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The Impact of Production Loan Towards Productivity of Corn Farmers in Sarangani Province

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Penie Louie C. Panuncillo *

*Corresponding Author



Keno Jay M. Balogbog §



§ Mindanao State University - General Santos City^(OA)

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Abstract

This study examined the impact of production loans on the productivity of corn farmers in Sarangani Province, Philippines. It specifically investigated the socio-economic characteristics of farmers, the reasons for availing production loans, the factors influencing corn productivity, the effect of production loans on yield, and the profitability of corn production. A descriptive-correlational design was employed, and data were collected from 315 farmer respondents using structured questionnaires. Frequency and percentage analyses were used to describe socio-economic profiles, while ranking and thematic analysis identified the primary reasons for loan utilization. Factors affecting productivity were analyzed using Ordinary Least Squares (OLS) regression and Generalized Linear Models (GLM), while the impact of production loans was explored using an impact pathway approach. Cost and return analysis determined the economic viability of corn farming. Results revealed that age, educational attainment, farm size, monthly income, loan amount and frequency, and participation in corn production and financial management training significantly influenced productivity. Gender, marital status, and number of dependents had no significant effect. Production loans enabled farmers to access essential inputs, conduct timely farming activities, and improve overall farm management, which contributed to higher yields and profitability. The study highlights the importance of integrating financial support with technical training and resource management to enhance smallholder corn productivity in the province.

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AUTHOR CONTACT QR LEDGER

Penie Louie C. Panuncillo



Keno Jay M. Balogbog



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Penie Louie C. Panuncillo^{§*} and Keno Jay M. Balogbog[§]

Affiliations

[§] Mindanao State University - General Santos City ^(OA)

Abstract

This study examined the impact of production loans on the productivity of corn farmers in Sarangani Province, Philippines. It specifically investigated the socio-economic characteristics of farmers, the reasons for availing production loans, the factors influencing corn productivity, the effect of production loans on yield, and the profitability of corn production. A descriptive-correlational design was employed, and data were collected from 315 farmer respondents using structured questionnaires. Frequency and percentage analyses were used to describe socio-economic profiles, while ranking and thematic analysis identified the primary reasons for loan utilization. Factors affecting productivity were analyzed using Ordinary Least Squares (OLS) regression and Generalized Linear Models (GLM), while the impact of production loans was explored using an impact pathway approach. Cost and return analysis determined the economic viability of corn farming. Results revealed that age, educational attainment, farm size, monthly income, loan amount and frequency, and participation in corn production and financial management training significantly influenced productivity. Gender, marital status, and number of dependents had no significant effect. Production loans enabled farmers to access essential inputs, conduct timely farming activities, and improve overall farm management, which contributed to higher yields and profitability. The study highlights the importance of integrating financial support with technical training and resource management to enhance smallholder corn productivity in the province.

Keywords: *agricultural finance, Corn productivity, farm profitability, impact pathway, production loans, Sarangani Province, smallholder farmers, Socio-economic factors*

* Corresponding Author

Penie Louie C. Panuncillo

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1. Introduction

Smallholder farmers are dealing with reduced amounts of available production resources coupled with increasing input costs that have led to lower productivity and profitability levels (Robinson, 2025). Production loans can alleviate the capital limitations experienced by these Farmers; however, capital access in a majority of new market areas continues to be a challenge (Varangis, 2025). Even in some of the highest corn-producing countries like the United States, smallholder farmers still have limited access to timely capital resources and are experiencing greater financial pressures because of large-scale competition (National Family Farm Coalition, 2023; Kopp, 2024).

Corn is one of the principal agricultural crops of the Philippines and serves as a primary source of farmer livelihoods; however, farmers in the Philippines continue to struggle with high production costs and limited access to financing (AgFlow, 2023; FPA, 2024). The island of Mindanao accounts for a substantial portion of the Philippines' total corn production with Sarangani being a major corn-producing province supporting the growth of the corn industry in Mindanao (MinDA, 2024; PSA Region XII, 2024). Despite their contribution to total corn production in Sarangani, many farmers remain economically disadvantaged due largely to limited access to capital support programs (PhilSEED, 2023).

Through these conditions, one research gap exists in regards to how the use of production loans affects farmers' corn production in Sarangani Province. The purpose of this study was to investigate how production loans impact corn production and examine the challenges faced by farmers in obtaining and utilizing production loans as a source of financing.

This study aimed to answer the following questions:

1. What are the socio-economic characteristics of the farmer beneficiaries in terms of age, gender, marital status, educational attainment, years of farming experience, farm size in hectare, average monthly net income from farming, number of dependents, amount of loan availed, number of times loan availed, corn production training attendance, and attendance in financial management training?
2. What are the reasons for availing production loans?
3. What are the factors affecting corn productivity?
4. What is the impact of production loans on corn productivity?
5. What is the profitability of corn production?

2. Review of Related Literatures

2.1. Corn Farming

Worldwide, corn or maize is one essential food crop that provides energy for humans and animals. Corn maize continues to be consumed in great quantities because of its nutritional value (Abayomi et al., 2023). In many western countries, corn is a principal source of carbohydrates, protein, fats, minerals, and vitamins used to feed both people and animals (Sudheesh et al., 2022). Corn is also the largest volume of feed grain traded worldwide, with the United States being the largest exporter (Bond, 2025). Corn or maize ranks third in the amount produced behind wheat and rice and not only has great nutritional value but is very adaptable to different environments (Kumar et al., 2022; Lopez-Nicora et al., 2023). In more developed parts of the world, it is also used as a biofuel source, which helps support alternative energy production (Lopez-Nicora et al., 2023). In addition to its environmental and nutritional value, maize has a very positive effect on economic development. In the United States, corn will continue to be a key contributor to agricultural output, provide a large part of U.S. GDP, and create a lot of jobs in rural areas (Swanson, 2025). Unfortunately, corn farmers are experiencing challenges meeting growing global food demand due to limited access to resources and financial support.

2.2. Corn Farmers in the Philippines

Philippines is known to be an agricultural country with its tropical climate conducive for many crops to grow which contributes to the total Gross Domestic Product of the Philippines and providing jobs to many Filipinos (Patacsil et al., 2023). One of the major crops produced all over the archipelago is the corn that ranks number three in terms of productivity and land area (Poonon, 2023). While rice is considered as the most important staple food in the Philippines because of Filipinos love for rice culture, the corn product ranks second as it is consumed by many Filipinos as an alternative for rice or as a snack.

Corn production has shown significant growth over the years due to the introduction of new technologies and machineries which makes farming faster and easier. The development of hybrid varieties also helped in increasing production and profitability, while government support programs which all aims to enhance the farmers production and profitability (Colminas et al., 2024).

While according to Becher et al. (2024), crop establishment methods and fertilizer applications are another important element to emphasize when farming as this both contributes to productivity and sustainability. In their study on the effect of crop establishment method on field performance in Leyte, Philippines, a significant contribution in corn farming was discovered. In all treatments of different crop method, the treatment number 5 which is a direct seeding method resulted in a more marketable crop with big corn ears and higher fresh stover yield. While transplanting did not result in a better output than direct seeding method. Fertilizer management also have big impact on the average days from sowing to tasseling, and on the quality of the green cob produced. This emphasize the importance of experimenting which crop establishment is best, and paying attention on fertilizer management. This further implies that corn farmers need financial support to fully execute proper crop and fertilizer management from sowing to tasseling.

2.3. Socio-Demographic and Economic Profile of Corn Farmers

Philippine agriculture is facing the challenge of ageing farmers population despite the rise in technology used in farming (Manigo, 2021). In (Quilit, 2025) study on local farmers in Apayao, majority of the workforce belong to older age groups.

Consistent with the findings of Asis (2019) and Colminas et al. (2024), which revealed that young generations are becoming less interested in agriculture because they perceive farming as an unattractive industry. Similarly, a report from Asis (2019) showed that there is a less percentage of young Filipinos participating in agriculture as these young Filipinos with higher level of education tend to migrate and look for careers outside farming. The same problem was highlighted by Lauengco (2022) indicating a growing concern in farming workforce with declining rate of young people joining the farming industry. Consistent with Colipano (2024) and Asis (2019), showing that most of the farmers are those in middle-aged. However, this result contradicts the result in the study of Colipano (2024) on the corn farmers in Kibawe, Bukidnon, most are middle-aged, with some young corn farmers who rank third in the survey.

The result in the study of Mayo and Villarta (2023) revealed that majority of corn farmers in Palimbang, Sultan Kudarat have been farming for more than six years, indicating expertise in corn farming in this area. While most of the farmers are cultivating land which are less than 3 hectares, many of them are relying on tenancy where they pay the rent land that they cultivate. One of the findings also revealed that half of the studied farmers have an income of less than Php 5,000.00 with 39 percent having monthly income of Php 5000.00 to Php 1000.00. This means that financial support is largely needed by these farmers whose income is not enough to cover the cost of corn farming. While in the study of Quilit (2025) among white corn farmers in Lower Apayao, majority of farmers have been farming for more than 10 years, which indicates that majority of the respondents have substantial experience in farming.

Another common observation among corn farmers is the predominance of male farmers than female. In Quilit (2025) study in Lower Apayao, showed that majority of the corn farmers are male, while half of the respondents were married which implying that farming is a way to support the needs of their family. According to Ani (2020), females have less representation in farming and do not have equal access to agricultural opportunities such as land ownership and agricultural loan. Another significant finding is the less wage given to women than men due to the limited amount of labor that women can do. This discrepancy has encouraged government to craft programs that include women education. This program may encourage inclusivity as well as increase in efficiency and sufficiency. The ability and willingness to venture new strategies in farming strategies and crop diversification was less evident in females (Ge et al., 2023) due to less education and less contribution in family decisions compared to males. While in Ilocos Norte, women participated more in production and farmhouse tasks doing less leg work such as selling produce in the market and cleaning the surroundings compared to men doing more of the field tasks (Aquino et al., 2025). In contrast with Ge et al. (2023), women in Ilocos Norte have achieved higher education than men, hence they are expected to head the operation and are discouraged to do any farming tasks.

The difference between men and women, education levels, and other socio-economic factors of among farmers were studied

by many authors. Though existing studies showed inconsistent result, this study will determine the socio-economic profile of corn farmers in Sarangani Province. Delving into the socio-economic characteristics of corn farmer will help to craft strategies to improve their status of farmers in Sarangani Province.

2.4. Profitability of Corn Farming

Most of the corn farmers in Palimbang, Sultan Kudarat, who were investigated in the study of Mayo and Villarta (2023), generate 50 cavans and above of yield per hectare, with twice-a-year cropping frequency for many farmers. This indicates high production and profitability, suggesting that further study of the genetic traits and characteristics of the corn variety can help many corn farmers in the Philippines. However, this contradicts the report generated by the Philippine Statistics Authority in 2024, showing a decline of corn production of 0.6 percent. Similarly, in the published report by Balita (2025), the total GDP contribution of the agriculture, together with forestry, and fishing sector has shown a declining rate since 2020.

As suggested by Lauengco (2022), there is a need for intensive monitoring of the financial support coming from the government to ensure that this resource is equitably shared up to the local levels. This will not just help the farmers increase perceive farming but will change the perspective of young generation that farming is profitable and sustainable.

