

# Assessing Financial Literacy Levels Among Small-Scale Farmers

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## ABSTRACT

The study investigates the financial literacy of farmers in San Lorenzo, Guimaraes, Philippines, with a focus on their knowledge, attitude, and behaviour regarding financial management. Recognizing the critical role agriculture plays in local economies, particularly in rural areas, the study emphasizes that financial literacy can significantly enhance farmers' ability to manage finances, adopt modern farming practices, and withstand economic challenges. A descriptive research design was employed, utilizing a researcher-made questionnaire to assess financial knowledge, attitude, and behaviour. The study revealed that while many farmers exhibit average to high levels of financial knowledge, there are still gaps in areas like investment, savings, and long-term financial planning. The results suggest that targeted financial literacy programs could improve resource allocation, farm productivity, and the overall financial resilience of small-scale farmers, contributing to sustainable agricultural livelihoods. The study underscores the importance of fostering financial education to empower farmers and support rural economic development.

**Keywords** – finances, attitude, behaviour, knowledge, economics, agricultural livelihood

## INTRODUCTION

Agriculture plays a pivotal role in global food security, rural development, and poverty alleviation (FAO, 2019). Smallholder farmers, particularly in developing countries, contribute significantly to agricultural production and livelihoods. However, many of these farmers face challenges in managing their finances effectively due to limited access to financial services, low literacy levels, and volatile market conditions (Demirgüç-Kunt & Klapper, 2012).

Financial literacy is crucial for farmers to make informed decisions about production, investment, and risk management (Karlan et al., 2014). It empowers them to access credit, save, invest, and protect themselves against economic uncertainties (Coleman-Jensen et al., 2020). Financially literate farmers are better equipped to adopt new technologies, diversify income sources, and withstand shocks such as droughts or market fluctuations (Mishra et al., 2018).

Farmers encounter various challenges in managing their finances effectively. These include inadequate access to formal financial services, limited financial education, lack of collateral, and exposure to weather-related risks (Binswanger-Mkhize et al., 2017). Moreover, complex financial products and opaque lending practices further exacerbate the financial vulnerability of farmers, especially in rural areas (Deininger & Jin, 2018). Sanglay et.al. (2021) suggested that the colleges and universities may lead collaborative activities such as seminars and trainings on income management in order to equip farmers with basic knowledge and skills in effective financial decisions and savings.

In the Island Province of Guimaraes in Western Visayas, Philippines, agriculture, fishery, and tourism have been identified as the major economic drivers. In the Agriculture sector, three (3) commodities are prioritized based on food sufficiency and economic contributions to the provincial economy, namely, rice, mango, and cashew.

The Municipality of San Lorenzo is considered the rice granary of the province, producing more than an average of 3.8 – 4.2 metric tons of rice annually in lowland areas.

Financial literacy has a direct impact on farm productivity, income levels, and sustainability. Studies suggest that financially literate farmers are more likely to adopt improved agricultural practices, invest in technology, and diversify their income sources (Kariuki et al., 2019). Enhanced financial management skills contribute to increased farm efficiency, profitability, and resilience to external shocks (Khanal et al., 2016).

Previous research has highlighted the importance of financial literacy in agricultural contexts. Studies have examined farmers' financial literacy levels, factors influencing financial decision-making, and the effectiveness of financial education programs (Ahsan et al., 2019). However, there remains a need for more empirical research to understand the specific challenges and opportunities for improving financial literacy among farmers (Shepard & Burger, 2020).

Recognizing the pivotal role of financial literacy among farmers in the agricultural sector, it is therefore necessary to investigate the financial practices and behaviors of farmers. By pinpointing knowledge gaps, researchers and policymakers can develop targeted interventions and educational programs to address these deficiencies. This study hopes to gain evidence-based insights that can inform policy decisions and interventions aimed at promoting financial inclusion and literacy among farmers. By understanding the needs and challenges faced by farmers, policymakers can design targeted programs to enhance financial literacy and access to financial services and improve farmers' financial well-being.

### **Objectives of the Study**

This study aims to assess the financial literacy of farmers in the Municipality of San Lorenzo, Guimaras, Philippines, for the year 2024. Specifically, it aims to:

1. To establish profiling of farmers in terms of age, sex, educational attainment, monthly income, farm area, and years in farming; and
2. Assess the financial literacy of farmers in terms of knowledge, attitude, and behaviour

### **Significance of the Study**

The result of this investigation will be utilized as baseline data on the financial literacy levels of small-scale farmers in San Lorenzo, Guimaraes.

