2, Sheet 2, L124&181)

[We do not sell our harvests to the traders because we can generate more income if we directly sell our products in Bankerohan.]

"Bali ang amoa ug naa nami ma harvest gina dretso namo baligya sa bankerohan" (F1, Sheet 4, L36)

[In our case, we directly sell our products to Bankerohan.]

"Ako bisan ginagmay akong gulay i-deliver nalang gyud nako. Kesa diri nako ibaligya". (F2, Sheet 4, L 127)

[Even though our harvests are not much, I still opt to deliver it to Bankerohan rather than sell it here (traders).]

Risking in Selling the Crops despite the Uncertain Income Generation

The Matigsalug Farmers displayed various scenarios in their farming and marketing experiences through the narratives exhibited in the earlier sections. They are individuals whose primary source of income is farming. This

emergent theme has exposed the Matigsalug Farmers' challenges from the hardships in farming and how these efforts are monetarily compensated—highlighting further that the respective income they get from marketing their products also dictates how they can progress in farming. Hence, the emergent theme of "risking in selling the crops despite the uncertain income generation."

Particularly with the prevailing plight of the Matigsalug Farmers, their compelling problems in farming are more on the financial aspect. Whether they will sell their products directly to Bankerohan or through the traders, it all boils down to the fact that their income is inconsistent because their harvests are sold at a low price. Thus, what they earn does not recoup the human efforts and production costs.

Furthermore, since most of the harvests are sold weekly, the capital for the following weeks' planting will be dependent on the current week's income. However, at times that status in the market is on their side, and it is immensely profitable; they can usually earn twice their capital. From these, the genuine status of the farming and marketing routine of the Matigsalug Farmers can be viewed here. The succeeding narratives will go into the in-depth cases of the Matigsalug Farmers with the said challenges.

"Depende sa presyo, Ma'am. Usahay bagsak, usahay mahal. Weather weather ra gihapon, Ma'am." (R1, Sheet 1, L44)

[It depends (income) on the prices in the market. Our products are sold at a low price, but sometimes they are sold at a higher price.]

"Usahay basta makapalit lang mi ug bugas, panud-an, mabuhi lang mi sa isa ka semana. Sunod semana napud, byahe napud, ana lang ma'am." (R1, Sheet 1, L104)

[Above all, the most important is that we can at least buy our meals and survive for the week. Then, we will work again for the following week.]

"Maka-rolling? Pareho aning maka igo mig kalabasa gamay, dungagan napud namo ug tanom. For example, isa ka lata unya makaigo mi, mupatong mi ug times two." (R2, Sheet 2, L227)

[For example, if we can earn a high profit this week with the squash, we will automatically plant more for the following week. Also, if the supply is low in the market, we can at least double the price of our products.]

"Kung matunong ug mahal, bawi nimo. Matunong ug barato or failure, tanom napud ka." (E5, Sheet 3, L280)

[If we can sell our products at a higher price, it is good for us. However, if not, then we will try again next time.]

"Sa pamaligya namo barato kayo nya sa pamaliton namo grabe gyud kamahal ang medisina abuno mao ng amo ginakuan gyud grabe kamahal sa pamaliton then pagbaligya namo sa bankerohan halos pangayoon ng presyo." (F1, Sheet 4, L4)

[The cost of our everyday commodities is very high. Plus, we still have to buy pesticides and fertilizers, which are also costly. Then our products are sold in Bankerohan at a meager price.]

Spending on Crops' Carriage

Transportation is a vital element in agriculture, specifically with farming and marketing of the products. Poor quality of transportation may cause physical damage to the crops, which can decrease their quality, leading eventually to a lower price of the product. Also, expensive transport services can induce additional operational costs wherein farmers will require to increase the price of their harvests (Hine, 2001). Narrowing down to the case of the Matigsalug Farmers, prior to selling the crops either to the traders or Bankerohan, they have to first transfer their harvests from their respective farms to the highway. Usually, a horse or a motorcycle is hired to transfer the crops. However, due to its additional cost, they prefer to transfer their products on their own, which is laborious. After the crops are transported on the highway, they will be transferred to the market by a hired jeepney. Once the crops reach Bankerohan, additional service costs will be added for the dropping of the products. Indeed, the statement of Hine (2001) is exact that the cost of transportation plays a vital role in formulating a connection toward agricultural development. Here are a few of the narratives shared by the Matigsalug Farmers:

"Naay suki namo na jeep na muadtog Davao. Mamasaha lang mi taga karga, naa sa mga gatos." (R1, Sheet 1, L48)

[We usually hire a jeepney. Usually, our transportation costs at least PHP 100.00 per sack.]