2.5. Production Loan Mechanisms

Production loans are financial support provided to farmers allowing them to finance farming inputs and production processes. This is a short-term loan that aims to assist smallholder farmers to procure needed materials to sustain to farming from production to distribution. These loans are in a form of cash, vehicles, materials, pesticides, or fertilizer depending on the need of the farmer. All these aims to help in maximizing the produce without being constrained by financial challenges (Chen, 2021).

As mentioned, loan products differ depending on purpose. Rural Bank of Pagadian in Western Mindanao provides pre-harvest and post-harvest loans, high value crops, and livestock loans which are given to rice, coconut, and livestock farmers in Pagadian. The Department of Agriculture – Agricultural Credit Policy Council (DA-ACPC) launched a program called Production Loan Easy Access (PLEA) which provides support to marginal and small farmers and fisherfolks with the aim of providing a convenient, non-collateralized, and with low interest rate.

Different types of production loans are provided to farmers especially to small farmers who are owning just small amount of land. This is to provide opportunities for them to maximize product outputs. Philippine government through Department of Agriculture, a department responsible in promoting programs for farmers have been crafting strategies to help aid small farmers in their agricultural practices.

2.6. Availment of Production Loan

Farming inputs such as labor, pesticides, herbicides, and fertilizers significantly impact the farming productivity (Diallo et al., 2020). This inputs however, requires capital to ensure the smooth process from planting to harvesting.

The longitudinal study of AT et al. (2022) in Nigeria which delved into the effect of farmers credit on agricultural productivity revealed that bank credit significantly influences productivity which further suggest that government must initiate savings and bank credit to farmers. This will not just enhance productivity

but profitability in farming as well. The study of Diallo et al. (2020) in the country of Senegal using inefficiency model revealed an increase of almost thirty-seven percent is observed for those farmers who were given access to credit. This big increase in production in Senegal only proves that the importance of financial access through credit plays an important role in agricultural farming.

In the study of Mayo and Villarta (2023), on the challenges faced by smallholder farmers in South Central Philippines particularly in Palimbang, Sultan Kudarat, one of the findings highlighted the lack of financial access and support from government. This limits the corn farmers ability to maximize their produce as they rely on their personal capital to sustain their livelihood which is not enough to cover the expenses.

Lack of credit access is the usual battle cry of many farmers. Thus, access to production loan may help many farmers who lack the resources to finance the farming cost all by themselves.

3. Research Design

This study employed a mixed-method research design, combining quantitative and qualitative approaches to comprehensively analyze the socio-economic characteristics of corn farmers, their reasons for availing production loans, productivity factors, loan impact, and profitability.

The study was conducted in Sarangani Province, a major corn-producing area in the Philippines composed of seven municipalities. The respondents were corn farmers who are members of Agrarian Reform Beneficiaries Organizations (ARBOs). From a total population of 1,498 farmers, a sample size of 315 was determined using the Slovin formula at a 5% margin of error and 95% confidence level. Respondents were selected through simple random sampling to ensure equal representation and minimize bias.

Data were gathered through survey questionnaires and interviews, supplemented by secondary sources such as journals and reports. Ethical approval was secured prior to data collection, followed by informed consent from respondents to ensure confidentiality and voluntary participation.

The research instrument was a validated and pilot-tested questionnaire consisting of five sections covering socio-economic profile, reasons for loan availing, factors affecting loan access, impact on productivity, and profitability. Validation was conducted by experts, while reliability was tested through a pilot study involving 30 respondents.

4. Results and Discussions

Table 1. Age Profile of Corn Farmers in Sarangani Province

Age Group	Counts	% of Total
18–29 years	20	6.3%
30–39 years	75	23.8%
40–49 years	107	34.0%
50–59 years	76	24.1%
60 years and above	37	11.7%
Total	315	100%

The age distribution of corn farmers shows that the largest group is 40-49 years old. This group consists of 107 respondents (34%). The 50-59 age group follows with 76 respondents (24.1%). Farmers aged 30-39 make up 75 respondents (23.8%), and 37 respondents (11.7%) are aged 60 and above. The smallest group is those aged

18-29, with 20 respondents (6.3%). The result indicates that corn farming in Sarangani is dominated by middle-aged individuals who are physically capable of doing farming activities. The large proportion of farmers aged 40 and above indicates that many have acquired sufficient knowledge and experience in farming techniques. While the low representation of young farmers may indicate that some are venturing into other career opportunities beyond farming as a livelihood.

This finding is consistent with Manigo (2021), Quilit (2025), Asis (2019), Lauengco (2022), and Colipano (2024), who reported that farming is increasingly dominated by middle-aged or older farmers, while younger individuals show lower participation in agriculture. However, it partly contradicts Colipano's (2024) study in Kibawe, Bukidnon, where young corn farmers still ranked third in the age distribution.

Access to production loans must consider farmers with practical experience who need productivity support programs to purchase farming inputs. This will help farmers improve their cultivation practices and produce better outputs. Moreover, the low number of young farmers underscores the need to create programs that encourage their participation in farming through training and technology-based farming practices. They can also be provided with loan access to help them start exploring farming opportunities. These initiatives will help sustain corn-farming operations and ensure that agriculture in Sarangani remains productive.

Table 2. Gender Profile of Corn Farmers in Sarangani Province

Gender	Counts	% of Total
Female	86	27.3%
Male	227	72.1%
Prefer not to say	2	0.6%
Total	315	100%

The data in Table 2 shows the frequency distribution of Gender. The largest group of respondents is male farmers with 227 counts (71.1%). This is followed by female farmers, who were represented by only 86 respondents (27.3%). While 2 respondents (0.6%) preferred not to disclose their gender.

The physically demanding activities of corn production, from land preparation to harvesting and other farming activities, explain why male farmers dominate corn farming in Sarangani Province. The presence of female respondents also indicates that they are involved in some corn farming activities they can manage, such as planting, fertilizer application, harvesting, and decision-making and farm management.

The results on gender distribution imply that production loan programs should address the needs of male farmers, such as machinery and farm inputs. The presence of female farmers underscores the need to offer gender-inclusive programs to increase their participation in corn farming, including financial literacy training and farming support services. This is especially important so female farmers can contribute to farm decision-making, such as budgeting and allocation of loan proceeds. Their role also helps in ensuring the productivity and financial stability of their households.

This finding is consistent with Quilit (2025), Ani (2020), and Ge et al. (2023), who reported that farming is commonly dominated by male farmers and that women often have lower representation and access to agricultural opportunities. However, it partly differs from Aquino et al. (2025), who found that women in Ilocos Norte

participated more in production and farmhouse tasks, although men still handled more field-intensive activities.

Table 3. Marital Status of Corn Farmers in Sarangani Province

Civil Status	Counts	% of Total
Married	237	75.2%
Separated	17	5.4%
Single	37	11.7%
Widowed	24	7.6%
Total	315	100%

Table 3 presents the results on the marital distribution of corn farmers in Sarangani Province. Most of the corn farmers are married, with 237 respondents (75.2%). This is followed by single farmers with 37 respondents (11.7%), widowed farmers with 24 respondents (7.6%), and the least frequent group are those who were separated from their partners with 17 respondents (5.4%).

The result on marital status supports previous findings in age distribution; farmers are dominated by middle-aged adults. This suggests that farming activities serve as a source of income to support their family. Hence, the availment of production loans is associated with sustaining farm operations, increasing income, and fulfilling household responsibilities, such as providing food for the family, paying for children's education, and covering other daily expenses.

This implies that production loans should consider the family obligations of corn farmers by providing flexible payment terms to help them manage both production and family expenses. Financial management training must also be provided to help farmers become efficient with loan allocation and budgeting. Spouses' participation must also be encouraged to support in the budgeting and decision making especially loan allocation and repayment planning.

This finding is consistent with Quilit (2025), who found that many corn farmers were married, suggesting that farming serves as a source of livelihood to support family needs. It also supports the discussion that production loan programs should consider household responsibilities because family obligations can affect how farmers use and repay their loans.

Table 4. Frequencies of Educational Attainment

Highest Educational Attainment:	Counts	% of Total
College Graduate	22	7.0%
College Level	54	17.1%
Elementary Graduate	42	13.3%
Elementary Level	30	9.5%
High School Graduate	92	29.2%
High School Level	46	14.6%
No Formal Education	7	2.2%
Total	315	100%

The data on educational attainment of corn farmers in Sarangani Province shows that most of the farmers have acquired high school diploma, with 92 respondents (29.2%). This is followed by farmers who reached the college level, with 54 respondents (17.1%) and 46 respondents (14.6%), who reached high school level. There are 42 respondents (13.3%) completed elementary education, while 20 respondents (13.3%) cited that they only reached elementary level. There are also 22 respondents (7%) who acquired college degree, however the least in number are those farmers with no formal education comprising the remaining 7 respondents (2.2%).

The result shows the mixed composition of corn farmers with majority who completed basic education. This suggest that some farmers have basic literacy skills to understand loan instructions especially on interest and payment terms. However, the presence of farmers who were up to elementary-level and no formal education also indicates that some respondents may lack the understanding of some technical terms especially on productivity record and financial management.

This implies that corn farmers in Sarangani Province must be provided with instructions that is simple and clear that can be understood by all farmers. This is important especially when communicating loan terms and interest. Furthermore, the result highlights the need to provide financial management and literacy training to farmers to maximize the use of production loans in increasing corn productivity and reducing the risk of repayment difficulty.

This finding is related to the discussion of Ge et al. (2023), which emphasized that education can affect farmers' willingness and capacity to adopt new farming strategies and make informed decisions. It also supports the need for simple loan instructions and financial literacy training, especially since the respondents have mixed educational backgrounds and some have only elementary-level education or no formal education.

Table 5. Frequencies of Years of Farming Experience

Years of Farming Experience	Counts	% of Total
11–20 years	131	41.6%
5–10 years	70	22.2%
Less than 5 years	20	6.3%
More than 20 years	94	29.8%
Total	315	100%

The result on the years of farming experience shows that 131 respondents (41.6%) have been farming for 11 to 20 years. This is followed by those with more than 20 years of farming experience, with 94 respondents (29.8%). While 70 respondents (22.2%) are in their 5 to 10 years of farming, and the least number of respondents are those with less than 5 years in farming experience.

The large proportion of farmers with more than 10 years of farming suggests that they are already experienced with farming methods and techniques. This also indicates that their knowledge and skills is built from their practical experience in the field of farming. While the low number of farmers with less than 5 years' experience suggest there is somewhat a decrease in the number of farming participation, especially for new generations who may be looking for opportunities beyond farming.

This finding is consistent with Mayo and Villarta (2023), who found that most corn farmers in Palimbang, Sultan Kudarat had been farming for more than six years, indicating farming expertise. It also agrees with Quilit (2025), whose study among white corn farmers in Lower Apayao found that most farmers had more than 10 years of farming experience, showing substantial experience in farming.

This implies the need to provide loan access to corn farmers to maximize the opportunity in increasing their production output. Farmers practical experience coupled with adequate production inputs will help generate more opportunity for farmers and elevate the overall economic status of farmers in Sarangani Province.

