EFFECTIVENESS OF TAGUMPAY AGRIVOLVING FUND (TAF) PROGRAM FOR RICE FARMERS IN TAGUM CITY, DAVAO DEL NORTE

ABSTRACT

The main objective of the study was to determine the effectiveness of the TagumpayAgrivolving Fund (TAF) program for rice farmers. A mixed-method research design was employed for this study. The sample of 150 rice farmers from six farmers' associations in Tagum City was determined using stratified random sampling technique. Data were collected through face-to-face interviews using a survey questionnaire that was validated by experts. The collected data were analyzed and interpreted using frequency, mean, and thematic analysis. The findings revealed that the majority of the farming population in the study consisted of older individuals, aged 41 years old and above. The gender distribution among the respondents in the TagumpayAgrivolving Fund Program showed a slightly higher representation of male farmers. Most farmers had relatively small to moderate-sized households and low monthly incomes. Furthermore, the majority of farmers were elementary graduates. They owned the land they cultivated, with small to medium-sized farm lots ranging from 1 to 5 hectares. Additionally, the program had a significant positive impact on the mean volume of rice production, which potentially improved the farmers' income. The results also indicated that the repayment terms of the TagumpayAgrivolving Fund (TAF) Program were consistently observed and perceived as very high in terms of program practices. Moreover, the effectiveness of the program in terms of access to credit, loan size, interest rate, repayment terms, and availability of technical support was reported as very high, demonstrating the program's effectiveness in empowering and facilitating agricultural endeavors. However, the rice farmers in the TagumpayAgrivolving Fund (TAF) Program faced challenges such as insufficient financing for rice production, low return on investment, delayed action on the needs of rice farmers, and scarcity of water supply.

Keywords: TagumpayAgrivolving Fund (TAF) Program, Practices, Impact, Effectiveness, Rice Farmers

1. INTRODUCTION

Agriculture remains crucial to the economy of the Philippines and is considered the prime mover of the Philippine economy. As an agricultural country, the Philippines must invest in encouraging equitable growth and developing more sustainable agriculture and food systems that are robust to natural disasters and can effectively respond to the effects of climate change. This is to strengthen the agriculture sector to achieve food self-sufficiency, improve rural communities and improve farmer income (Brown, et.al, 2018; Sanchez, 2015; Poliquit, 2006).

The agricultural sector in the Philippines has been plagued with persistent challenges resulting in low farm incomes and rural employment, a lack of food security, and inadequate agricultural competitiveness. The agricultural challenges that hamper agricultural productivity for a very long time include limited access to credit and agricultural insurance, low farm mechanization, inadequate post-harvest facilities, inadequate irrigation, scant support for research and development (R&D), weak extension service, incomplete agrarian reform program implementation, and aging farmers and fisherfolk (Brown, et. al., 2018; Sanchez, 2015).

Agricultural credit is one of the most important interventions for alleviating rural poverty and for agricultural development. Extending agricultural credit availability has been widely used as a policy to accelerate agricultural and rural development. It has traditionally been used as a tool to increase production by providing priority sectors with access to production inputs (Poliquit et. al, 2006).

Many efforts have been made, and there is a continuous search for sustainable interventions through appropriate credit schemes to improve the living conditions and quality of life of small farmers in rural areas. However, problems frequently impede such efforts and interventions, which is why some rural credit programs fail. Some credit programs are no longer viable because of the failure and collapse of several rural financial institutions due to poor management and a lack of good governance. In the Philippines, previous agricultural credit programs failed because the demand for funds by intended beneficiaries was ignored during their design and implementation (Yaron et al., 1997; World Bank, 2000).

Farmers and farmer associations received millions in grant funding for agricultural projects. However, it is regrettable to learn that farmers are still regarded as being below the poverty line. In addition, most of our farmers are caught up in the middleman and traditional financing schemes charging them with higher interest, increasing the risk of living in poverty. There was no institutionalized sustainability mechanism of grants for agricultural projects in-placed at the local level thereby increasing the possibility of un-sustained funds. These were the main reasons why the City Government of Tagum implemented the "Tagum City Agrivolving Fund" (TAF) program through the City Agriculture Office. The TAF program is a unique, local initiative of the City Government of Tagum that started in 2014.

The general objective of the TagumpayAgrivolving Fund (TAF) Program was to achieve self-reliance among farmers in the sustainability of their farming ventures as a mechanism for ensuring food security by establishing an Agricultural Credit Facility. In addition, the specific objectives were to help enhance the productive capacity, competitiveness, and income-earning potential of these households through the provision of credit for production, processing, marketing, and other income-generating livelihood activities, to lessen the dependence of farmers on government dole outs, to facilitate the coordinated provision of credit-enhancement and other support services such as capacity building, technical assistance, crop insurance, marketing, and monitoring and evaluation to optimize the benefits and potential impact of credit to target areas and beneficiaries, to strengthen the capacity of the organizations to address immediate needs during emergencies and natural calamities, to generate funds and sustain the same through a revolving fund; and most importantly and to improve and uplift the living conditions of farmers.

According to the Guide Book of Tagum City Agriculture Office (2016), the farmers who want to avail of the program on TagumpayAgrivolving Fund (TAF) Program should be registered and bonafide members of any associations/cooperatives organized and assisted by the City Government of Tagum through its City Agriculture Office. This is because assistance subject to Agrivolving was provided and turned over for free to their organizations, and the organizations will distribute these to their members and collect after the harvest season a minimal amount or as much as 50% of the market price of the farm inputs as agreed by the officers and members. Moreover, the bases for establishing the TagumpayAgrivolving Fund (TAF) are the following documents: Constitutions and By-Laws (CBL), Approved Policies, Systems and Procedures, and Board Resolutions. Furthermore, at the Organizations or Farmer Association level the requirements for the rice farmers to avail the TagumpayAgrivolving fund of the associations are Clearance from the Associations/Cooperative and application form duly approved by the fund manager.

Rice farmers in rural areas often face challenges in accessing credit to finance their agricultural production and improve their livelihoods. TagumpayAgrivolving Fund (TAF) program has been implemented to support rice farmers, but its effectiveness in addressing the financial needs of rice farmers is not well understood. There is a need to assess the effectiveness of the TagumpayAgrivolving Fund (TAF) Program and identify the factors that contribute to its success or failure. By addressing this research problem, the study could help inform policymakers and program coordinators to enhance effectively rural credit programs that better meet the needs of rice farmers in rural areas, ultimately contributing to the improvement of livelihoods and poverty reduction in rural communities. Over the course of the program's eight-year operation, no research has been undertaken to assess the impact of the TagumpayAgrivolving Fund (TAF) program on its beneficiaries. The researcher finds it imperative to conduct a study to evaluate the program's effectiveness and its impact on rice growers.