## **METHODOLOGY**

This study utilized a descriptive research design to assess the financial literacy of farmers in the Municipality of San Lorenzo, Guimaras, Philippines, which comprises 12 barangays: Aguilar, Cabano, Cabungahan, Constancia, Gaban, Igawayan, M. Chavez, San Enrique, Sapal, Sebario, Suclaran, and Tamborong. According to Aggarwal and Ranganathan (2019), a descriptive study is aimed at portraying the distribution of one or more variables without focusing on causal relationships or hypotheses. It provides data on the characteristics, effectiveness, practices, recovery, and processing, answering questions related to who, what, where, and how.

The participants were selected from the registered farmers in the municipality, with a total sample size of 237, based on a list provided by the Office of the Agricultural Services of the Local Government Unit of San Lorenzo.

A researcher-made questionnaire, duly validated by experts and tested for reliability, served as the primary data collection tool. It was crafted based on an extensive review of relevant literature, including scholarly articles and previous studies pertinent to financial literacy. It consisted of two parts: Part I captured the demographic profile of respondents, including variables such as age, sex, educational attainment, monthly income, farm area, and years in farming. Part II focused on evaluating the financial literacy of respondents, segmented into three areas: financial knowledge, attitude, and behavior.

The financial knowledge component was assessed using a 10-item multiple-choice test covering topics such as budgeting, saving, and investment. The assessment of financial knowledge levels was guided by the criteria established by Alhenawia and Elkhallb (2013) and Guliman (2015). A mean score exceeding 80% of the total items indicates a high level of financial knowledge. A score between 60% and 80%, inclusive of 60% but not surpassing 80%, reflects an average level. Conversely, a score below 60% signifies a low level of financial knowledge.

**TABLE 1** Criteria for evaluating the level of financial literacy.

Mean Score %	Level of Financial Literacy
More Than 80%	High
60%-80%	Average
Less Than 60%	Low

To evaluate the financial attitude and financial behavior of small-scale farmers, a Likert-type scale was employed. This scale allowed respondents to express their level of agreement with a series of statements related to financial practices, values, and decision-making tendencies. Responses were scored on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To facilitate interpretation, the resulting mean scores were categorized into five levels, each corresponding to a verbal interpretation of financial attitude and behavior.

**TABLE 2** A scale to measure the financial attitude and financial behavior.

Range	Verbal Interpretation
4.21 - 5.00	Excellent
3.41 - 4.20	Good
2.61 - 3.40	Fair
1.81 - 2.60	Poor
1.00 - 1.80	Very Poor

To ensure the content validity of the instrument used to measure financial knowledge, a panel of five (5) expert validators was consulted, composed of an English critic, a statistician, a researcher, and professors specialized in business and management at a state university. Each expert was asked to evaluate each item in the financial knowledge questionnaire. They rated each item using a 7-point scale as per Item-Content Validity Index (I-CVI) procedures set by Munisamy et al. (2021). The resulting Item-Content Validity Index (I-CVI) was 0.88, which was in agreement with Amin (2005), who recommended that for any tool to be considered valid, the CVI has to be 0.7 and above.

Each expert was asked to evaluate each item in the financial knowledge questionnaire using the survey instrument validation rating scale adapted from the criteria for evaluating survey questionnaires set forth by Good and Scates (1972).

To ensure the internal consistency of the items measuring financial attitude and financial behavior, Cronbach's alpha was computed for each construct. For the financial attitude scale, the Cronbach's alpha was  $\alpha = 0.85$ , and for the financial behavior scale, the Cronbach's alpha was  $\alpha = 0.81$ , indicating a high level of reliability. According to Kılıç (2016), the reliability of the scale is accepted as good if the coefficient is found equal to or greater than 0.70.

The collected data were analyzed using descriptive statistics, including frequency counts and percentages, to provide a comprehensive overview of the financial literacy levels among the farmers.

## RESULTS AND DISCUSSIONS

### Profile of the Respondents

The age distribution of farmers in San Lorenzo, Guimaras, reveals a significant population of adult farmers (40-59), constituting 54% of the total sample. This is followed by a substantial number of younger adult farmers (20-39), comprising 26.6% of the population. In contrast, senior farmers (60 years old and above) are a relatively smaller segment, representing 17.3% of the total, respectively.

In terms of sex, the farmers in San Lorenzo, Guimaras are dominated by females, with women representing a significant 68.4% of the farming population. Conversely, male farmers make up just 31.6% of the population. This aligns with the findings of Ashok K. Mishra, Aditya R. Khanal, and Samarendu Mohanty (2017), which emphasize the crucial contributions women make to agricultural and rural economies in developing countries. In rural areas, women actively participate in a range of production and farm management activities. In the Philippines, women are more intensively engaged in agricultural work compared to men. Moreover, the study highlights that female-headed farm households, despite facing limited access to land, achieve higher rice production values than their male counterparts, further underscoring the vital role of women in agricultural productivity.