The result on the farm size in hectares revealed that most of corn farmers in Sarangani Province own 1 to 2 hectares, with 141 counts (44.8%). This is followed by 103 respondents (32.7) with 3-4 hectares of land and 41 (13%) respondents who cultivate less

Table 6. Frequencies of Farm Size (hectares)

Farm Size (hectares)	Counts	% of Total
1–2	141	44.8%
3–4	103	32.7%
Less than 1 hectare	41	13.0%
More than 4	30	9.5%
Total	315	100%

than one hectare of land. While only 30 farmers (9.5) have more than 4 hectares land. This indicates that corn farming in Sarangani Province is dominated by small to medium scale farmers who have limited land area to cultivate. Hence, proper utilization of inputs and budgeting of financial resources are necessary to increase corn yield. This finding is consistent with Mayo and Villarta (2023), who reported that most corn farmers in Palimbang, Sultan Kudarat cultivated land areas of less than 3 hectares, indicating the dominance of small-scale farming.

The dominance of small to medium sized farmers implies that production loan programs must consider the land size cultivated by farmers. The amount of loan must be enough to cover the cost needed for buying inputs and materials, while also taking into account the yield and the capacity of the farmer to pay. This initiative will help farmers to cover production cost without excessive repayment burden.

Table 7. Frequencies of Average Monthly Net Income from Farming (after expenses)

Average Monthly Net Income from Farming (after expenses)	Counts	% of Total
Above ₱20,000	40	12.7%
₱10,001–₱20,000	112	35.6%
₱5,001–₱10,000	105	33.3%
Below ₱5,000	58	18.4%
Total	315	100%

The result on the income distribution shows that most of the farmers have average monthly net income of ₱10,001–₱20,000, with 112 respondents (35.6%). This is followed by those earning between ₱5,001–₱10,000, with 105 respondents (33.3%). While 58 farmers (18.4%) have average monthly income below ₱5,000, and 40 farmers (12.7%) earns more than ₱20,000 per month.

The result on the average monthly income after expenses shows that majority of the corn farmers in Sarangani Province earns low to moderate income range from corn farming. The high number of farmers having net income of ₱10,001–₱20,000 means the income they earn is still limited considering the months of production from land preparation to harvesting. The presence of farmers earning less than ₱5,000 also shows that some farmers are struggling financially which can affect their ability to purchase farming inputs to improve their productivity.

This finding is consistent with Mayo and Villarta (2023), who reported that many corn farmers in Palimbang, Sultan Kudarat had low monthly income, with several earning below ₱5,000, indicating the financial limitations faced by smallholder corn farmers.

This implies that access to production loan must be provided to corn farmers who are struggling with sustaining farming activities. Access to loan will help low-income farmers to purchase farming inputs needed to maximize their productivity. However, trainings on financial management especially on proper budgeting must be

conducted to help farmers utilize their resources effectively. Lending institutions must also design loan products with reasonable interest and repayment terms to support farmers who have limited net income from corn farming.

Table 8. Frequencies of Number of Dependents

Number of Dependents	Counts	% of Total
1–2	77	24.4%
3–4	160	50.8%
More than 4	69	21.9%
None	9	2.9%
Total	315	100%

The result for the number of dependents that corn farmers have showed that most of the farmers have 3 to 4 dependents, with 160 respondents (50.8%). This is followed by 77 farmers (24.4%) with 1 to 2 dependents, 69 farmers (21.9%) with more than 4 dependents, while 9 farmers (2.9%) have no dependents.

This supports the previous finding in marital status where majority of the farmers are married and with family responsibilities. The number of farmers having 3 to 4 dependents means that their income from corn farming are not only used to cover another production costs but also to support the needs of the family.

This finding is related to Quilit (2025), who noted that many corn farmers are married, suggesting that farming serves as a source of livelihood for family needs. It also supports Mayo and Villarta (2023), who emphasized that limited farm income increases the need for financial support, especially when farmers also carry household responsibilities and dependents.

This implies that production loan programs must consider that farmers capacity to pay is affected by their obligation to cover family expenses. Hence, familial obligations must be considered in introducing loan programs and when approving a loan application. Orientation of proper budgeting and resource allocation must also be conducted before granting a loan approval to guide farmers in budgeting loans proceeds, considering household expenses and production costs. This will help not just in improving yield but also in reducing financial burden among farmers.

Table 9. Frequencies of Amount of loan availed (latest)

Amount of loan availed (latest)	Counts	% of Total
below ₱10,000	40	12.7%
₱10,001- ₱20,000	131	41.6%
₱20,001- ₱50,000	115	36.5%
above ₱50,001	29	9.2%
Total	315	100%

The frequency distribution of the latest total amount availed by respondents. Majority of the farmers availed a loan between ₱10,001- ₱20,000, with 131 respondents (41.6%). This is followed those who availed a production loan of ₱20,001- ₱50,000, with 115 respondents (36.5%), and below ₱10,000, with 40 counts (12.7%). While there are 29 farmers (9.2%) were granted of more than ₱50,001 worth of production loan.

The result shows that many farmers apply for a low to moderate production loan range. The highest response in ₱10,001–₱20,000 bracket indicates that application and approval of loans are enough to cover the cost for production such as buying of seeds, payment for the labor, and other farming inputs. The small frequency who availed more than ₱50,001 indicates that only few farmers were qualified for larger production capital which can be associated

with farm size, repayment capacity, number of dependents, and after expense income of corn farmers.

This suggest that approval of loans must be consistently aligned to the repayment capacity of farmers. While low production can help farmers to cover farming expenses, this may still not be enough to cover all materials needed. While those with larger production loans, need careful budgeting and planning in paying for repayment terms. Hence, financial management seminar must include techniques on proper budget and loan allocation. This will ensure that loan production creates greater positive impact on corn farmers in Sarangani Province.

This finding is consistent with Chen (2021), who described production loans as short-term financial support used by small-holder farmers to finance farm inputs and production activities. It also supports Mayo and Villarta (2023), who emphasized that farmers with limited income need financial assistance to cover corn farming costs, although the low to moderate loan amounts in this study suggest that loan approval should still be matched with farm size, input costs, and repayment capacity.

Table 10. Frequencies of Production Loan Availment

Number of times loan availed	Counts	% of Total
3–4 times	92	29.2%
More than 4	32	10.2%
Once	68	21.6%
Twice	123	39.0%
Total	315	100%

The frequency distribution on the number of times farmers availed a production loan is presented on Table 10. Most of corn farmers in Sarangani Province have availed a production loan twice, with 123 respondents (39%). This is followed by those who availed a production loan for 3-4 times, with 92 respondents (29.2%) and those who have availed for the first time, with 68 respondents (21.6%). While the lowest group of farmers are those who availed production loan for more than four times, with 32 respondents (10.2%).

This indicates the important role of production loans for corn farmers in Sarangani Province as a capital for purchasing farming inputs and sustaining farming operations every crop cycle. While the number of farmers who availed loan for more than three times emphasized that production loan has been part of the regular farming initiatives for corn farmers in Sarangani Province.

This finding is consistent with Chen (2021), who described production loans as short-term financial support used by farmers to finance recurring production inputs and farming activities. It also supports AT et al. (2022), Diallo et al. (2020), and Mayo and Villarta (2023), who emphasized that access to credit or financial support helps farmers sustain production and improve productivity.

This implies the need to ensure that production loan programs remain accessible and sustainable allowing farmers to finance farming operations. However, lending institutions must constantly provide orientation to prevent debt accumulation among farmers who rely on loan renewals for their crop production. This will ensure that production loans will not lead to additional financial burden but a tool to improve productivity.

The data on table 11 shows the frequency of attendance in corn production training among corn farmers in Sarangani Province. The result shows that more than half of the farmers population accounting for 186 respondents (59%) have attended corn production training. Meanwhile, 129 respondents (41%) have not attendance any training related to corn production.

Table 11. Frequencies of Corn Production Training Attendance

Corn Production Training Attendance	Counts	% of Total
No	129	41.0%
Yes	186	59.0%
Total	315	100%

This indicates that large group of respondents have received technical guidance on corn farming which can help improve their knowledge and skills in efficient and effective farming strategies. While 41% of respondents indicates a substantial number of farmers that have not received training on latest development and technologies used for improving farming practices.

This finding supports Becher et al. (2024), who highlighted the importance of crop establishment and fertilizer management, which means that corn production training is necessary, especially for the 41 percent of farmers who have not attended any training.

Hence, this result implies the need to strengthen training programs and require farmers participation as part of the process before granting loan approval. This will help ensure that farmers learn the new farming practices and allocate production loan accordingly. This process can help in preventing loan misuse and ensure that production creates positive impact on yield and economic status of corn farmers in Sarangani Province.

Table 12. Frequencies of Have you attended financial management training?

Have you attended financial management training?	Counts	% of Total
No	182	57.8%
Yes	133	42.2%
Total	315	100%

The data on table 12 shows the attendance of corn farmers in Financial Management training. The result shows that most group of farmers have not attended financial management training, with 182 respondents (57.8%). While only 133 respondents (42.2%) have attended training on financial management.

The result indicates that most farmers have not received any formal training regarding Financial Management. This further shows the lack knowledge on financial budgeting and proper allocation of borrowed capital. Meanwhile, the number of farmers with financial training indicates that they have acquired experience on how to manage farming expenses and income which allows them to manage their loan obligations effectively.

This finding supports Lauengco (2022), who emphasized the need for intensive monitoring of financial support to ensure that assistance given to farmers is properly used. It is also related to Chen (2021), who described production loans as financial support for farm inputs and production processes, which highlights the need for financial management training so farmers can properly allocate borrowed capital and manage repayment.

This suggest that financial lending institutions must provide financial management training on farmers before granting loan assistance. This training must be required to all farmers to ensure that they are equipped with the financial knowledge on proper loan allocation and budgeting. Providing training programs will help farmers plan their budget and ensure proper allocation of loan assistance.

Table 13 contains the frequency ranking of the reasons for availing production loans among corn farmers. Since the respondents

Table 13. Reasons for Availing Production Loan

<i>Reasons for Availing Production Loan</i>	Counts	Rank
Purchase Of Seeds and Planting Materials	202	1
Fertilizer Expenses	196	2
Land Preparation	195	3
Hired Labor Cost	158	4
Hired Labor Cost	158	4
Pesticide Expenses	150	5
Encouraged By Fellow Farmers	97	6
It Was Simpler and Faster to Avail Compared to banks or other lenders	87	7
Loan Offered By ARBO	86	8
Encouraged By ARBO Staff	83	9
No Other Funding Sources Available	76	10
Transportation Of Farm Inputs To Field	63	11
Transportation Of Produce	63	11
Transportation Of Farm Inputs To Field	63	11
Transportation Of Produce	63	11
Equipment Rental (e.g., Tractor, Sprayer, Thresher)	62	12
Emergency Education-Related Needs (e.g., Tuition, School Supplies)	39	13
Emergency Health-Related Needs (e.g., Hospitalization, Medicine)	39	13
Lack Of Income During Off-Season	38	14
To Repay Previous Debts or Loans	38	14
To Support Household Expenses During Planting Season	32	15

were allowed to check all applicable reasons, the counts represent the number of times each reason was selected, while the rank identifies which reasons were most and least commonly chosen.

The data reveal that the purchase of seeds and planting materials ranked first, with 202 responses, followed by fertilizer expenses with 196 responses, and land preparation with 195 responses. These results indicate that corn farmers mainly avail production loans to finance direct production needs, particularly the basic inputs and field preparation activities required before and during the cropping season.