"Unya ang transferring pa, ma'am. Transfer napud. Kabayo ug tao mao ang mu-labor. Pag-abot sa kalsada, motor napuy mulabor. Pag-abot sa highway, pa-Bangkerohan, jeep napud ang sakyang. So ika-tulo siya i-handling." (E3, Sheet 3, L76)

[With the transferring (of crops), a horse or person is usually hired to transfer our harvests to the highway. After, we will be transporting them to Bankerohan via jeepney. Our products are transferred thrice.]

"Uno singkwenta ang haul. Piso sa motor, dos singkwenta na. Kumprahon nag singko. Pamasaha pa namo trabahador." (E3, Sheet, L142)

[It costs PHP 1.50 (per kilo) for the hauling of the crops, then PHP 1.00 (per kilo) for the hired motorcycle. However, our products are usually bought from us at PHP 5.00 per kilo.]

"Mao na isa pud sa problema sa mag uuma magpa gawas sa produkto" (F3, Sheet 4, L99)

[One of the problems we encounter as farmers are the transfer of products from the farm to the highway.]

Unsold Products

The European Union (2012) defines food waste as food that is rejected from the food supply chain but is still edible and can still be consumed by humans, which causes adversities environmentally and economically. It is also considered a global phenomenon in agriculture (Peira et al., 2018). Thus, the Matigsalug Farmers are not an exemption from this problem.

Specifically, upon harvest, the Matigsalug Farmers have a distinct classification of their products--Class A (premium quality), Class B (good quality), and Class C (poor quality). The categorization of the harvests is where the "food waste" begins. According to the Matigsalug Farmers, only the Class A and Class B crops are usually sold. Since they have to maximize their harvests to earn, they opt to sell the Class C products at a meager price. However, when these are not consumed, they are left with no choice but to give them to other people or dispose of them. Below are the statements of the Matigsalug Farmers.

"Usahay ibilin lang namo sa Bankerohan. Amo lang ipanghatag didto. Kay 24 hours lang ka didto unya uli naka direktso. Kay naa napud mupuli sa imong pwesto. Puli-puli lang man didto, Ma'am" (R1, Sheet 1, L75)

[Usually, we leave unsold products in Bankerohan. Sometimes, we give these to the people there. We are only allowed to sell our products in Bankerohan for 24 hours, and we will be replaced by the next tenant that has rented the same stall.]

"Ginalabay namo didto." (R2, Sheet 2, L191)

[We throw them (unsold products).]

"Ang uban gina hatag namo. Ginapapakyaw namo." (R2, Sheet 2, L237&L243)

[Sometimes we give the unsold crops or sell them at a meager wholesale price.]

"Kasagaran ana kalabasa. Pag mupresyo na nang kalabasa ug dos singkwenta, wala na. Dili na na kagawas, ma'am." (E1, Sheet 3, L254)

[For example, the squash costs PHP 2.50 per kilo from the farm (excluding overhead cost and transportation cost), and then the traders will buy this set of squash at the same price; we opt not to transport them to the highway anymore.]

"Usahay tunga. Tunga pud ang masayang." (F2, Sheet 4, L164)

[Usually, half of our harvests are unsold.]

Idea on Establishing Partnerships that will help the Matigsalug Farmers

The emergent theme "idea of establishing partnerships that will help the farmers" enumerates the suggested solution of the Matigsalug Farmers for the challenges they have been experiencing in farming and marketing. They desire the following proposed solutions to be established through third-party support, such as private companies, businesses, and government agencies.

One of which is the establishment of a centralized bagsakan in Marilog. The Matigsalug Farmers are already immersed in the usual scenario wherein they sell their harvests without assurance that they can earn enough profit. With the situation that the traders usually buy their yields at a low price, and delivery of products going to Bankerohan is costly, the farmers are convinced that they need a local centralized bagsakan.

Moreover, other recommended solutions of the Matigsalug Farmers are financing support, technical support, and implementation of government programs and projects. Although interventions like these from the government already exist, such as the Kapital Access for Young Agripreneurs (KAYA), Agri-Negosyo Loan Program (ANYO), Sikat Saka Program (SSP), among others, of the Department of Agriculture (DA). The Matigsalug Farmers needed more

assistance in accessing such help. They are not technically capable enough to acquaint themselves with this system, consequently hoping that this aid will be available in their area. Generally, it is vital first to capacitate the farmers in management, ensure their commitment, and provide supervision through government agencies or non-government offices before implementing the proposed solutions (Purnawan et al.,2021). Below are the depositions of the Matigsalug Farmers:

“Ok siya para sa amoang mga farmer. Para dili nami mugasto ug pamasaha. Dili na maghago-hago adtog Davao.” (R1, Sheet 1, L81)

[It is okay for us farmers (bagsakan), so we do not have to spend more on transportation expenses. We do not need to go to Davao (Bankerohan) anymore.]