In terms of civil status, the data demonstrates that the majority of individuals in the sample are married, with a relatively small proportion being single. The data reveals a clear skew towards married individuals, with 83.1% of the sample being married and only 16.9% being single.

The data on educational attainment reveals that the majority of respondents have completed high school, with 53.2% (126 individuals) falling into this category. A smaller portion, 29.5% (70 individuals), have attained a college education, indicating that nearly a third have pursued higher education. Meanwhile, 17.3% (41 individuals) have only finished elementary school, suggesting that a notable segment of the population may face educational limitations. This distribution suggests that while a significant portion of respondents have a basic education, there are opportunities to improve access to higher education, which could contribute to better socioeconomic outcomes for the community.

The table also presents data on the monthly income distribution of 237 individuals, categorized into three income brackets: "₱5,000 & below," "₱5,001-₱10,000," and "> ₱10,000." The largest segment of the sample falls into the low-income group (5,000 & below) with 174 individuals, representing a substantial 73.4% of the total population. The next significant group comprises 55 individuals, making nearly a quarter of the population (23.2%). The smallest segment of the population is those earning more than 10,000 pesos per month. Only 8 individuals fall into this category, accounting for a mere 3.4% of the total. This contradicts the study of Sanglay, et.al. (2021), which showed that the majority of the male rice farmers are earning a monthly income below PHP10,000 and therefore spend less than their income level and seldom save money, but compare prices before buying.

As to the number of family members, the data reveal that the vast majority of families in the sample are relatively small, with 186 families, representing 78.5% of the total sample. This suggests that most families consist of a relatively small number of members, typically between one and five. Moreover, a smaller portion of the sample were medium-sized families, wherein 49 families fall into this group, accounting for 20.7% of the population. These households have between six and ten members, indicating a moderate family size. The smallest group comprises just 2 families, or 0.8% of the sample, with more than ten members. This indicates that very few households have large family sizes.

When examining whether farmers have bank deposits, the data reveal a significant disparity in banking service use among farmers, with 173 or 73% not holding any bank deposits, indicating they are largely unbanked and do not utilize formal banking for savings. In contrast, only 27% of farmers have bank deposits.

As to years in farming, the data reveal a diverse range of farming experience within the population. A significant portion of the farmers, 76 individuals or 32.1%, are relatively new to the profession, with 1 to 10 years of experience. Farmers with moderate experience, those who have been farming for 11 to 20 years, comprise 60 individuals or 25.3% of the sample. This suggests that a considerable number of farmers are still early in their careers or have reached a level of stability in their farming practices.

Notably, 22.8% of the farmers have over 30 years of experience, highlighting a strong tradition of farming within the community and a potential wealth of knowledge that could be valuable for mentoring newer farmers. In contrast, a smaller portion of the sample, 19.8%, consists of farmers with 21 to 30 years of experience. This decline in the number of farmers as years of experience increase may indicate that some individuals leave the profession after a few decades, possibly due to other opportunities or factors that influence their decision to step away from farming.

**TABLE 3** Profile of the small-scale farmers.

Profile	f	%
Age		
Young adult (20-39)	68	28.7
Adult (40-59)	128	54.0
Senior (60 & above)	41	17.3
Total	237	100.0
Sex		
Male	75	31.6
Female	162	68.4
Total	237	100
Civil Status		
Single	40	16.9
Married	197	83.1
Total	237	100
Educational Attainment		
Elementary	41	17.3
High School	126	53.2
College	70	29.5
Total	237	100
Monthly Income		
5,000 & below	174	73.4

5,001-10,000	55	23.2
> 10,000	8	3.4
Total	237	100
Number of Family Members		
1 to 5 members	186	78.5
6 to 10 members	49	20.7
> 10 members	2	0.8
Total	237	100
Bank Deposit		
With Bank Deposit	64	27
No Bank Deposit	173	73
Total	237	100
Years in Farming		
1 to 10 years	76	32.1
11 to 20 years	60	25.3
21 to 30 years	47	19.8
> 30 years	54	22.8
Total	237	100