Other highly ranked reasons include hired labor cost, with 158 responses, and pesticide expenses, with 150 responses. This further shows that production loans serve as working capital for the actual farming process, including labor and crop protection. Meanwhile, the lowest-ranked reason was to support household expenses during planting season, with 32 responses, followed by lack of income during off-season and repayment of previous debts or loans, each with 38 responses. This suggests that although some farmers also consider household and financial pressures, their main reason for availing production loans remains focused on farm production.

This result is consistent with Chen (2021), who described production loans as financial support used by farmers to finance farm inputs and production processes. It also agrees with Diallo et al. (2020) and AT et al. (2022), who emphasized that access to credit improves agricultural productivity because farmers need capital for inputs such as seeds, fertilizer, pesticides, labor, and land preparation.

The result implies that production loan programs should prioritize the actual production expenses of corn farmers, especially seeds, fertilizer, land preparation, pesticides, and hired labor. Since these reasons obtained the highest ranks, ARBOs, cooperatives, and lending institutions should ensure that the approved loan

amount and release schedule are aligned with the cropping calendar and current farm input prices.

Table 14. Factors Affecting the Availment of Production Loans

Major Themes	Subthemes
Loan Application Process	Documentary requirements Approval waiting time
Loan Term Clarity	Interest rate understanding Repayment schedule awareness
Organizational Trust and Support	ARBO/cooperative assistance Officer approachability Membership familiarity
Loan Program Accessibility	Local availability Simple requirements
Repayment and Financial Capacity	Harvest price fluctuation Household financial demands Rising production costs

Major Theme 1: Loan Application Process

The first major theme that was identified as one of the factors in availing production loan is the application process. This was further elaborated to two subthemes which are documentary requirements and approval waiting time. These subthemes are discussed in the following sections:

Subtheme 1.1: Documentary Requirements

Documentary requirements were identified as one of the factors in availing production loan. Some on the participants shared the assistance provided by the ARBO help with their application for production loan. Arnel mentioned that complying with documentary requirements was very organized with an officer who guides until the process ends:

[...] okay kaayo ang dagan kay kabalo na ang ARBO sa proseso. Gipangayo lang nila ang basic requirements, then gi-assist mi sa pag-fill out. Dili kaayo ko na-stress kay naay officer nga naggiya from start hangtod release sa loan (CF_01)
The process went very well because the ARBO already knew the procedure. They only asked for the basic requirements, then assisted us in filling out the forms. I was not really stressed because there was an officer who guided me from the start until the release of the loan.

However, some participants shared that they experienced delay in processing especially when requirements are incomplete. Cardo submitted incomplete documentary requirements that caused the delay of the loan processing:

[...] naa koy kulang nga document mao nadugay gamay (CF-03)
I had a missing document, so the process was slightly delayed.

Grace also shared that her application was difficult as she was unaware of the required documents for production loan:

Medyo lisod akong application experience kay dili ko kabalo dayon unsa nga papers ang kailangan. Nabalik pa ko usa ka beses kay naa koy kulang (CF-07)

My application experience was somewhat difficult because I did not immediately know what papers were needed. I had to go back once because I had a missing requirement.

The result indicates corn farmers must comply with the necessary documentary requirement for the fast approval of their production loan. Hence, ARBOs, cooperatives, and lending institution must provide a checklist of requirements together with an orientation to farmers to provide clear instruction to avoid delay in application.

This finding is consistent with the discussion on the DA-ACPC Production Loan Easy Access (PLEA) program, which describes production loan support as convenient, non-collateralized, and intended for marginal and small farmers. The experience of Arnel, who was assisted by the ARBO in completing basic requirements, supports the idea that accessible loan mechanisms become easier for farmers when organizations provide direct guidance.

Subtheme 1.2: Approval waiting time

The waiting time for loan approval was another factor for availing production loan among corn farmers. Several participants emphasized that although the process was manageable, they still struggle with the waiting period for the loan approval and release. This affects their plan especially that corn farming needs to follow specific timing especially during planting season. Arnel shared that sometimes they need to wait for the final approval of the loan:

[...] Usahay medyo maghulat pa sa final approval. Maayo unta kung mas maaga ang release kay ang corn farming naa gyud timing. (CF_01)

Sometimes, we still have to wait for the final approval. It would be better if the release were earlier because corn farming really depends on proper timing.

Similarly, Sonia shared that although the application process was easy, she still experienced waiting period for the loan approval:

Ang application experience nako okay ra, although naghulat pa ko gamay sa approval. (CF_01)

Sometimes we still have to wait for the final approval. It would be better if the release were earlier because corn farming really depends on timing.

These responses suggests that timely approval is important for corn farmers as it affects their ability to prepare for corn production activities on time. Corn farming follows specific timing for land preparation and planting, hence delay in the purchase of inputs and materials can impact farmers ability to maximize their production output.

This finding is consistent with Chen (2021), who explained that production loans help smallholder farmers finance farming inputs and production processes. It also supports Becher et al. (2024), who emphasized the importance of crop establishment and fertilizer

management in corn productivity, since delayed loan approval can affect land preparation, planting schedule, and input application.

This implies that ARBOs, cooperatives, and lending institutions must improve their approval scheduling and ensure to align their loan approvals and release with planting season to ensure that the loan amount is maximize to increase productivity.

Major Theme 2: Loan Term Clarity

Loan clarity emerged as another factor for availing production loan. This is further elaborated into two subthemes which are Interest rate understanding and repayment schedule awareness. These subthemes are discussed in the following sections:

Subtheme 2.1: Interest Rate Understanding

Another emerging factor for availing production loan is farmers' understanding of the interest rate. Clear explanation of the interest rate, terms, and schedules are important considerations for farmers to proceed with production loan:

[...] Gi-explain man gyud ang interest ug kanus-a magbayad (CF-01)

The interest and the schedule of payment were properly explained to us.

Similarly, Dante also shared that aside from the explanation on the interest, due date, and payment schedule, a sample computation was also provided:

[...] Gipakita pud nila ang sample computation, mao mas dali nako nasabtan [...] (CF-05)

The loan rules were very clear to me because they explained the interest, due date, and payment schedule one by one. They also showed a sample computation, which made it easier for me to understand.

Hence, farmers are pushed to apply for a production when they are provided with clear expectations on how much they need to pay together with the payment schedules. However, several participants demonstrate basic understanding of the details of their loan especially on interest rates:

Dili kaayo klaro sa akoo ang interest computation. Kabalo ko kanus-a magbayad, pero ang detalye sa penalty medyo libog (CF-03)

I am not very clear about the interest computation. I know when to pay, but the details of the penalty are somewhat confusing

Nestor also shared that the interest was explained but there was no clear breakdown of the details. Similarly, Pedro recommended to explain the details in vernacular language particularly in bisaya or tagalog to effectively translate the details of interest:

Mas gusto nako nga i-explain nila in Bisaya or Tagalog nga simple. Lahi ra gyud kung klaro ang example sa interest ug bayad. (CF-15)

I prefer that they explain it in simple Bisaya or Tagalog. It is really different when the examples of the interest and payment are clear

The statements indicate the corn farmers understand that their production loan also includes their obligation to pay for the interest. However, there should be clearer explanation on how repayments and interest are computed.

This related to Chen (2021), who explained that production loans are intended to help smallholder farmers finance production needs, but the present finding extends this by showing that farmers still need clearer explanations of interest computation, penalties, and payment examples to fully understand their loan obligations.

Hence, it is important for lending institutions, cooperatives, and ARBOs to provide clear orientation using simple and localized terms that can be understood by the corn farmers. providing clear explanation on interest breakdown will help farmers plan their repayment properly and avoid misunderstanding during repayment schedules.

Subtheme 2.2: Repayment Schedule Awareness

Repayment schedule awareness is another factor in availing production loan among corn farmers. Some participants mentioned that knowing the schedule of payments help with their decision if they can manage with their loan obligation. Dante shared that he understood the rules of production loans because the details on interest, due date, and payment schedules were explained one by one:

Klaro kaayo sa akoo ang loan rules kay giisa-isa nila ang interest, due date, ug payment schedule. (CF-04)

The loan rules were very clear to me because they explained the interest, due date, and payment schedule one by one.

Sonia also shared that it understanding of repayment after harvest is important which shows the importance of timing of payment before availing loan. Similarly, Felix emphasized that the importance of setting aside the budget for loan payment after harvest. Having clear understanding of repayment data is necessary to carefully manage the cash flows:

Kabalo ko sa interest, repayment date, ug kinahanglan nga bayaran after selling. Ang clarity sa terms nakatabang nga maka-plan ko sa cash flow. (CF-19)

I know the interest, repayment date, and the requirement to pay after selling. The clarity of the terms helped me plan my cash flow.

The responses suggest that awareness of repayment schedules helps corn farmers decide to proceed with the loan, plan their loan obligations, and prevent confusion during payment time.

This finding is consistent with Chen (2021), who described production loans as short-term financial support for farmers, since repayment timing is an important part of managing borrowed capital for production needs. It also supports the discussion on accessible agricultural credit programs such as DA-ACPC's PLEA, where clear and farmer-friendly loan terms are necessary for small farmers to confidently avail and manage production loans.

Therefore, cooperatives, ARBOs, and lending institutions should clearly provide details on due dates and consequences for delayed payment. Since, farmers depend on their income from harvest to pay for their loans, it is necessary to provide farmers with payment options to help farmers manage their finances and avoid paying penalties resulting from delayed payment.

Major Theme 3: Organizational Trust and Support

Organizational support emerged as another factor that encourages corn farmers to avail production loan. This is further elaborated into three subthemes which are ARBO/cooperative assistance, Officer approachability, and Membership familiarity.

Subtheme 3.1: ARBO/cooperative assistance

The assistance provided by the ARBO or cooperative emerged as a factor that encourage farmers to apply for production loan. Several participants shared that the officers helped in preparing their documents providing guidance if they have missing requirements:

Kung naa koy kulang nga requirement, ginapahibalo nila ko dayon. (CF-02)
If I have lacking requirements, they inform me immediately.

Similarly, Mila shared the ARBO help is important especially with processing of the documents:

Ang ARBO supportive man, labi na sa pagtabang sa documents [...] overall, okay akong experience. (CF-12)
The ARBO is supportive, especially in helping with the documents. Overall, my experience was okay.

The assistance provided by the officers during the application, processing, and release of production loan, they also provide after service which includes providing follow-ups to check the crops condition:

Maayo ang suporta sa organization kay naa silay follow-up sa field. Dili lang sila mangayo ug payment; ginatan-aw pud nila kung okay ba ang crop. Kana nakatabang sa among confidence. (CF-11)
The organization's support is good because they conduct field follow-ups. They do not only ask for payment; they also check whether the crops are doing well. That helped build our confidence.

This subtheme suggests that the assistance provided by the ARBOs, cooperatives, and lending institutions all throughout the

production process provides confidence to farmers in availing production loans.

This finding is consistent with the discussion on production loan mechanisms, particularly the DA-ACPC Production Loan Easy Access (PLEA) program, which emphasizes convenient, non-collateralized, and accessible credit support for small farmers. It also supports Lauengco (2022), who emphasized the need for intensive monitoring of financial support, since the participants shared that ARBOs and cooperatives do not only assist in processing documents but also conduct field follow-ups to check crop conditions.