“Mas gwapo kung duol nalang kay direct nalang pag harvest, fresh pa kaayo pag abot sa bagsakan.” (R1, Sheet 1, L93)

[It is better because it is (bagsakan) near our farms so we can assure that the harvests are still in good condition because of the shorter duration of travel.]

“Mao nang gwapo naay bagsakan para nay sigurado na buyer” (E3, Sheet 3, L288)

[The reason why it is better to have a bagsakan because there is a sure buyer (of our harvests).]

“Mas okay gyud tong naay bagskan kay mahal in gyud tanan.” (F4, Sheet 4, L158)

[It is better to have a bagsakan to make sure all of the harvests will be sold.]

“Kung naa lang gyud mo guide..naay grupo... na magdala sa grupo muadto sila didto para makaloan sila. Og e encourage sad nimo sila na dili magpa bilin na sige pa finance kay para muabot ang panahon na sarili nalang nimo ang gasto.” (F3, Sheet 4, L231&236)

[If only a group could help the farmers avail of existing agricultural programs, especially with agricultural loans. Also, it would be better if groups would also guide the farmers in terms of their finances.]

Farmers to Traders Arrangement

The last remaining emergent theme for the overarching "marketing approach" is the "farmers to traders' arrangement." In the preceding sections, the paper discussed that the Matigsalug Farmers either sell their products straight to Bankerohan or through traders. Here, the experiences of the Matigsalug Farmers with their business arrangements with the traders are sought out.

Some Matigsalug Farmers are not financially capable enough to deliver their products straight to Bankerohan. Their harvests are sometimes not that much, and it will be unfeasible to transport them to the market. That is why they prefer to sell it to traders. However, problems such as the fixed pricing of crops by the traders and their delayed payments are the most challenging cases that they need to face. Thus, these schemes probably exist because the study can presume that the farmers' little knowledge of the market is why they are reliant on what their buyers will say about the market. These local farmers fully

entrust their products to the traders, not considering going beyond what is happening in the agricultural market (Concepcion&Montiflor, 2003). The following narratives will go in-depth with the Matigsalug Famers' perception of the traders.

"Number one gyud na problema namo diri ma'am, walay klarong buyer. Dili nang pagdeliver nimo, diretso na ug bayad. Ideliver pag Bankerohan, pagbalik, anha paka bayran. alay dagko bitaw nga aduna gyuy capital." (E3, Sheet 3, L167)

[The number one problem that we experience is we do not have sure buyers. Sure buyers in the sense that they should be paying us directly upon getting our harvests. However, they pay us after selling the products first in Bankerohan.]

CONCLUSIONS AND RECOMMENDATIONS

The recommendations based on the study's findings encompass policy, community-level, and future study considerations. Policy recommendations include establishing a centralized bagsakan (drop-off point) in Marilog to reduce the travel burden for farmers transporting produce to Bankerohan Public Market, approximately 60 kilometers away (Kevin Lynch, *The Image of the City*). Watershed management education is also recommended to help farmers understand and maintain sustainable farming practices, given their reliance on the Kulafu River.

At the community level, it is advised that the Matigsalug Farmers continue to strengthen their institutional management through MACOEMADDACI to attract and effectively utilize agricultural aid. Farmers should also register with the Registry System for Basic Sectors in Agriculture (RSBSA) to access government agricultural programs. Additionally, farmers should become more proactive in pricing their produce and exploring value-added activities, such as selling pre-cooked vegetables, to enhance their income stability.

FURTHER STUDY

Future research should investigate the impacts of the Philippines' Public Utility Vehicle Modernization (PUVM) Program on farmers' transportation methods. Further investigation into the effectiveness of Farm-to-Market Roads (FMR) is suggested to alleviate transportation challenges. Lastly, in-depth socio-economic and anthropological studies of the Matigsalug Farmers are recommended to develop a comprehensive profile, aiding the implementation of effective agricultural programs (Colaizzi, 1978; Creswell, 2015; Sanjari et al., 2014)

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