1.1 Research Questions

The study aimed to determine the effectiveness of TagumpayAgrivolving Fund (TAF) to rice farmers. Thus, this study specifically sought to answer the following questions:

1. Whatis the socio-demographicprofileoftherespondentsintermsof:

    a. age;
    b. gender;
    c. highesteducationalattainment;
    d. householdsize;
    e. farm lot size;
    f. farm lot tenure status; and

   g. combinedmonthlyfamily income?
2. What is the current status of TagumpayAgrivolving Fund (TAF) program practices to the rice farmers in terms of:
   a. provision of agricultural inputs;
   b. amount of credit per hectare;
   c. repayment; and
   d. agricultural extension services?
3. What is the impact of TagumpayAgrivolving Fund (TAF) program on the economic status' of the rice farmers in terms of:
   a. volume of production;
   b. income;
   c. quality of produce; and
   d. competitiveness in the market?
4. How effective TagumpayAgrivolving Fund (TAF) program in terms of:
   a. access to credit;
   b. loan size;
   c. interest rate;
   d. repayment terms; and
   e. availability of technical support?
5. What are the challenges faced by rice farmers in TagumpayAgrivolving Fund (TAF) program?

1.2 Objectives of the Study

The study aimed to determine the effectiveness of TagumpayAgrivolving Fund (TAF) to rice farmers. Thus, this study specifically sought to answer the following objectives:

1. To describe the socio-demographicprofileoftherespondentsintermsof:
   a. age;
   b. gender;
   c. highesteducationalattainment;
   d. householdsize;
   e. farm lot size;
   f. tenurial status; and
   g. combinedmonthlyfamily income.
2. To assess the current status of TagumpayAgrivolving Fund (TAF) program practices to the rice farmers in terms of:
   a. provision of agricultural inputs;
   b. amount of credit per hectare;
   c. repayment terms; and
   d. agricultural extension services.
3. To determine the impact of TagumpayAgrivolving Fund (TAF) program on the economic status' of rice farmers in terms of:
   a. volume of production;
   b. income;
   c. quality of produce; and
   d. competitiveness in the market.
4. To determine the effectiveness of TagumpayAgrivolving Fund (TAF) program in terms of:
   a. access to credit;
   b. loan size;
   c. interest rate;
   d. repayment terms; and
   e. availability of technical support
5. To determine the challenges faced by rice farmers in TagumpayAgrivolving Fund (TAF) program.

1.3 Review of Literature And Theoretical Framework

This chapter provides a review of relevant literature supporting the study, focusing on the availability and role of rural credit, especially for small-scale farmers. It examines the TagumpayAgrivolving Fund (TAF) Program, a credit initiative designed to aid rice farmers in the Philippines with financial and technical assistance. The chapter explores key aspects of rural credit, including historical background, types, sources, and the rural credit landscape in the Philippines. Additionally, it assesses the TAF Program's effectiveness in addressing the profile, current status, impact, and challenges faced by rice farmers.

The profile of farmers—including age, gender, education, and income—significantly impacts their access to credit, as observed across various regions (Murray-Prior & Wright, 2017; Laborte et al., 2019; Chen et al., 2021). Effective credit programs enhance productivity when timely support, appropriate loan terms, and technical assistance are provided (Tadesse &Bahiigwa, 2015; Nguyen & Nguyen, 2021). Credit access notably improves income and productivity, bolstering farmers' economic well-being (Mwangi et al., 2018; Sial et al., 2019). However, barriers such as high interest rates, lack of collateral, and complex loan processes hinder access for many (Mukhtar et al., 2018; Tesfaye & Ayalew, 2021). Originating from 17th-century practices, rural credit has been vital in fostering agricultural growth and mitigating income instability, especially in times of economic strain (Desai & Mellor, 1993; Poliquit, 2006). Establishing accessible, formal credit systems in rural areas is essential for sustained agricultural modernization and improved rural livelihoods (Heidhues, 1995; Rosenzweig, 2001).

In rural areas, farmers access two main types of credit: formal and informal. Formal financial institutions like commercial and rural banks, state-owned banks, and agricultural development banks provide credit, although access is often limited by lengthy processes, high transaction costs, and collateral requirements (Martokoesoemo, 1994; Chowdhury & Garcia, 1993). Due to these barriers, farmers frequently turn to informal financial institutions, characterized by adaptable, short-term lending without collateral. Informal sources include direct lending from friends or family, professional moneylenders, tied credit linked to market transactions, and mutual finance groups based on trust, such as *paluwagans* in the Philippines (ADB, 1989; Poliquit, 2006; Tolentino, 1988).

Various credit mechanisms, including rural banks, NGOs, cooperatives, and development assistance, provide credit access in rural areas. For example, NGOs cater to underserved populations with group lending models that bypass traditional collateral (Poliquit, 2006; Zeller et al., 2001). The Tagum City Agrivolving Fund Program, launched in 2013, offers Tagum farmers affordable loans through an internal credit facility managed by farmer associations. This initiative, built on community involvement, facilitates self-reliance and independence among farmers. Local government support ensures the program's sustainability through consultative planning, effective implementation, and regular monitoring and evaluation to strengthen farmer-led associations (CAGRO, 2015).

The TagumpayAgrivolving Fund initiative by Tagum City exemplifies innovative agricultural programs that empower farmers through credit access, self-management, and educational support. Notable features include a farmer-controlled credit facility, a city-operated rice research center, and technology such as the Photovoltaic Selective Light Water Insect Trap, all of which enhance productivity and income. Additionally, initiatives in farm tourism, inter-cropping, and support for idle land utilization expand income streams and community engagement. The program, rooted in Agricultural Credit Theory, aligns with research underscoring the transformative role of credit in rural productivity and poverty reduction (Poliquit, 2006; Llanto, 1993). Sustainable through community ownership and technical guidance, this program sets a replicable model for rural development, fostering resilience and economic growth among small farmers.

1.4 Conceptual Framework

The conceptual framework depicted in Figure 1 outlines the structure of the study aimed at evaluating the effectiveness of the TagumpayAgrivolving Fund (TAF) Program for rice farmers. The study employed the Input, Process, and Output (IPO) Model, a widely utilized framework in diverse research and evaluation domains. In addition, the IPO Model provided the researcher with a general structure and guide for the direction of the study (Neechan, 2018).

The conceptual framework of the study outlines the structure and components used to evaluate the effectiveness of the TagumpayAgrivolving Fund (TAF) Program for rice farmers. To guide this evaluation, the study employed the Input, Process, and Output (IPO) Model, which is a commonly utilized framework in research and evaluation across different fields.