Hence, ARBOs and cooperatives should consistently provide farmers with assistance in loan application, document assistance, application updates, and field monitoring so build farmers confidence in production loans.

Subtheme 3.2: Officer approachability

Another emerging factor for availing loan production is officers' approachability. Several participants shared that they feel comfortable with asking questions and raising concerns to officers:

Kung naa mi pangutana, dali ra pud sila maduolan. (CF-01)
Whenever we have questions, they are easy to approach.

Similarly, Ben shared that the officers were approachable and immediately informed farmers if there is lacking requirements:

Okay akong experience sa cooperative kay approachable ang mga tao didto. Kung naa koy kulang nga requirement, ginapahibalo nila ko dayon. (CF-02)
My experience with the cooperative was good because the people there are approachable. If I have lacking requirements, they inform me immediately.

Applying for a loan production requires a lot of documents to process and forms to fill-out which may be confusing to corn farmers, but the presence of approach officers helps in reducing this confusion, making the loan process less intimidating to farmers.

However, some participants shared that they are hesitant sometimes to ask questions because officers are sometimes busy.

[...] pero dili pa kaayo ko close sa officers. Usahay maulaw ko mangutana kay basin busy sila. (CF-07)
But I am not yet very close to the officers. Sometimes, I feel shy to ask questions because they might be busy.
Okay man sila makigstorya, pero usahay busy pud ang officers. (CF-03)
They are okay to talk to, but sometimes the officers are also busy.

The statements suggest that approachability must be accompanied with the officer's availability to assist farmers proactively so corn farmers will become more confident in asking questions. It further extends the reviewed literature by showing that accessibility is not only about simple requirements or available credit, but also about the approachability and availability of officers who

guide farmers, answer questions, and reduce confusion during the loan process. This implies that ARBOs, cooperatives, and lending institutions should provide consultations or assign contact persons to make the process more accessible to corn farmers.

Subtheme 3.3: Membership familiarity

Membership familiarity on the loan processes emerged as another factor that encourages farmers to avail for production loan among corn farmers. Their prior experience and familiarity with how the process works, the officers handling their loan applications, and the service provided by the organizations gives corn farmers the confidence to avail for the loan:

Dako akong salig sa among ARBO kay dugay na mi nga miyembro ug kaila na namo ang officers. (CF-01)

I have great trust in our ARBO because we have been members for a long time and we already know the officers. Dali ra akong application kay regular member ko ug maayo akong record. (CF-19)

My application was processed easily because I am a regular member and I have a good record.

This suggest that prior experience and familiarity with the loan process build trust and confidence among farmers. However, farmers who are new with the process and are not close to officers are hesitant to approach and ask questions. This implies the ARBOs and cooperatives should provide consistent communication and guidance to both new and regular members.

Major Theme 4: Loan Program Accessibility

Loan program accessibility was revealed to be another factor that impacts production loan availment. This is further categorized into local availability and simple requirements. These subthemes are discussed in the following sections.

Subtheme 4.1: Local availability

The availability of production loan in the locality of farmers makes it more practical and attainable. As expressed by Arnel, the presence of ARBOs and cooperative within the community makes it easier and convenient for corn farmers to access. As shared by Cardo:

Accessible siya kay naa ra sa barangay ang contact person. (CF-03)

It is accessible because the contact person is already within the barangay.

Similarly, Edgar and Jun expressed the convenience they get from having available ARBOs and cooperatives in their community especially for farmers who are pressed for time and tied with their farming activities. Ben also emphasized that the process was easier because the organization was already familiar with the farmers situation. This suggest that while accessibility is important, the added familiarity on farmers situation make it more convenient for farmers since the organization understood their farming background.

Furthermore, Mila added that the organization showed their willingness to help by reaching out to the farmers first:

Accessible siya kay giduol mismo sa organization ang members. Dili na kinahanglan nga farmer pa ang mangita ug lender. (CF-12)

It is accessible because the organization itself reaches out to the members. Farmers no longer need to look for a lender themselves

This was supported by Sonia who mentioned that the loan process was accessible because it is easier for them to ask questions and submit their application compared to outside lending:

Accessible siya kay dali ra mag-inquire ug mag-submit. Compared sa lending sa gawas, mas komportable ko diri. (CF-17)

It is accessible because it is easy to inquire and submit requirements. Compared to outside lending institutions, I feel more comfortable here.

However, Pedro recommended that aside from providing accessibility, organization must also provide clear explanations and handouts especially on payment terms. Hence, ARBO/cooperative must provide clear orientation and initiate conversation to clarify information that are unclear to corn farmers. Overall, the presence of ARBO/cooperative within the community is more practical and convenient for many farmers reducing their travel and hesitation.

This finding extends existing literature showing that accessibility is strengthened when the loan program is available within the barangay, when contact persons are nearby, and when ARBOs or cooperatives actively reach out to farmers. This suggests that local availability makes production loans more practical and less intimidating for corn farmers compared with outside lending institutions.

Subtheme 4.2: Simple requirements

The simple documentary requirements are another emerging factor that encourages farmers to avail production loan. Several participants emphasized the simplicity of requirements needed to apply for a loan compared with banks:

Mas accessible ni siya kumpara sa banko kay dili na kinahanglan daghan kaayo nga papeles. (CF-01)

It is more accessible compared to banks because it does not require too many documents.

Similarly, Jun and Ramon both mentioned that the requirements are easier to comply and the process is not too strict compared with bank applications. Wilma also highlighted the importance of not requiring collateral compared with formal bank loans:

Accessible siya kay local ug mas dali kaysa formal bank. Dili na kinahanglan collateral nga wala man pud mi. Para sa small farmer, mao ni ang mas realistic nga option. (CF-20)

It is accessible because it is local and easier compared to formal banks. Collateral is no longer required, which we also do not have. For small farmers, this is the more realistic option.

These subthemes emphasize that simpler documentary requirements with no complex paper works reduce farmers' hesitation in applying for production loan. Hence, cooperatives, ARBOs, and lending institutions should maintain requiring simple documentary requirements to farmers especially that corn farming in Sarangani Province is dominated by small to medium scale farmers.

Keeping the loan requirements simple and realistic

Major Theme 5: Repayment and Financial Capacity

Another factor that was identified that influences the decision to apply for a production loan among corn farmers was the repayment and financial capacity. This was further elaborated into harvest price fluctuation and household financial demands.

Subtheme 5.1: Harvest price fluctuation

Several participants expressed that while loan was helpful with sustaining their farming activities, repayment obligations become difficult especially with low selling price of corn during harvest.

Pinaka-challenge nako ang repayment kay usahay ubos ang presyo inig harvest. Maayo unta kung naay option nga installment after selling. (CF-05)

My biggest challenge in repayment is that the price during harvest is sometimes low. It would be better if there were an installment option after selling

Wilma shared the same sentiment and suggested to initiate farm to market linkage to help farmers with the low selling price of corn:

Ang challenge kay kung ubos ang presyo sa mais, lisod gihapon ang repayment. Suggest nako nga naa market linkage support para mas maayo ang selling price. (CF-20)

The challenge is that when the price of corn is low, repayment also becomes difficult. My suggestion is to provide market linkage support so farmers can have a better selling price.

Jun also shared that paying for the interest is manageable but the price fluctuation makes the interest burdensome for them.

Ang concern nako kay ang interest bisan manageable, dako gihapon kung ubos ang presyo sa mais. Suggest nako nga kung production loan, mas ubos unta ang interest. (CF-10)

My concern is that even though the interest is manageable, it still becomes heavy when the price of corn is low. I suggest that for production loans, the interest should be lower.

Dante suggested that repayment must be adjusted to align with the selling period of corn. These statements demonstrate that farmers are not only concerned with loan accessibility but also consider the price fluctuations and their capacity to pay for their loan obligations.

This finding is related to Mayo and Villarta (2023), who reported that corn farming can generate high production and profitability, because the present finding shows that profitability and repayment capacity are still affected by the selling price during harvest. It also supports Lauengco (2022), who emphasized the need for stronger

monitoring of financial support, since farmers' ability to repay production loans becomes difficult when corn prices are low, even if the loan helped sustain farming activities.

Therefore, cooperatives, ARBOs, and lending institutions should provide flexible payment options and installment schemes especially with price fluctuations during harvest to reduce financial concerns of corn farmers during harvest.

Subtheme 5.2: Household financial demands

Household financial demands emerged as another factor affecting production loan of corn farmers in Sarangani Province. This supports the marital distribution of corn farmers where majority are married with family obligations. Several participants mentioned that their loan obligations are sometimes not used mainly for crop production but on household associated expenses such as food, school expenses, and health needs.

Akong challenge kay ang loan nagamit pud sa household expenses kay wala mi income ato nga time. Mao pag-abot sa farm inputs, kulang na ang nahabilin. (CF-07)

My challenge is that the loan was also used for household expenses because we had no income at that time. So when it was time to buy farm inputs, the remaining amount was already insufficient.

Nestor shared that their loan amount is sometimes used for the education expense with their kids suggesting to provide financial coaching to manage loan amount focusing on farm inputs.

Ang challenge nako kay pag-release sa loan, naa pud mi bayranan sa school sa bata. Naapektuhan ang budget para sa fertilizer. Suggest nako nga naay financial coaching aron ma-prioritize ang farm inputs. (CF-13)

My challenge was that when the loan was released, we also had school expenses for the children to pay. This affected the budget intended for fertilizer. I suggest having financial coaching so farm inputs can be prioritized.

Income from farming follows certain seasons and sometimes farmers are confronted with urgent financial needs that push them to use part of their loan amount:

[...] daghan kaayo kinahanglan sa balay ug sa uma. Naay parte nga nagamit sa emergency health needs kay nasakit akong anak. (CF-03)

There were many needs at home and on the farm. Part of the loan was used for emergency health needs because my child got sick.

Similarly, Teresa shared the same sentiment, saying that their loan amount is compromised especially when there is an emergency health expense in the family.

Ang pinaka-challenge nako kay naay emergency health expense sa pamilya. Naapektuhan ang paggamit sa loan kay dili tanan napunta sa farm. (CF-18)

My biggest challenge was the emergency health expense in the family. The use of the loan was affected because not all of it went to the farm.

When I received the loan, I immediately used it for seeds, fertilizer, and land preparation.

Gigamit nako ang loan according sa farm plan: seeds first, then fertilizer, then labor. (CF-06)

I used the loan for fertilizer, seeds, and payment for labor during planting.

This suggest that household demands can divert the budget for crop production among corn farmers. Furthermore, these demands can affect farmers loan utilization and farmers productivity which violates the purpose of production loan. This implies that ARBOs, cooperatives, and lending institutions must provide financial management supports and emergency assistance so that the budget intended for crop production will be utilized mainly to finance farming activities.

4.1. Impact Of Production Loans on Corn Productivity

This section discussed the analyzed theme pertaining to impact of production loans on corn productivity. The analysis reveals six major which are improved access to production inputs, timely farm operations, and better crop growth and harvest output. This suggests the production loan in general p help in sustaining farming operations, improved crop quality, and production. These themes are discussed in the following sections together with its corresponding subthemes.