## Financial Literacy of the Farmers

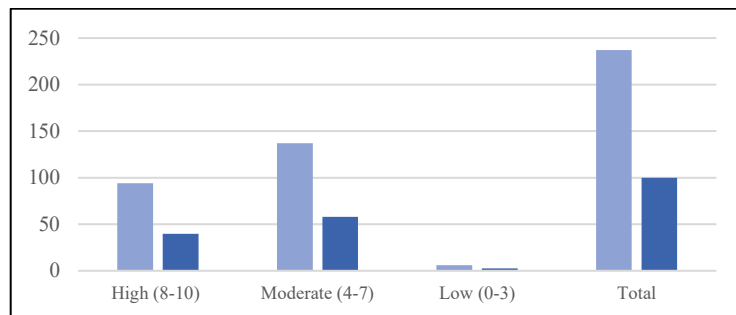
### Farmers' Financial Knowledge

The data presented in Table 2 illustrates the distribution of financial knowledge among small-scale farmers, categorized according to their mean scores: more than 80% (high knowledge), 60%–80% (average knowledge), and less than 60% (low knowledge). The results show that a majority of respondents (53.2%) fall within the average financial knowledge category, indicating a moderate understanding of financial concepts. Notably, 39.7% of the farmers achieved scores above 80%, reflecting a high level of financial literacy, while only 7.2% demonstrated low financial knowledge with scores below 60%. This distribution suggests that most small-scale farmers possess a functional understanding of financial concepts, though only a fraction demonstrate advanced literacy that could be directly applied to strategic decision-making in farm management. These findings point to the presence of a foundational awareness of financial practices among the farmers. The implications are significant, as enhancing financial literacy from moderate to higher levels has the potential to improve resource allocation, strengthen economic resilience, and promote the long-term sustainability of small-scale farming systems.

As supported by Riswandi et al. (2024) and Twumasi et al. (2021), financial literacy empowers farmers to manage their finances effectively, which is crucial for maintaining sustainability in agricultural operations.

Studies indicate that farmers with strong financial literacy skills are better equipped to manage cash flow, allocate resources efficiently, and engage with financial markets effectively, thus fostering sustainable profits.

**Figure 1.** Financial knowledge of small-scale farmers.



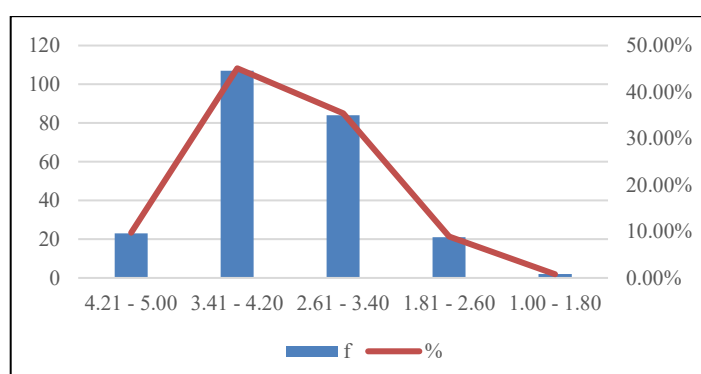
### Farmers' Financial Attitude

The financial attitude of small-scale farmers in San Lorenzo, Guimaras, as presented in the data, reveals a generally positive outlook toward managing their finances. Among the 237 respondents, the majority (45.1%) demonstrated a good financial attitude, suggesting that these farmers possess a strong sense of financial responsibility and are likely able to manage their farming finances effectively. A considerable proportion (35.4%) exhibited a fair financial attitude, indicating that while they show some degree of financial awareness, there are still gaps in areas such as long-term financial planning or managing unexpected expenses. Interestingly, 9.7% of respondents rated their financial attitude as excellent, reflecting a high level of financial discipline and proactive decision-making that can serve as models for others in the farming community. On the other hand, only a small fraction (8.9%) fell into the poor category, signaling potential challenges in financial management, such as poor debt management or a lack of savings.

The overall distribution implies that most small-scale farmers in San Lorenzo are positioned at moderate to high levels of financial responsibility. However, the sizable portion rated as “fair” underscores the need for targeted interventions to improve their financial attitudes and behaviors. These interventions could include financial literacy training, access to financial planning tools, and strengthening community support systems. By enhancing financial knowledge and skills, the proportion of farmers exhibiting excellent financial attitudes could increase, thereby fostering greater economic resilience and sustainability within farming communities.

This is supported by the findings of Tomaneng et al. (2023), who found that women farmers in Ilocos Sur, despite exhibiting low financial knowledge and skills, showed a high level of financial attitude, which positively impacted their farming experiences. Similarly, Sanglay et al. (2021) highlighted that, in San Pablo City, Laguna, despite low-income farmers having neglected certain areas of financial literacy, they exhibited a strong attitude toward debt repayment, correlating positively with their financial behavior. This suggests that the positive financial attitudes seen in San Lorenzo could be leveraged to improve financial outcomes if paired with targeted education and support.