The IPO Model provides a systematic approach to understanding the relationships and interactions among the key elements involved in a program or intervention. It consists of three interconnected components:

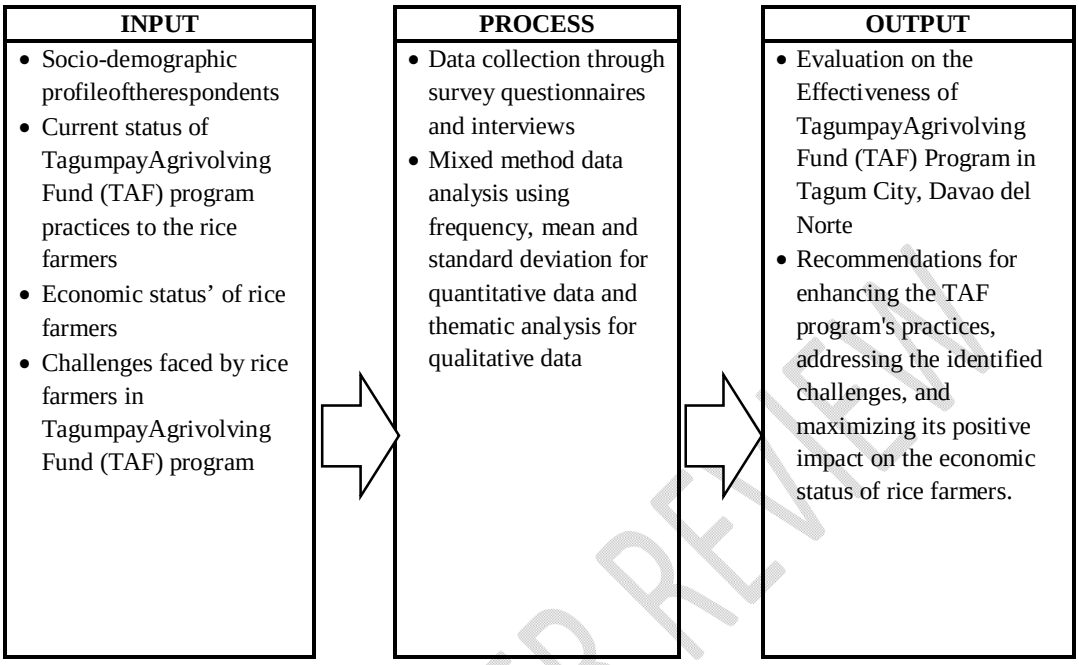

Figure 1. The Conceptual Framework of the Study

The input component comprises essential socio-demographic and economic information, including age, education, household size, field size, farm tenure, and income of respondents, as well as the status of the TagumpayAgrivolving Fund (TAF) program, covering input provision, credit terms, and extension services. The process component involves data collection through surveys and interviews with rice farmers, utilizing a mixed-methods approach for analysis—quantitative data by frequency, mean, and standard deviation, and qualitative data by thematic analysis. The output component assesses TAF program effectiveness, its impact on farmers' economic status, and provides recommendations for improvement to enhance support for rice farmers.

2. METHODOLOGY

This chapter presents the research method that was employed to attain the research objectives. It explained the sources of data, the data gathering instrument, and the sampling technique. Additionally, it discussed the procedure of the study and the statistical treatment of the gathered data.

Method Used

This study used a mixed method design which is the combination of quantitative and qualitative approach to collect and analyze data (Creswell &Tashakkori, 2007). In recent years, integrating qualitative and quantitative methods becomes common in research (Bryman, 2006) because mixed method design can provide detailed and comprehensive data in order to achieve the research objectives and answer the research questions.

Sources of Data

The primary data sources were the survey questionnaires given among the rice farmers' associations in Tagum City, Davao del Norte. Moreover, the researcher obtained secondary data sources from books, journals, articles and online resources that produce various views, outcomes and data from the authors to support the study findings.

Respondents of the Study

The respondents of this study were the 150 rice farmers of the six Farmers' Associations (FAs) who are the beneficiaries of TagumpayAgrivolving Fund (TAF) Program, namely: Pagsabangan Tagum Farmers Irrigators Association Incorporated (PATAFIA), Mangga Pagsabangan Rice Farmers Association (MAPARIVFA), Mandapaan New Balamban Rice Farmers Association (MNBRFA), San Agustin Farm Machineries and Rice Farmers Association (SAMARIFA), Nueva Fuerza Rice Farmers Association (NUFRIFA) and La Filipina Rice Farmers Association (LAFIRIFA). The Farmers' Associations in Tagum City served as crucial channels for collaboration, knowledge sharing, and resource pooling among rice farmers. Through their participation in the TagumpayAgrivolving Fund (TAF) Program, these associations had the opportunity to access financial assistance, training programs, and other resources aimed at enhancing rice production, increasing yields, and improving the overall welfare of rice farmers in the region.

Sampling Technique

The researcher used Stratified Random Sampling to choose the sample which means that the rice farmers of the six Farmers' Associations (FAs) are the target populations, elements are divided into distinct groups or strata where within each stratum the elements are similar to each other with respect to selected characteristics of importance to the survey (Wiley, 2017). This study used Raosoft Sample Size Calculator to determine the sample size 150 rice farmers from the given population size of the six Farmers' Associations (Raosoft, 2020).

The Raosoft Sample Size Calculator is a tool used to determine the appropriate sample size needed for the study based on the population size and desired level of precision. It takes into account factors such as confidence level and margin of error to ensure a representative sample. By utilizing the Stratified Sampling Technique with the assistance of the Raosoft Sample Size Calculator, the study aimed to ensure that the selected sample of rice farmers accurately represented the larger population. This approach helps to capture the diversity and variability within the population, leading to more robust and reliable research findings (Raosoft, 2020).

Table 1 presents the Stratified Sampling Technique using Raosoft Sample Size Calculator of the study.

Table 1. Stratified Sampling Technique using Raosoft Sample Size Calculator

Raosoft Sample Size Calculator Result	Name of FAs	Number of Members	Percentage	Sample Size per FAs
150	PATAFIA	90	37%	56
	MAPARIVFA	32	13%	20
	MNBRFA	34	14%	21
	SAMARIFA	28	11%	16
	NUFRIFA	28	11%	16
	LAFIRIFA	33	14%	21
		245	100%	150

Procedure of the Study

Prior to the conduct of the study, the researcher asked permission from the Local Chief Executive of the City Government of Tagum through its City Agriculture Office. A list of the beneficiaries was secured in order to identify the research respondents. A verification of the research respondents was conducted with the help of the chairpersons and officers of the identified Farmers' Associations.

A researcher-made survey questionnaire was used and validated by experts that include the head and TagumpayAgrivolving Fund (TAF) Program coordinator of the City Agriculture Office, Master's Degree holder of Secondary Education major in Mathematics, and a , Master's Degree holder of Public Administration and the advisory committee of the study.

The researcher asked permission to the Chairperson's of the Farmers' Associations to officially conduct the study and at the same time made a courtesy call to discuss and explain the purpose of the study.

The survey questionnaires and interview transcripts were used as sources of data through personal interviews of the rice farmers for this study.

Data Analysis

The study employed quantitative and qualitative methods for data analysis. Descriptive statistics, including frequency counts and percentages, were used to outline respondents' profiles, while the mean was applied to evaluate the current status, economic impact, and effectiveness of the TagumpayAgrivolving Fund (TAF) program for rice farmers. Mean ranges were designated to interpret responses, with categories from "Very High" to "Very Low," indicating the frequency of program practices observed, the economic impact on farmers, and program effectiveness. For qualitative analysis, thematic analysis identified challenges faced by rice farmers under the TAF program.