Table 15. Impact of Production Loans on Corn Productivity

Major Themes	Subthemes
Improved Access to Production Inputs	Seeds and fertilizer availability Pesticide and herbicide purchase Land preparation and equipment rental
Timely Farm Operations	On-time planting Timely fertilizer and pest control application
Better Crop Growth and Harvest Output	Increased harvest volume Better corn quality

Major Theme 1: Improved Access to Production Inputs

Improved access to production inputs emerged as one of the impacts of production loans among corn farmers. This was further elaborated into three subthemes which are Seeds and fertilizer availability, Pesticide and herbicide purchase, and Land preparation and equipment rental.

Subtheme 1.1: Seeds and fertilizer availability

One of the impacts of production loan on corn productivity is the availability of seeds and fertilizer. Participants mentioned that they utilized their loan mainly to buy corn seeds and fertilizers:

Akong gigamit ang loan mainly sa fertilizer ug seeds. Naa pud gamay nga napunta sa plowing kay kailangan na gyud andam ang yuta. (CF-02)

I mainly used the loan for fertilizer and seeds. A small portion also went to plowing because the land really needed to be prepared already.

Pagdawat nako sa loan, diretso nako siya gigamit sa seeds, fertilizer, ug land preparation. (CF-01)

Nakatabang gyud ang loan kay nakapalit ko ug mas maayong seeds ug sakto nga fertilizer [...] Karon mas kompleto ang inputs, mao mas tarong ang tubo sa mais. (CF-01)

The loan really helped because I was able to buy better seeds and the proper fertilizer [...] Now the inputs are more complete, so the corn growth is better.

Similarly, Felix shared that access to production loan allowed to procure needed quantity for the fertilizers. June also mentioned that adequate fertilizer application helped to improve crop growth.

This finding is consistent with Chen (2021), who explained that production loans help smallholder farmers procure farm inputs and sustain production activities. It also supports Diallo et al. (2020) and AT et al. (2022), who emphasized that access to credit improves agricultural productivity because farmers need capital for inputs such as seeds, fertilizers, labor, pesticides, and other production needs. Hence, access to loan production not just helped in procuring quality seeds but also in buying sufficient fertilizer to support better crop growth and production output.

Subtheme 1.2: Pesticide and Herbicide Purchase

The ability to purchase pesticide and herbicide emerged as another positive impact of production loans among corn farmers.

Nakapalit pud ko ug herbicide. Mas limpyo ang field ug mas maayo ang crop stand. (CF-04)

I was also able to buy herbicide. The field became cleaner and the crop stand improved.

This emphasizes the additional benefit provided by production loan to maintain clean farm area and sustain crop growth. Inday shared the same experience that the loan amount helped in buying herbicide on time that improved weed control.

Overall, ang loan nakatabang sa productivity ug income. Naminusan ang losses kay na-control ang weeds ug pests earlier. (CF-09)

Overall, the loan helped improve productivity and income. Losses were reduced because weeds and pests were controlled earlier.

This statement indicates how production loan helped in early control of weeds and pests before the can cause greater damage

to farmers. This suggests the loan production helps in corn productivity by allowing farmers to immediately respond to the damage caused by weed and pests by purchasing necessary by purchasing the needed herbicides and pesticides when needed. The result agrees with AT et al. (2022) and Diallo et al. (2020), who found that access to credit improves agricultural productivity, since the participants in this study were able to control weeds and pests earlier because loan proceeds allowed them to buy herbicides and pesticides on time. Therefore, production loan not only helps in purchasing farm inputs but helps in sustaining crop maintenance ensuring crop growth and quality until harvest.

Subtheme 1.3: Land preparation and equipment rental

Land preparation and equipment rental was identified as another impact of production loan on farmers productivity. Participants shared that aside from buying the seeds and fertilizers, some loan amount was used in pre-farming activities such as land preparation, plowing, and labor expenses which are important before the start of cultivation.

Naa pud gamay nga napunta sa plowing kay kailangan na gyud andam ang yuta. Naka-prepare ko sa yuta ug naka-plant within season. (CF-02)

Similarly, Arnel mentioned that upon receiving the loan, part of the amount was spent for land preparation which indicates that this is one of farmers allocation for loan proceeds. This land preparation requires for machinery and fuel which could be another burden for farmers with limited cash, but with production loan, farmers were able to secure necessary machineries and pay for labor costs at the start of production without delays. Inday also mentioned that part of the loan proceeds was used for tractor rental highlighting the used of loan for operational expenses.

Overall, land preparation and equipment used are part of farmers allocation of the loan proceeds. Hence, production loan helps in timely and productive farming among corn farmers. The finding relates to Colminas et al. (2024), who noted that machineries contribute to faster and easier corn production.

Major Theme 2: Timely Farm Operations

The access to production loan support the time farm operations of corn farmers. These are further categorized into three subthemes which are on-time land preparation, on-time planning, timely fertilizer and pest control application. These subthemes are further discussed in the following sub-sections.

Subtheme 2.1: On-time planting

On-time planting emerged as another benefit of production loan for corn farmers. Corn farmers follow specific planting schedule and having available cash when needed is necessary to purchase seeds and pay for the labor within the appropriate period. Arnel emphasized that production loan is important especially during planting season as it prevents delays in farming:

Oo, nakatabang siya nga ma-timing nako ang land preparation ug planting [...] Kung naa ang kwarta on time, dili ma-delay ang trabaho sa uma.

Yes, it helped me time the land preparation and planting properly [...] When the money is available on time, the work on the farm is not delayed.

Similarly, Ben shared that he was able to prepare the land and plant withing the season which helps in with better crop growth and quality output. Additionally, he shared that without the loan the activity would be delayed for two weeks.

This subtheme shows that loan application helped farmers with timely farming activities especially during planting season. This implies that ARBOs and cooperatives must ensure that production loans are processed and released before the planting season to allow farmers to procure necessary inputs needed for the initial corn production. These organizations can prepare a loan release calendar which patterned to the farming cycle for earlier processing of needed documents and prevent delays in loan approval.

Subtheme 2.2: Timely fertilizer and pest control application

Timely purchase of fertilizer and pest control application emerged as another impact of production loan on corn farming productivity. Production loan helped farmers to purchase fertilizers and pesticides at certain period of crop growth. This has allowed corn farmers to manage weeds and pests the soonest preventing further damage on crops which could lead to poor quality and low income. As shared by Arnel, the loan amount helped with buying needed inputs to ensure better crop growth:

Nakatabang gyud ang loan kay nakapalit ko ug [...] sakto nga fertilizer. Before, magkulang ko sa abono kay hulaton pa nako ang kwarta gikan sa lain. Karon mas kompleto ang inputs, mao mas tarong ang tubo sa mais. (CF-01)

The loan really helped because I was able to buy the proper fertilizer. Before, I would lack fertilizer because I still had to wait for money from other sources. Now the inputs are more complete, so the corn growth is better.

This indicates that the capacity to purchase need farm inputs helps to improved the condition of crops that leads to better quality upon harvest. Additionally, Dante shared that loan assistance helped to purchase herbicide to maintain cleaner field and better crop stand. Inday also mentioned that losses were reduced due to immediate control of pests and weeds:

Naminusan ang losses kay na-control ang weeds ug pests earlier. Para nako, kung disciplined ang paggamit sa loan, makita gyud ang positive result. (CF-09)

Losses were reduced because weeds and pests were controlled earlier. For me, if the loan is used in a disciplined manner, positive results can really be seen.

This highlights the importance of timely application of fertilizer, pesticide, and herbicide to protect crop quality and increase productivity. This indicates that access to production loan not only helps with purchasing farm inputs but helps in the overall farm management practices.

This supports Diallo et al. (2020), who noted that farming inputs such as fertilizers, pesticides, herbicides, and labor significantly affect productivity. This implies that ARBOs, cooperatives, and lending institution provides timely release of loan approval to help farmers with timely application of pesticides and herbicides to promote overall productivity. Constant monitoring must also be done to ensure that loan proceeds are used for farming-related activities.

Major Theme 3: Better Crop Growth and Harvest Output

Better crop growth and harvest output emerged as another positive impact of production loan on corn productivity. This is further elaborated into three subthemes which are improved crop stand, increased harvest volume, and better corn quality.

Subtheme 3.1: Increased harvest volume

Increased harvest volume was identified as one of the impacts of production loan on corn productivity. Several participants shared that loan production helps with purchasing necessary farm inputs and perform farm activities on time which helps protect crop and leads to better production output. Production loan helped with the effective farm management by allowing farmers to purchase

needed seeds, fertilizers, pesticides, and herbicides and pay for labor contributing to better crop growth. Oscar shared that he is able to purchase quality seeds and fertilizers which helped in crop management.

Mas maayo ang farm inputs nako karon kaysa previous cropping. Nakapalit ko ug quality seeds ug sakto nga abono. Nakatabang pud sa crop management kay naay budget sa spraying. (CF-14)

My farm inputs are better now compared to the previous cropping season. I was able to buy quality seeds and the proper fertilizer. It also helped in crop management because there was a budget for spraying.

This indicates that when farmers have enough capital, they are more capable of managing farming operations and improving the condition of the crops. Several farmers also associate better farm management with better harvest outcomes. Oscar shared that the harvest has improved with better corn quality:

Mas taas ang harvest nako ug mas maayo ang quality sa shelled corn. Ang cobs mas bug-at ug mas gamay ang reject. Makaingon ko nga dako ang role sa loan. (CF-14)

My harvest was higher, and the quality of the shelled corn was better. The cobs were heavier, and there were fewer rejects. I can say that the loan played a big role.

Similarly, Ramon shared that with increased in harvest also leads to increase in income which provides confidence for the next cropping.

Mas taas akong harvest ug mas maayo ang net income. Nakita nako nga ang proper loan use ug good timing nagdala ug better yield. Mas confident ko karon sa next cropping. (CF-16)

My harvest was higher, and my net income improved. I saw that proper loan use and good timing led to better yield. I am now more confident for the next cropping season.

Victor also shared that the better crop establishment, sufficient fertilizer, and equipment rental helped with better yield and increase in harvest. These responses demonstrate the effectiveness of loan production with increased harvest by providing farmers with the needed capital to purchase farm inputs and needed materials for crop management. This also suggest that proper loan utilization results in better crop quality and improve harvest quantity.

As mentioned by Mayo and Villarta (2023), corn farmers can achieve high production and profitability when farming activities are properly supported. This implies that aside from ensuring timely release of production loans, ARBOs, cooperatives, and lending institutions must also conduct consistent monitoring of loan proceeds.

Subtheme 3.2: Better corn quality

Farmers shared that better corn quality was another positive result of access to production loan on productivity. Overall, production loan not only creates difference in production quantity

but also in crop quality. Inday shared that there was significant improvement compared to previous harvest with limited capital:

Mas taas akong harvest ug mas nindot ang quality sa mais. Naka-sell pud ko sa mas maayo nga presyo [...] Dako ang improvement kumpara sa season nga kulang ko ug capital. My harvest was higher, and the quality of the corn was better. I was also able to sell at a better price [...] There was a big improvement compared to the season when I lacked capital.

This indicates that better crop output may also have an impact on the marketability of the harvested corn products. Additionally, Oscar agreed that production loan helped with generating better harvest which provides better shelled corn. Better corn is a result of timely fertilizer application, better quality of seeds, and proper farm maintenance throughout the production period. This result highlights the need for ARBOs and cooperatives to ensure not just timely approval but also sufficient amount to cover cost for corn production. When farmers received the necessary support, they can better maximize the opportunity to purchase farm inputs and conduct appropriate farm maintenance resulting to better yield and income.