**Figure 2.** Financial attitude of small-scale farmers.



## Farmer's Financial Behavior

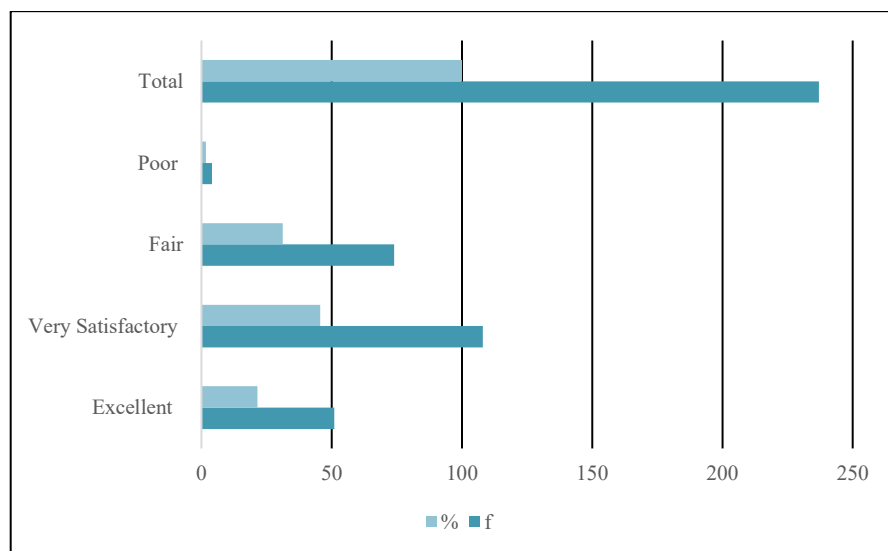
The financial behavior of small-scale farmers, as presented in Table 4, reveals a generally positive trend in their financial practices. Out of 237 respondents, the majority (45.6%) demonstrated very good financial behavior, suggesting that they are capable of managing resources responsibly, maintaining reasonable spending habits, and making practical financial decisions. A considerable proportion (31.2%) exhibited only fair behavior,

indicating that while they possess some degree of financial awareness, gaps remain in areas such as savings, budgeting, or long-term financial planning. Interestingly, 21.5% were assessed to have excellent financial behavior, reflecting strong financial discipline and decision-making skills that could serve as models for sustainable agricultural livelihoods. On the other hand, only a small fraction (1.7%) fell into the poor category, which may signal vulnerability to financial risks such as debt mismanagement or inadequate savings.

The overall distribution implies that most small-scale farmers are positioned at moderate to high levels of financial prudence. However, the sizable share of those rated as only “fair” underscores the need for targeted interventions such as financial literacy training, access to credit programs, and capacity-building initiatives. By strengthening these aspects, the proportion of farmers attaining excellent financial behavior could be increased, thereby fostering greater economic resilience and sustainability within farming communities.

Selvia et al. (2021) found that enhanced financial knowledge and subsequent positive financial behaviors correlate significantly with improved financial well-being, suggesting that individuals who engage in good financial practices tend to achieve greater contentment in their financial lives. This assertion is further supported by Iramani and Lutfi (2021), who noted that positive financial behavior mediates the influence of financial knowledge on financial well-being, thereby emphasizing the importance of applying what one knows about financial management.

**Figure 3.** Financial behavior of small-scale farmers.



## CONCLUSIONS

The study conducted on the financial literacy levels among small-scale farmers in the Municipality of San Lorenzo, Guimaras, has provided valuable insights into their financial knowledge, attitudes, and behaviors. The results indicate that a majority of farmers exhibit moderate financial knowledge, with a significant proportion demonstrating a functional understanding of financial practices. Despite the relatively high level of financial responsibility observed, gaps remain in areas such as long-term financial planning, savings, and investment. Notably, while many farmers show positive financial attitudes and behaviors, a targeted approach to improving these areas could further enhance their economic resilience. The findings underscore the importance of promoting financial literacy to support the sustainable growth of small-scale farming communities and improve the financial well-being of farmers.



Based on the study's findings, it is recommended that targeted financial literacy programs be implemented for small-scale farmers in the region. These programs should focus on enhancing farmers' knowledge in areas such as budgeting, saving, investment, and risk management, particularly to help them navigate volatile market conditions and improve resource allocation. In addition, increasing access to financial services and introducing educational initiatives that cater to both high and low levels of financial literacy could have a significant impact. Moreover, fostering community support systems and collaborations with local educational institutions could further strengthen the financial capabilities of farmers. These measures will contribute to enhancing their decision-making, increasing farm productivity, and ultimately ensuring the long-term sustainability of their agricultural livelihoods.

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