3. RESULTS AND DISCUSSIONS

This chapter presents the findings of the study. The first part shows the profile of the rice farmers. The second part reveals the status of the TagumpayAgrivolving Fund (TAF) program practices for the farmers. Afterwards, the third part reports the impact of the TagumpayAgrivolving Fund (TAF) program on the economic status of rice farmers. The fourth part reveals the effectiveness of the TagumpayAgrivolving Fund (TAF) program. Finally, the fifth part presents the challenges faced by rice farmers in TagumpayAgrivolving Fund (TAF) program.

3.1 Socio-demographic Profile of Rice Farmers

Table 2. The Summary of Profile of the Respondents

Profile	Frequency (*f*)	Percentage (%)
Farmers' Association		
PATAFIA	47	31.3
MAPARIVFA	25	16.7
MNBRFA	20	13.3
NUFRIFA	18	12.0
SAFMARFA	22	14.7
LAFRIFA	18	12.0
Age		
20-25	3	2.0
26-30	5	3.3
31-40	21	14.0
41 above	121	80.7
Sex		
Male	93	62.0
Female	57	38.0
Household Size		
2-4	86	57.3
5-10	61	40.7
More than 10	3	2.0
Combined Monthly Income		
Below 10,000	130	86.7
11,000-20,000	14	9.3
21,000-30000	2	1.3
More than 31,000	4	2.7
Highest Educational Attainment		
Elementary Level	12	8.0
Elementary Graduate	45	30.0
Secondary Level	30	20.0
Secondary Graduate	35	23.3
Vocational Graduate	9	6.0
College Level	13	8.7
College graduate	6	4.0
Tenure Status		
Owner	75	50.0

Tenant	69	46.0
Lessee	6	4.0
Farm Lot Size		
Less than 1 ha	74	49.3
1- 5 ha	74	49.3
More than 6 ha	2	1.3

The socio-demographic profile of rice farmers presented in Table 2 reveals key insights into the composition of the respondents, reflecting a diverse yet distinct demographic landscape. A significant majority of the farmers are associated with the PATAFIA (31.3%), indicating the prominence of this farmers' association within the local agricultural community. The age distribution shows that the majority (80.7%) of the respondents are aged 41 and above, suggesting a trend toward an aging farming population, which may have implications for future agricultural practices and sustainability. Gender representation also skews toward males, comprising 62% of the respondents, highlighting potential gender dynamics within farming operations. Furthermore, the household size indicates that a substantial portion of the respondents comes from smaller families (57.3% have 2-4 members), which may influence their economic strategies and labor allocation in farming activities.

Additionally, the economic conditions of the rice farmers underscore significant challenges. A striking 86.7% of respondents report a combined monthly income below 10,000, highlighting the financial constraints faced by these farmers. This low income level is further compounded by the educational attainment of the respondents, where a considerable number (38.7%) have not progressed beyond secondary education, which may limit access to advanced agricultural techniques and resources. The tenure status shows a nearly equal split between owners (50%) and tenants (46%), indicating a mixed farming structure that could impact land management and investment in agricultural productivity. With a majority of farmers operating on land sizes of less than 5 hectares (98.6%), these small-scale operations may face additional challenges regarding access to resources and market opportunities, ultimately affecting their overall livelihoods and agricultural sustainability.

3.2 Current Status of TagumpayAgrivolving Fund (TAF) Program Practices to the Rice Farmers

The current status of the TagumpayAgrivolving Fund (TAF) program's credit practices for rice farmers is shown in Table 3.

Table 3. Current Status of TagumpayAgrivolving Fund (TAF) program practices to the rice farmers in terms of amount of credit per hectare.

	Item	Frequency (*f*)	Percentage (*%*)
Amount of Credit per hectare	Less than Php 5,000	76	50.7
	Php 5,001 – Php 9, 999	20	13.3
	Php 10,000 – Php 14,999	38	25.3
	Php 15,000 – Php 20,999	12	8.0
	More than Php 20,000	4	2.7
	Total	150	100

The results indicate that the majority of rice farmers received credit amounts less than Php 5,000.00 per hectare, accounting for 50.7% of the sample size. On the other hand, only four farmers (2.7%) received credit amounts exceeding Php 20,000.00 per hectare, which was the lowest frequency observed. The result implies that a significant proportion of rice farmers received credit amounts below Php 5,000.00 per hectare. This indicates that the program may be more accessible to farmers who require smaller loan amounts. It can be inferred that the program aims to cater to the financial needs of small-scale rice farmers, providing them with access to credit for their agricultural activities. However, it is important to ensure that the credit amounts provided are sufficient for farmers' needs and can effectively support their operations.

The research findings were in congruence with the study conducted by Nguyen (2021) which stated that focusing on the impact of agricultural credit on rice farmers' productivity, revealed that the

availability of agricultural inputs and technical assistance was crucial for enhancing rice productivity. Further, this is in line with the study of Gidisu et al. (2019) on the impact of microfinance on agricultural productivity which found that access to agricultural extension services played a critical role in increasing productivity in the agricultural sector.

Table 4 presents the status of the TagumpayAgrivolving Fund (TAF) program practices for rice farmers. It focuses on the provision of agricultural inputs, repayment terms, and agricultural extension services as perceived by the rice farmers.

Table 4. Current status of TagumpayAgrivolving Fund (TAF) Program Practices to the Rice Farmers in terms of provision of agricultural inputs, repayment terms and agricultural extension services

Items	Mean	Standard Deviation	Description
Provision of agricultural inputs	4.04	0.49	High
Repayment terms	4.78	0.59	Very High
Agricultural extension services	4.09	0.62	High

The results of the study indicate that repayment terms have the highest mean score of 4.78, while the provision of agricultural inputs has the lowest mean of 4.04. Furthermore, the results of the study revealed that the provision of agricultural inputs has a mean of 4.04 and a standard deviation of 0.49, indicating a consistently high and program practices oftentimes observed. Repayment terms, on the other hand, have a mean of 4.78 and a standard deviation of 0.59, indicating a very high and program practices always observed. Agricultural extension services have a mean of 4.09 and a standard deviation of 0.62, indicating a high and program practices oftentimes observed.

Moreover, the provision of agricultural inputs is effectively providing farmers with the necessary resources and materials needed for rice production. This implies that farmers are likely receiving the inputs they need to enhance their productivity and improve their agricultural practices. In addition, the repayment terms for the program indicate that farmers are diligently adhering to the repayment requirements of the program. The farmers are making timely payments, which can be crucial for the sustainability and continuity of the agricultural program.

Moreover, the agricultural extension services provided by the program are generally high, but not as consistently high as the provision of agricultural inputs or repayment terms. This implies that while farmers often receive agricultural extension services, there may be some room for improvement in ensuring consistent and effective implementation of agricultural extension services. Despite the availability of extension services, farmers perceive them as not being particularly useful. This perception arises because the services are developed without considering the farmers' specific conditions.