4.2. Factors Affecting Productivity

This section explains the factors affecting corn farmer's productivity in Sarangani Province. This considers the yield per hectare as the dependent variable and the socio-economic profile of the respondents as the independent variables. To properly analyze the result, normality test using Shapiro-Wilk was used. F The ordinary least squares (OLS) statistical treatment was used for variables that met the normality assumption, while generalized linear models (GLM) were used for variables that violated the normality assumption.

Table 16. Factors Affecting Productivity in terms of Age

Predictor	Estimate	Statistic Value	P	Interpretation
Age:				
30–39 years – 18–29 years	0.717	t = 2.22	.027	Insignificant
40–49 years – 18–29 years	1.363	t = 4.36	<.001	Significant
50–59 years – 18–29 years	1.844	t = 5.72	<.001	Significant
60 years and above – 18–29 years	1.638	t = 4.60	<.001	Significant

The data in table 17 shows that the age of farmers has a significant impact on corn productivity in the Sarangani area. In this instance, OLS regression used the youngest age group (18–29 years of age) as a reference group. In comparison to the reference group, farmers between the ages of 30 and 39 years had an increase in corn yield of 0.717 units ($t=2.22$ and $p=0.027$); those who were 40–49 years old produced 1.363 more units of corn than their younger counterparts ($p<0.001$); those who were 50–59 years old produced 1.814 more units of corn than their younger counterparts ($p<0.001$); and those who were over the age of 60 produced 1.638 more units of corn than their younger counterparts ($p<0.001$). The data indicate that as farmers age, they become more proficient at resource management, how to care for crops, and implementing improved practices, which improve farm productivity. It appears

that there is a slight decline between the 60 years and above group compared with the 50–59 year group that may be due to limitations in physical ability or hesitance to use new approaches.

This finding is consistent with the studies conducted by Quilit (2025), Asis (2019), and Colminas et al. (2024) which confirm that middle-aged and older farmers are the majority in corn production in the Philippines and therefore productivity increases with age. In contrast, Colipano (2024) reported that Kibawe, Bukidnon has a larger percentage of younger farmers than the Sarangani region did, and that in Sarangani, yields from younger farmers were lower than yields from older farmers. In summary, these findings support the RRL theory that age is one of the major influences on smallholder corn production.

This implies that when developing interventions for an increase in corn crop production, the farmer's age/experience should be taken into account when designing training programs. Mentoring or extension services must be targeted towards younger farmers in order to increase their rate of skill acquisition as well as farming efficiencies so that they can be as productive as their older more experienced peers. Furthermore, through the implementation of policies promoting the exchange of knowledge between older and more experienced corn to the younger generation, sustainability and advancement of total corn yields within the province can be realized.

Table 17. Factors Affecting Productivity in terms of Gender

Predictor	Estimate	Statistic Value	P	Interpretation
Gender:				
Male - Female	-0.195	z = -1.119	.263	Insignificant
Prefer not to say - Female	-0.911	z = -0.924	.355	Insignificant

The data in Table 18 show that corn farmers in Sarangani Province are not likely affected by gender. A generalized linear model (GLM) has shown an estimated reduction of 0.195 units in the yield of corn for males compared to females ($z = -1.119$; $p = 0.263$) and an estimated 0.911 unit reduction for farmers who chose not to specify their gender ($z = -0.924$; $p = 0.355$). The results suggest that the productivity levels of male farmers and female farmers and those who chose not to disclose their gender are likely the same as females in the area.

These results support the studies of Ani (2020) and Ge et al. (2023), which indicate that although women may have less representation in certain farm tasks and limited access to resources such as land and loans, this does not inherently impact overall productivity.

The findings suggest that there exist no observable gender differences with respect to the potential for producing yields from corn. Therefore, gender should not be a criterion for providing assistance or interventions designed to improve corn yields. Thus, all resources, such as inputs, training, and production loans can be distributed to producers through a non-gender-specific prioritization of delivery systems. Additionally, producers should be prioritized based on other criteria that are known to affect yield production.

The result presented on table 19 shows that marital status does not significantly impact corn production among the farmers residing in Sarangani Province. Referring to the generalized linear model (GLM), where married farmers serve as the reference, separated farmers had an estimated reduction of yield by 0.579 ($z = -1.677$, $p = 0.094$), single farmers had an estimated increase of

Table 18. Factors Affecting Productivity in terms of Marital Status

Predictor	Estimate	Statistic Value	P	Interpretation
Marital Status:				
Separated - Married	-0.579	$z = -1.677$	.094	Insignificant
Single - Married	0.264	$z = 1.086$	.277	Insignificant
Widowed - Married	-0.157	$z = -0.532$	.595	Insignificant

yield by 0.264 ($z = 1.086$, $p = 0.277$), and widowed farmers had an estimated reduced yield of 0.157 ($z = -0.532$, $p = 0.595$). As none of these differences reached statistical significance, it indicates that marital status does not significantly contribute to corn production in Sarangani Province as reflected in these results.

Marital status does not appear to have an effect on corn production for farmers in Sarangani Province; as indicated by the results in Table 18. Using a generalized linear model (GLM) with married farmers as the base level, separated farmers were estimated to produce 0.579 units less corn ($z = -1.677$, $p = 0.094$); single farmers were estimated to produce 0.264 more units ($z = 1.086$, $p = 0.277$); and widowed farmers were estimated to produce 0.157 less unit ($z = -0.532$, $p = 0.595$). None of these estimates were found to be statistically different from each other which indicates that marital status does not meaningfully affect corn production for the study population.

This supports the study of Ani (2020), which emphasizes that marital status alone does not directly determine farm yield, and that productivity is more strongly affected by access to resources, training, and financial support. However, the findings slightly contradict studies like Quilit (2025), which suggest that family responsibilities and household obligations may indirectly affect farming decisions and resource allocation.

The results of this study suggest that the productivity of corn does not differ according to whether or not an individual is married, and therefore, programs intended to increase yield could be implemented regardless of marital status among farmers. This implies that Agrarian Reford Beneficiaries (ARBOS) should disregard marital status in planning for resource allocation, training, and technical assistance. Lending institutions can create and implement loan programs without the need to separate programs based on the borrower's marital status. Rather they may use their own experience as producers and other factors that actually affect production. This would assist in making credit much more efficiently available to all farmers and assist in providing the farmers with the financial resources they require to improve productivity.

Table 19. Factors Affecting Productivity in terms of Marital Status

Predictor	Estimate	Statistic Value	P	Interpretation
Highest Educational Attainment:				
College Level – College Graduate	-0.369	$t = -1.09$	.276	Insignificant
Elementary Graduate – College Graduate	-1.401	$t = -3.98$	<.001	Significant
Elementary Level – College Graduate	-1.265	$t = -3.37$	<.001	Significant
High School Graduate – College Graduate	-0.743	$t = -2.34$	.020	Insignificant
High School Level – College Graduate	-0.908	$t = -2.62$	.009	Significant

The result in table 20 shows that educational attainment level of corn farmers has a significant impact on corn production. The OLS regression analysis revealed a reduction in corn yields across educational attainment, with elementary level, elementary graduate, and high school level showing significant impact. The reduction in yield estimates for elementary school graduates was -1.401 ($t = -3.98$, $p < 0.001$) and -1.265 ($t = -3.37$, $p < 0.001$) for those who reached upto elementary school level. In addition, those who reached high school level had lower production of -0.908 than college graduate ($t = -2.62$, $p=.009$) and those graduated from high school had a reduction estimate of -0.743 ($t = -2.34$, $p=.020$). While college level farmers did not significantly differ from college graduates with a reduction estimate of -0.369 units ($t = -1.09$, $p=.276$). The result suggests that when farmers have higher levels of education, they usually get higher yields of corn than those with lower levels of education. This is likely because educated farmers have better skills in decision making and have learned the modern farming methods and techniques than less educated farmers.

This aligns with studies of Ani (2020) and Ge et al. (2023), which suggest that higher education equips farmers with better decision-making skills, knowledge of modern farming techniques, and the ability to efficiently utilize resources, including production loans and technical training.

These research findings provide further evidence that farmers with lower levels of education require additional support, in the form of both educational assistance as well as capacity-building initiatives or programs, in order for farmers to realize improved productivity on their farms. A farmer's educational level can also be considered when assessing how much a farmer will be able to utilize production loans and best practices to maximize yield potential. Less-educated farmers may benefit from targeted training and technical assistance so they can receive full benefit from financial support and technical assistance, which will contribute to increased corn production throughout Sarangani Province.

Table 20. Factors Affecting Productivity in terms of Years of Farming Experience

Predictor	Estimate	Statistic Value	P	Interpretation
Years of Farming Experience:				
5–10 years – 11–20 years	-0.91151	$t = -4.7568$	<.001	Significant
Less than 5 years – 11–20 years	-1.50879	$t = -4.8558$	<.001	Significant
More than 20 years – 11–20 years	0.00380	$t = 0.0217$	.983	Insignificant

The data found on Table 21 show that farming experience is a significant predictor of corn productivity for farmers in the province of Sarangani. An OLS regression analysis using the 11–20 years category as the reference group shows that farmers who have between 5–10 years of experience produce significantly lower yields by 0.912 units ($t = -4.7568$; $p < 0.001$). Furthermore, farmers with less than 5 years of experience had lower yields than those with 5–10 years of experience with a difference between the two groups of 1.509 units ($t = -4.8558$; $p < 0.001$). While, farmers who have been farming for over 20 years had no statistically significant difference compared to the reference group with an estimate of 0.0038 units ($t = 0.0217$, $p = 0.983$). This indicates that farmers who have been farming for less than 20 years have lower yields than

the other group of farmers with mid-level or extensive farming experience.

This aligns with the studies of Quilit (2025) and Mayo and Villarta (2023), which emphasize that farmers with more experience tend to manage farm operations more efficiently and make better decisions regarding crop management, input utilization, and adoption of farming practices.

This demonstrates to ARBOs that it is critical to implement mentoring and training programs designed around providing farmers with less than ten years of experience with the necessary farm management and agricultural production skills to enable them to increase their farm yield levels. They may also consider farm experience into account when making decisions about loan availability since early-career farmers may need more support to effectively utilize production loans towards increasing their overall productivity.

Table 21. Factors Affecting Productivity in terms of Farm Size

Predictor	Estimate	Statistic Value	P	Interpretation
Farm Size (hectares):				
3–4 - 1–2	1.42	$z = 12.9$	<.001	Significant
Less than 1 hectare - 1–2	-1.63	$z = -10.8$	<.001	Significant
More than 4 - 1–2	1.95	$z = 11.4$	<.001	Significant

The result in table 22 shows that the farm size of corn farmers from Sarangani Province has a significant impact on corn productivity. A generalized linear model (GLM) with farms that are between 1–2 hectares was used as the reference category for the analysis. Farmers that have 3–4 hectares of land are estimated to have increased their yield by 1.42 units ($z=12.9$, $p < 0.001$), whereas farmers that have less than 1 hectare of land have been found to have decreased their yield by an estimated amount of 1.63 units ($z=-10.8$, $p < 0.001$). Additionally, farmers with more than four hectares of land have the largest increase in yield of 1.95 units ($z=11.4$, $p < 0.001$). These findings indicate that the size of the farm is related to higher yields, while the smallest farms are likely limited in their ability to achieve optimal yields due to limited access to resources as well as the use of mechanized equipment and efficient farm management practices.