The low adoption of technologies and limited utilization of extension services cannot solely be attributed to farmers' unwillingness. Rather, other factors such as inefficient service delivery mechanisms, inadequate personnel, and a shortage of necessary equipment contribute to this situation. As a result, these farmers do not see the need to actively seek out extension services.

The result of the study conforms to the study of Tadesse and Bahiigwa (2015), stating that the effectiveness of credit programs depends on the implementation of certain practices. In Ethiopia, a study discovered that practices such as the timely provision of resources, repayment of loans, and technical support played a vital role in enhancing the productivity of farmers. In addition, Ouma et al. (2018) found that providing credit and technical support promptly resulted in improved income and productivity for small-scale farmers. Moreover, Baloch (2019) reveals that the extension services faced limitations in effectively improving farmers' technical skills and disseminating technology and information. These limitations were primarily attributed to insufficient resources, including inadequate budget allocation, lack of proper transportation facilities, vast and dispersed geographical areas, and a lack of knowledgeable extension workers.

3.3 Impact of TagumpayAgrivolving Fund (TAF) program on the economic status' of the rice farmers

The impact of TagumpayAgrivolving Fund (TAF) Program on the economic statuses of the rice farmers in terms of Volume of Production is shown in Table 5.

Table 5. Impact of TagumpayAgrivolving Fund (TAF) Program on the economic status' of the rice farmers in terms of Volume of Production

	Item	Mean	Description
Volume of Production	Volume of rice production before the implementation of TAF program	3831.73	3831.73 kg
	Price of unmilled rice before TAF program	17.90	Php 17.90
	Volume of rice production after TAF program	4591.08	4591.08 kg
	Price of unmilled rice after the implementation of TAF program	16.41	Php 16.41
	Percent increase on the volume of production after the implementation of TAF Program		20%

Further, the study reveals that before the implementation of the TagumpayAgrivolving Fund (TAF) Program, the mean volume of rice production among the farmers' associations was 3,831.73 kg. However, after the implementation of the TAF Program, the mean volume of rice production increased to 4,591.08 kg, representing a significant improvement. Additionally, the study shows a substantial increase in rice production volume among the farmers' associations, with an approximate 20% increase in the mean volume of rice production. This improvement implies that the TAF Program had a positive impact on rice production, potentially contributing to the overall productivity and income of the rice farmers.

Parallel to this, the result of the study conforms to the study of Mwangi et al. (2018), stating that credit facilities have a significant impact on increasing farmers' income and crop yield. Moreover, Kerubo et al. (2016) conducted a study that revealed access to credit facilities significantly enhanced the quality of life for small-scale farmers in Kenya. In addition, Roy et. al., (2020), stated that credit facilities initiatives had a favorable effect on the income of rural households, leading to an improvement in their livelihoods. Similarly, the study conducted by Sial et al. (2019) in Pakistan demonstrated that microfinance programs played a significant role in boosting rice production, resulting in increased productivity.

The impact of the TagumpayAgrivolving Fund (TAF) program on the economic status of rice farmers, in terms of volume of production, income, quality of products, and competitiveness in the market, is shown in Table 6.

Table 6. Impact of TagumpayAgrivolving Fund (TAF) program on the economic status' of the rice farmers in terms of income, quality of produce and competitiveness in the market

Item	Mean	Standard Deviation	Description
Income	4.58	0.89	Very High
Quality of produce	3.89	0.82	High
Competitiveness in the market	2.98	0.57	Moderate

The study reveals that among these factors, income had the highest mean of 4.58, while competitiveness in the market had the lowest mean of 2.98. Furthermore, the study shows that income had a mean of 4.58 and a standard deviation of 0.89, indicating that it is very high. The quality of

produce had a mean of 3.89 and a standard deviation of 0.82, indicating that it is high. Market competitiveness had a mean of 2.98 and a standard deviation of 0.57, indicating that it is moderate.

The results coincide with a study conducted by Mishra (2018) that found that smallholders who suffer credit constraints typically have lower production and efficiency than other farmers. The total income that can be generated from available resources, technology, and marketing opportunities may increase if financing is accessible.

3.4 Effectiveness of TagumpayAgrivolving Fund (TAF) Program

Table 7 presents the effectiveness of TagumpayAgrivolving Fund (TAF) Program for rice farmers association.

Table 7. Effectiveness of TagumpayAgrivolving Fund (TAF) Program

Items	Mean	Standard Deviation	Description
Access to credit	4.36	1.28	Very High
Loan size	3.67	1.15	High
Interest rate	4.39	1.26	Very High
Repayment terms	4.73	0.67	Very High
Availability of technical support	4.53	0.79	Very High
Overall	4.34	0.81	Very High

The result presented an overall mean of 4.34 and a standard deviation of 0.81, described as very high. This result implies that Tagum Agrivolving Fund (TAF) program was found very accessible and effective by the farmers.

Among the items, the repayment terms of TAF program got the highest mean of 4.73 with a standard deviation of 0.67. Second is the loan size, with a mean of 3.67 and a standard deviation of 1.15. Third is the availability of technical support, with a mean score of 4.53 and a standard deviation of 0.79, followed by interest rate, which got a mean of 4.39 and a standard deviation of 1.26. Lastly, access to credit got the lowest mean of 4.36 and a standard deviation of 1.28.

The data indicated that the effectiveness of TAF program is very high, which means that payment arrangements were reasonable and practical and offered necessary loan size for the agricultural operations. Rice farmers also received adequate, current, and prompt technical support. Moreover, the program also addressed the prevalent concerns regarding high loan interest rates and access to agricultural funding.

The result of the study conforms with the study finding of Amidu and Wolfe (2017) that accessibility to credit, loan size, interest rates, and repayment terms are key factors that influence the success of these financial services. Further, Abebaw (2017) stated that loan size and repayment terms were crucial factors in influencing the effectiveness of credit facilities.

On the other hand, the study was also congruent with the study of Sibanda et. al. (2019) stated that the interest rate and availability of technical support to the smallholder farmers were essential factors contributing to the effectiveness of credit facilities programs.

3.5 Challenges Faced by the Rice Farmers in the TagumpayAgrivolving Fund (TAF) Program

Table 8 presents the challenges faced by the rice farmers in the TagumpayAgrivolving Fund (TAF) Program. This includes the participants' responses to the study taken from the interviews conducted. From the face to interview transcripts, core ideas were identified, and themes were achieved.

Table 8. Major Themes and Core Ideas on the Challenges Faced by the Rice Farmers' Beneficiaries in the TagumpayAgrivolving Fund (TAF) Program

MAJOR THEMES	CORE IDEAS
Insufficient Financing for Rice Production	1. The money loaned to the association is not sufficient for the financing of the rice field. 2. Programs for application of fertilizers and insecticide are not followed because of shortage of funds. 3. The funds that instead of spending on the rice field was spent on daily consumption
Low Return on Investment	1. High cost of inputs and low prices of harvested rice 2. Not profitable because the rice field is flooded that causes yield loss. 3. Damage by pests such as diseases and natural calamities that resulted in increased production costs due to need for inputs and can lead to reduced income of rice farmers
Delayed Action on the Needs of Rice Farmers	1. Government subsidized seeds and fertilizers were not given on time to the rice farmers. 2. Lack of drying facilities and machineries 3. Poor condition of farm to market roads 4. Not insured crops and no claims of indemnity when crops are damage
Scarcity of Water Supply	1. Slow movement of water irrigation to the rice field from National Irrigation Authority 2. Rainfed rice field difficult to have water if there is no rain 3. Not all rice farmers can afford to buy solar or gasoline for water pump irrigation

After thorough analysis of the challenges faced by the rice farmers beneficiaries in the TagumpayAgrivolving Fund (TAF) Program, four (4) themes emerged. These are the following: (1) insufficient financing for rice production; (2) low return on investment; (3) delayed action on the needs of rice farmers; and (4) scarcity of water supply.

The TagumpayAgrivolving Fund (TAF) Program is a commendable initiative aimed at supporting rice farmers and enhancing their agricultural practices. However, like any endeavor, it is not without its challenges.

3.6 Insufficient Financing for Rice Production

Most of the rice farmers had similar responses according to the generated data of the study, expressing the fundamental themes of challenges faced by the rice farmers in the TagumpayAgrivolving Fund (TAF) Program. One of the main themes that emerged was insufficient financing for rice production.

RF1 mentioned that the money they loaned to the association is not sufficient for the financing of the rice field:

> "*Ang kwartanaginapahilamsaasosasyondilipajudkapaigo para satananggalastohonsatibook production sahumayan kay naaramansa 50% sa total production cost sapagkakaron ang mapahiramsaamoatungod kay ginapaigoanrapud ang pundosaasosasyon para maapudsatanangmembrosaasosasyon.*"

(The amount of money loaned by the association was not sufficient to cover all the expenses of the entire rice field production. It accounted for only 50% of the total production cost at that time since the association's funds were allocated to be shared among all the members of the association.)

In fact, another rice farmer expressed that program for application of fertilizers and insecticides are not followed because of shortage of funds. RF2 shared that:

"Tungodsakalisodmangitagog pang finance saakongbasakandilinaganimasunod ang tamangpanahonsapagpang apply ogabunoogusahaytipironpajudpag apply maongdilikaayotaasog production kay kulangsaabunoogatakihonpudsainsketo kay dili man ko kaapplyog insecticide bisagkinahanglannaapplyan."

(Due to the challenges in securing means to finance my rice field, I am unable to apply fertilizer at the appropriate time, and there were instances where I applied it too late. Consequently, the production yield was not optimal due to the insufficient availability of fertilizer. Furthermore, the absence of insecticide application made the crops susceptible to pest attacks.)

Rice farmers generally encounter difficulties in budgeting money for their daily needs and rice field expenses. RF3 admitted that:

"Maglisodjud mi og budget saamongkwartatungod kay dilikapaigo ang among income ginagmayramaongusahay ang among budget na para untasahumayanmakuhaanjud para sa among pangunsumo pang adlawadlawaronnaaykaonon."

(It was challenging for us to budget for rice production as our meager income was inadequate. Sometimes, our budget for rice would be diverted for our daily consumption to ensure we had something to eat.)

Respondents of the study generally expressed that insufficient financing poses a significant challenge for rice farmers in the TagumpayAgrivolving Fund (TAF) Program. The farmers struggle to secure adequate funds for rice production, leading to limitations in covering production costs, implementing necessary agricultural practices, and budgeting effectively for their farming activities. According to a study conducted by Alalade et al. in 2023, the insufficient availability of financial resources and capital necessary for Nigeria's agricultural sectors presents a significant challenge. This obstacle hinders their ability to obtain the necessary inputs that would enable them to enhance production effectively and sufficiently.

3.7 Low Return on Investment

Agriculture plays a vital role in the global economy, and rice farming is a significant component of agricultural production in many countries. However, despite its importance, rice farmers often struggle with a low return on investment (ROI). According to RF4:

"Sa pagkakaronniangaljud mi sataaskaayongpresyosaabunooguban pang mga inputs maonangausahaymalugijud mi sa among pagpangumaunyapagabotnapajudna ting harvest naunyaibaligya ang abot kay baratopajudkaayo ang presyosapagbaligya sa humay."

(Currently, we were complaining due to the considerably high prices of fertilizer and other inputs. As a result, we often experienced losses in our farming activities. Additionally, when the harvest time

arrived, the selling price of rice would be considerably low, further exacerbating our financial challenges.)

Rice farmers also added that most of the rice fields in Tagum City were flood prone areas that when flood comes it causes yield loss. RF5 stated that:

> *"Ang among area judbahaononmaonangapagmusagunsonganina ang ulanmakulbaannajud mi ogsugod ana kay kabalo mi napagmudako ang tubigsasapamalunopanjudna among humayanogpagmabahaanna ang humayannamonaajuyposibilibadnamafailure among production ogdili mi kabawisaamongnagastoparehas sauna nganabahaan mi."*
>
> (Our area is highly susceptible to flooding, this is why we immediately get worried whenever successive rainfall occurs. We are certain that as the water levels in the river increase, our rice fields will be completely submerged. In such circumstances, there was a significant risk of crop failure, which led to the inability to recoup the expenses incurred, as we had previously witnessed during a flooding incident.)

Figure 2. Flooded Rice Field in Barangay San Agustin

On the other hand, RF6 further mentioned damage by pests such diseases and natural calamities that resulted in increased production costs due to need for inputs and can lead to reduced income of rice farmers is always a big problem of the rice farmers and that:

> *"Naayjuypanahonngaatakehonogpesteogsakit ang amoangpananomunyakanilagi pong kulang ta sa financing dilidayonnatomapalitan ang dapatnamedisina para sapagsugpoanangmgamananapaogsakitmaongdilinajud mi mag expect ogdakongabotogginansyapag ting harvest na."*
>
> (There were times when our crops were attacked by insect pests and diseases. Since we are already faced with financial constraints, we cannot promptly purchase the necessary chemicals to control these issues. As a result, we couldn't anticipate a significant yield during the harvest period.)

In general, rice farmers commonly face a low return on investment in their agricultural activities. Factors contributing to this include high input costs, the risk of yield loss due to flooding in flood-prone areas, and the detrimental effects of pests, diseases, and natural calamities.

According to Velza et al., (2023), agricultural inputs such as planting materials, fertilizers, pesticides, and labor availability play a crucial role in determining crop production. The absence or scarcity of these inputs can significantly hinder the yield or harvest of farm production. Farmers commonly face the challenge of high costs associated with acquiring these inputs, including planting materials, fertilizers, pesticides, and even labor. Further, the study of Baraka (2023) reveals that farmers are experiencing changes in temperature and precipitation patterns including more frequent and intense droughts and floods. These changes are leading to lower crop yields and incomes.

3.8 Delayed Action on the Needs of Rice Farmers

Persistent delays in government action to meet the requirements and address the challenges faced by rice farmers have created significant setbacks and added to their existing struggles. RF7 asserted:

> *"Usahay delay judkaayo ang hinabangngagikansagobyerno kay daghanpamangudkaayo nag prosesongaagihanbagomaabotsaamoangamga mag uuma. Parehasnalanganangmgaabunoogsemelyanadili on time usahaymaabotsaamoamaongmadelay ang among programanganaplanosa among pagpanguma. Kulangpudkaayosamga facilities ang among association nadugay naman untakaayo mi sigeg request ana perowala pay response labinasamgamakinaryasog ang bularanansa among humay."*
>
> (At times, we experienced significant delays in government assistance because there were multiple processes to go through before reaching us, the farmers. For instance, the delivery of fertilizers and seeds would often not arrive on time, causing disruptions to our planned farming programs. Despite our continuous requests, our association still lacked crucial facilities, especially machinery and rice milling equipment.)

Additionally, farm to market roads play a crucial role in the transportation of agricultural products from rural areas to markets, ensuring the smooth flow of goods and supporting the economic vitality of farming communities. Moreover, the poor condition of these roads has become a significant challenge, hindering the efficient movement of produce and impacting the overall agricultural sector. RF8 supported this insight and stressed:

> *"Parehasdirisaamoanga ang among basakan kay naasaubossabukidmusubidapakagbukidunyawalayklarongdalanlabi nag ting ulanlapokkaayomaglisodjud mi ogpaggawassaamongnaharvestnahumayogdakopudkaayo among magastopag transport kay pakyawan man gamit ang motor kay dili man masudlanogdagkongsakyanansaamonghumayanaronuntamaisarapa ghakottanangnaharvestnasakosahumay."*
>
> (Similarly, in our area, our farm is located at the bottom of the mountain. To reach the other side of the mountain, since there are no clear roads, especially during heavy rains when the road becomes extremely muddy. We really struggle in transporting our harvested rice because we only had motorcycles available for hire, unable to accommodate large vehicles to carry all the harvested sacks of rice at once. As a result, we incurred significant expenses for transportation. Ideally, we wished to have a proper road so that we could easily transport all our harvested rice sacks in one go.)

Further, crop insurance serves as a financial safety net for farmers, offering protection against unpredictable events such as adverse weather conditions, pests, diseases, or other hazards that can adversely affect crop yields. However, due to various reasons, not all farmers avail themselves of crop insurance coverage.

RF9 affirmed:

> *"Looykaayo mi ngamga mag-uumanausahaydilimaabotsaamoa ang programabahinanangpagpa insured sapagpanomnamaskingrabena ang damage saamongpananomwalajudmeymadawatngahinabanggikansagobyerno. Isa pudsaamongproblema kay dili mi permimabisitahansa among agricultural technician ngamaoygaassistsaamoasapag fill up sa form para sa insurance, tungodsiguro kay daghanpudkaayogmgaasosasyonngaiyanggidalamaongdilinajudniya mi maatimantanangmga mag-uuma."*
>
> (As farmers, we were deeply concerned about the times when we were unable to access the crop insurance program, even though our crops had suffered severe damage. We did not receive any assistance from the government. Another challenge we encountered was the unavailability of our agricultural technician, who was responsible for assisting us in filling out the insurance forms. It seemed that they had to cater to multiple associations, making it difficult for them to accommodate all of us farmers.)

Rice farmers generally expressed their experiences on delays in government action to meet their needs and address their challenges. These delays occur in the provision of necessary resources, infrastructure development, and access to crop insurance. The cumulative effect of these delays adds to the struggles faced by rice farmers, hindering their ability to effectively manage their farms, overcome setbacks, and improve their overall livelihoods. Moreover, Mahmud (2023) indicates that inadequate transportation infrastructure, such as poorly maintained roads, insufficient availability of vehicles, and the high expenses involved in transporting farm produce from rural areas to markets and urban centers, contribute to increased transportation costs for farmers.

3.9 Scarcity of Water Supply

Rice cultivation requires substantial amounts of water for irrigation, particularly during the crucial stages of planting, establishment, and maturation. Insufficient or irregular water supply can have detrimental effects on crop growth, leading to reduced yields, stunted plant growth, and even crop failure. Water supply is a critical issue for rice farmers, posing significant challenges to their agricultural practices and livelihoods. RF10 supported this insight and stressed:

> *"Ang sitwasyonsa among irigasyondirisaamonglugar para saamonghumayandakojudkaayo mi ogproblemamahitungod ana kay dili stable ang agas satubignga nag gikansa NIA kay usahaymashortnasatubig kay daghanpamangud nag agihannamga barangay nanaapoynanginahanglanogirigasyonnamga rice farmers ogusahayhinay ang agas namaabotsaamonghumayanmaong delay ang among patubigsa among humayan."*
>
> (The situation regarding the irrigation system in our area, particularly for our rice fields, was a major cause of concern for us. We encountered significant issues due to the unstable water supply from the National Irrigation Administration (NIA). There were instances when the water supply fell short because numerous other barangays depended on the same irrigation system, resulting in delays in providing water to our rice fields. This delay in water supply had a profound impact on our farming activities.)

Moreover, rainfed rice farmers face a range of challenges that significantly impact their agricultural practices and livelihoods. Rainfed rice cultivation relies solely on natural rainfall for water

supply, making it susceptible to weather patterns and climatic variations. RF12 confirmed this insight and stated:

> *"Kani among basakan sir kay rainfed rani nagasalig lang mi saulansapagpatubigsa among basakanmaonangausahayogwalayulanmaglisodjud mi ogkuhaogtubigdiridiliparehasanangsaubannganaayirigasyonngadal irakakuhagtubigmaongpagsigeginitdiriunyawalaysaktong supply satubigwalajuyayo ang tubosamonghumayogdaghanogsagbot."*
>
> (Our rice fields were rainfed, which meant we relied solely on rainfall for irrigation purposes. Consequently, there were times when we faced difficulties in obtaining water when there was no rain. Unlike in other areas with irrigation systems where water could be easily accessed, our situation was different. Hence, during prolonged periods of no rainfall and insufficient water supply, our rice field suffered, and weed growth became abundant.)

Additionally, RF13 highlighted that not all rice farmers can afford to buy irrigation system and stated:

> *"Kamingmgagagmay lang ngamga mag-uumangagasalig lang saulansapagpatubigsaamonghumayanmaglisodjud mi ogpalitanang gasoline o solar pump irrigation system kay ginagmayratawon among income ogdilipudmakaya ang maintenance ana kay puhonmangayo man jud nag maintenance kay ginagamit man naajud nay posibilibadnganaaymga pang ilisanngapyesa."*
>
> (As small-scale farmers, who rely solely on rain for irrigating our rice fields, we struggle in purchasing gasoline or solar pump irrigation systems. Our limited income prevented us from affording the upfront costs of such equipment. Additionally, the maintenance expenses were also beyond our means, and we relied on the hope that someone would provide maintenance services when needed, considering the possibility of requiring replacement parts.)

In general, rice farmers expressed the challenges they have faced on the scarcity of water supply. Insufficient or irregular water flow from irrigation systems and reliance on rainfall for rain-fed rice farming create obstacles in achieving optimal crop growth and productivity. Moreover, Rasul (2022) reveals that water is essential for various production processes and acts as a vital resource for production systems. Without water, crops cannot survive, and a limited water supply negatively impacts production levels. It is crucial to have a reliable and continuous water supply to ensure higher crop yields, in addition to considering other factors such as climate, soil conditions, and genetic factors.

4. SUMMARY, CONCLUSION AND RECOMMENDATIONS

4.1 Summary

Based on the preceding findings, conclusions were drawn in this section. The results of the profile of the respondents revealed that the farming population in the study was predominantly composed of older individuals aged 41 years old and above. The gender distribution among the respondents in the TagumpayAgrivolving Fund Program showed a slightly higher representation of male farmers. The majority of farmers had relatively small to moderate-sized households and low monthly incomes. Most of the rice farmers had completed elementary education. They primarily owned the land they cultivated, with small to medium-sized farm lots ranging from one to five hectares.

The findings indicated that the majority of rice farmers received credit amounts less than PHP 5,000.00 per hectare. Furthermore, the repayment terms of the TagumpayAgrivolving Fund (TAF) Program had the highest mean, suggesting that they were consistently observed and perceived as very high in terms of program practices. The implementation of the program had a significant positive impact on the mean volume of rice production, potentially improving farmers' income.

Moreover, the effectiveness of the TagumpayAgrivolving Fund (TAF) Program in terms of access to credit, loan size, interest rate, repayment terms, and availability of technical support was reported to be very high, indicating the program's effectiveness in empowering and facilitating agricultural endeavors.

Furthermore, the major challenges faced by the rice farmers in the TagumpayAgrivolving Fund (TAF) Program included insufficient financing for rice production, low return on investment, delayed action on the needs of rice farmers, and scarcity of water supply.

4.2 Conclusion

Presented in this chapter are the conclusions of the study based on the data analysis and findings.

Based on the preceding findings, conclusions were drawn in this section. The results of the profile of the respondents indicated that the farming population in the study was predominantly composed of older individuals aged 41 years old and above. The gender distribution among the respondents in the TagumpayAgrivolving Fund Program showed a slightly higher representation of male farmers compared to female farmers. The majority of farmers had relatively small to moderate-sized households and low monthly incomes. There was a diverse range of educational backgrounds among the farming population, with most of them being elementary graduates. They primarily owned the land they cultivated, with small to medium-sized farm lots ranging from 1 to 5 hectares.

Furthermore, the majority of rice farmers received credit amounts less than PHP 5,000.00 per hectare, with a small percentage receiving amounts exceeding PHP 20,000.00 per hectare. The results also indicated that the item repayment terms of the TagumpayAgrivolving Fund (TAF) Program had the highest mean, suggesting that they were consistently observed and perceived as very high in terms of program practices.

On the other hand, the provision of agricultural inputs had the lowest mean score but was still perceived as high in terms of program practices. Moreover, the implementation of the TagumpayAgrivolving Fund (TAF) Program had a significant positive impact on the mean volume of rice production. The program contributed to an improvement in rice production, potentially enhancing overall productivity and income for rice farmers.

Furthermore, it was revealed that the effectiveness of the TagumpayAgrivolving Fund (TAF) Program in terms of access to credit, loan size, interest rate, repayment terms, and availability of technical support was reported as very high. These positive outcomes demonstrated the effectiveness of the program in empowering and facilitating the agricultural endeavors of rice farmers.

Further, it was also revealed that the effectiveness of the TagumpayAgrivolving Fund (TAF) Program in terms of access to credit, loan size, interest rate, repayment terms, and availability of

technical support was very high. These positive outcomes demonstrate the effectiveness of the program for rice farmers in empowering and facilitating their agricultural endeavors.

Lastly, the challenges faced by the rice farmers in the TagumpayAgrivolving Fund (TAF) Program were insufficient financing for rice production, low return on investment, delayed action on the needs of rice farmers, and scarcity of water supply.

4.3 Recommendations

Based on the conclusions drawn from the study's results, several recommendations have been proposed. Firstly, it is suggested to increase financing for rice production. This can be achieved by exploring options to secure additional funding specifically designated for rice farmers. Collaboration with government agencies that have financial support programs for farmers could help expand the available financial resources for rice production.

Secondly, there should be a focus on market competitiveness. Strategies should be developed to enhance the market competitiveness of rice farmers, as it was identified as an area with a moderate mean score. This may involve providing farmers with relevant market information, improving post-harvest practices, and facilitating market linkages.

Thirdly, it is important to strengthen the support systems available to rice farmers. This can be done by providing technical assistance, training, and seminar programs. Creating knowledge-sharing platforms would also help farmers improve their skills and stay updated on newly discovered research-based practices. Additionally, effective channels of communication and feedback mechanisms should be established to address the needs and concerns of rice farmers promptly. Encouraging collaboration and networking among farmers can facilitate the exchange of experiences and ideas.

The fourth recommendation is to continuously monitor and evaluate the effectiveness of the TagumpayAgrivolving Fund (TAF) Program. This evaluation will help assess its impact on farmers' economic status, identify areas for improvement, and ensure the long-term success and sustainability of the program.

Given the scarcity of water supply, the fifth recommendation is to improve water management. The program should invest in sustainable irrigation infrastructure, such as water conservation techniques, rainwater harvesting, and efficient irrigation methods. These measures will help mitigate the impact of water scarcity on rice farming.

The sixth recommendation emphasizes the importance of strengthening collaboration and partnerships. Collaboration among stakeholders, including government agencies, agricultural extension services, research institutions, and farmer cooperatives, can facilitate knowledge sharing, technology transfer, and resource pooling. Building strong partnerships will enhance the effectiveness of the TagumpayAgrivolving Fund (TAF) Program in addressing the challenges faced by rice farmers.

The seventh recommendation is to review and enhance rural credit programs. It is crucial to evaluate and improve existing rural credit programs for rice farmers to support their financial needs and strengthen the agricultural sector. Customizing these programs to meet the specific requirements of rice farmers, simplifying procedures, offering financial education, encouraging collaboration, and monitoring progress can make these credit initiatives more effective and influential.

By implementing these recommendations, the agricultural sector can provide better financial support to rice farmers, improve their market access and competitiveness, enhance their skills and knowledge, ensure effective program management, address water scarcity challenges, and promote collaboration among stakeholders. These measures will contribute to the overall development and sustainability of rice farming, benefiting both farmers and the agricultural sector as a whole.

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