This is consistent with studies of Mayo and Villarta (2023) and Quilit (2025), which highlight that larger farm holdings have better access to resources, mechanization, and efficient management practices, enabling higher productivity. These results can also be interpreted through the lens of Human Capital Theory of Becker (1964), which posits that farmers with more resources and knowledge can make more effective decisions to enhance productivity, and the Sustainable Livelihoods Framework (Chambers & Conway, 1992), which emphasizes that access to assets including land size is crucial for improving livelihoods and farm outcomes.

These findings imply the need for ARBOs to present targeted support to smallholding farmers which would include consolidation of resources, provide training and access to inputs, in order to improve their productivity. The size of the farm could also play an important role in the development of production loan programs, as farmers with larger farms would tend to use loans more effectively to produce higher yields as opposed to smallholders whom would need extra support in order to maximize the benefits from financial assistance. Therefore, a farmer's farm size may serve as a basis for

different types of programs aimed at promoting improvements in corn productivity for all farmers throughout the province.

Table 22. Factors Affecting Productivity in terms of Monthly Net Income

Predictor	Estimate	Statistic Value	P	Interpretation
Average Monthly Net Income:				
Below ₱5,000 - Above ₱20,000	-2.865	$z = -13.93$	<.001	Significant
₱10,001–₱20,000 - Above ₱20,000	-0.622	$z = -3.37$	<.001	Significant
₱5,001–₱10,000 - Above ₱20,000	-1.784	$z = -9.59$	<.001	Significant

The result in table 23 shows that average net monthly income of farmers has a statistically significant impact on corn production in Sarangani Province based on data from the analysis of GLMs using the reference category of above ₱20,000. The yield loss for farmers earning less than ₱5,000 per month is estimated at 2.865 units ($z = -13.93$, $p < 0.001$), while for those earning between ₱5,001 and ₱10,000, is estimated at 1.784 units ($z = -9.59$, $p < 0.001$), and between ₱10,001 and ₱20,000 it is estimated at 0.622 units ($z = -3.37$, $p < 0.001$). These results illustrate low-income farmers have lower agricultural productivity which can be due to the inability to afford productive inputs, modern equipment, and production loans.

According to the findings presented in Table 23, average net monthly income of farmers has a statistically significant impact on corn production in Sarangani Province based on data from the analysis of GLMs using the reference category of above ₱20,000. The yield loss for farmers earning less than ₱5,000 per month is estimated at 2.865 units ($z = -13.93$, $p < 0.001$), while for those earning between ₱5,001 and ₱10,000 it is estimated at 1.784 units ($z = -9.59$, $p < 0.001$) and between ₱10,001 and ₱20,000 it is estimated at 0.622 units ($z = -3.37$, $p < 0.001$). This suggests that income has a negative correlation with agricultural productivity and indicates farmers in lower income brackets have lower productivity as they are not able to afford access to affordable inputs and modern equipment as well as production loans.

This finding supports studies of Quilit (2025) and Mayo and Villarta (2023), which emphasize that financial capacity is a key determinant of farm productivity. The results are also consistent with the Human Capital Theory by Becker (1964) and the Sustainable Livelihoods Framework by Chambers and Conway (1992), which highlight that financial resources (part of tangible assets) enable farmers to invest in inputs, adopt improved practices, and achieve better production outcomes. The findings of this research reinforce that ARBOs need to provide extra resources to support low-income farmers, such as training, affordable input access, and resolution assistance for resource management when yielding a greater crop. They may also look at offering farmers a way to obtain production loans or flexible line-of-credit programs which will allow them to use the money they save to invest in more necessary inputs resulting in increased productivity. Therefore, addressing income disparity is crucial in increasing corn production within the province as a whole.

The data in table 24 show that the number of dependents does not have a substantial impact on the productivity among corn farmers located in Sarangani Province. Analysis using a generalized linear model (GLM) with 1–2 dependents as a reference group, the farmer with 3–4 dependents had an average corn productivity

Table 23. Factors Affecting Productivity in terms of Number of Dependents

Predictor	Estimate	Statistic Value	P	Interpretation
Number of Dependents:				
3-4 - 1-2	0.199	$z = 1.045$	.296	Insignificant
More than 4 - 1-2	0.211	$z = 0.926$	.354	Insignificant
None - 1-2	1.006	$z = 2.076$	.038	Significant

increase of 0.199 units ($z = 1.045$, $p = 0.296$) and those who had more than 4 dependents experienced a slight increase of 0.211 units ($z = 0.926$, $p = 0.354$). At the same time, farmers who did not have any dependents reported a significant corn productivity increase of 1.006 units when compared to the reference group ($z = 2.076$, $p = 0.038$). Therefore, the findings suggest that in general, having dependents has little impact on corn yield; however, those who do not have dependents may have more resources or time available for managing of their farms.

This is consistent with the Sustainable Livelihoods Framework by Chambers and Conway (1992), which emphasizes that productive outcomes are more strongly influenced by access to assets such as human, financial, and physical capital rather than household composition alone.

This means ARBOs should not differentiate between farmers with and without dependents regarding interventions that improve productivity since most categories demonstrate negligible results in relation to the number of dependents. However, offering farmers with dependents more assistance through labour, access to farm inputs or technologies to save time could help them save time and possibly result in yield improvements. The number of dependents also should not play a large role in the development of production lending programs by lending institutions, allowing credit allocation to depend to a greater extent on experience, participation in training programs, and the size of the farm as they are more likely to provide better predictive relationships to both improved productivity and loan performance.

Table 24. Factors Affecting Productivity in terms of Amount of Loan

Predictor	Estimate	Statistic Value	P	Interpretation
Amount of Loan Available:				
below ₱10,000 - above ₱50,001	-3.612	$z = -17.15$	<.001	Significant
₱10,001 - ₱20,000 - above ₱50,001	-2.031	$z = -11.46$	<.001	Significant
₱20,001 - ₱50,000 - above ₱50,001	-0.642	$z = -3.58$	<.001	Significant

The result in table 25 shows that the amount of production loans significantly influenced corn productivity of the farmers in Sarangani Province. Using a general linear model or GLM with highest loan level, greater than ₱50,001 as a reference, farmers who had loans less than ₱10,000 experienced significant drop in yields (3.612 units) ($z = -17.15$, $p < 0.001$); farmers who had loans between ₱10,001 and ₱20,000 had a decreased yield of 2.031 units ($z = -11.46$, $p < 0.001$); farmers who had loans between ₱20,001 and ₱50,000 had a decreased yield of 0.642 units ($z = -3.58$, $p < 0.001$). This indicates that there is a positive effect of loan amounts on yield indicating that larger loans will provide farmers with better quality inputs and/or technologies which will enable them to

enhance their production capabilities, thus increasing the yields they produce.

The results are also consistent with the Sustainable Livelihoods Framework (Chambers & Conway, 1992), emphasizing that access to financial capital is a key asset enabling smallholder farmers to improve production and economic outcomes.

The highlights the need for ARBOs to provide affordable, prompt and larger production loans to improve productivity. Farmers with larger loan amounts are able to invest in improving their productivity more readily than farmers without larger loans; therefore, lenders must ensure that loan programs not only look at eligibility but also take into account the amount of funding available so that farmers can make meaningful investments in farm inputs and technology. Structured credit schemes coupled with technical assistance will maximize the impact of loans on productivity of corn; especially for smallholder farmers located in Sarangani Province.

Table 25. Factors Affecting Productivity in terms of Number of Times Loan Available

Predictor	Estimate	Statistic Value	P	Interpretation
Number of times loan available:				
More than 4 - 3-4 times	0.245	$t = 0.972$	.332	Insignificant
Once - 3-4 times	-1.558	$t = -7.917$	<.001	Significant
Twice - 3-4 times	-0.858	$t = -5.060$	<.001	Significant

The data in Table 26 reveal that the number of times farmers used production loans relates to their yield of corn in Sarangani Province. Using OLS regression analysis with the reference category being those who have accessed a loan 3-4 times, for farmers that accessed a loan once, their yield decreased significantly by 1.558 units ($t = -7.917$, $p < 0.001$). For farmers that accessed loan twice, they had their yield decrease significantly by 0.858 units ($t = -5.060$, $p < 0.001$). Farmers accessing loan more than 4 times did not have statistically significant decline in their total yield (0.245 units, $t = 0.972$, $p = 0.332$). It appears that limited availability of production loan access results in lower levels of productivity, however, there is little impact on yield from accessing production loans more than four times when compared to the reference.

This aligns with studies such as Diallo et al. (2020) and AT et al. (2022), which show that consistent access to credit enables farmers to purchase necessary inputs and implement timely farming activities, directly improving productivity. These results also reflect the Sustainable Livelihoods Framework Chambers and Conway (1992), emphasizing that repeated access to financial capital enhances farmers' ability to utilize inputs and labor effectively, thereby improving agricultural outcomes.

Therefore, farmers' ability to get production loans several times is vital for them to be able to invest consistently in farm inputs and practices. ARBOs are encouraged to establish structured and automated processes for providing repeated loan access to farmers while ensuring productive use of financial assistance. Lending institutions should have programs that promote structured and repeated access to loans, while also ensuring that they are able to provide guidance on how maximize the funds to improve productivity.

Results from Table 27 show that farmers attending corn production training significantly increase their productivity of corn in Sarangani Province. Through OLS regression, it was shown that

Table 26. Factors Affecting Productivity in terms of Corn Production Training

Predictor	Estimate	Statistic Value	P	Interpretation
Have you attended corn production training?: Yes – No	0.908	t = 6.06	<.001	Significant

yield for those farmers who attended training was approximately 0.908 units higher than those who did not ($t=6.06$, $p<0.001$). This supports that training is a direct contributor to increased productivity for farmers due to better understanding of new farming practices, appropriate input use and effective farm management techniques.

These results are also consistent with the Human Capital Theory (Becker, 1964), which posits that investment in knowledge and skills improves productivity. Hence, the presence of established and accessible training programs will benefit ARBOs, particularly with respect to providing assistance to less experienced and lower-educated corn farmers. To enhance effective use of financial assistance through production loan programs, lending agencies could include participation in training programs as part of the lending process so that farmers can develop skills and gain knowledge necessary for maximizing production and return on investments. Therefore, promoting training programs with loans may enhance the total yield produced by corn in the entire province.

Table 27. Factors Affecting Productivity in terms of Financial Management Training

Predictor	Estimate	Statistic Value	P	Interpretation
Have you attended financial management training?: Yes – No	0.870	t = 5.81	<.001	Significant

The data presented in Table 28 shows that participation in financial management training positively impacts corn yield for farmers in Sarangani Province. Based on OLS regression analysis, the average yield of farmers that received financial management training was an estimated 0.870 units higher than the average yield of farmers that did not receive training ($t=5.81$, $p<0.001$). The results support the notion that financial management skills result in increased productivity through improving the farmer's ability to efficiently manage resources and expenses, as well as maximize the effectiveness of their use of inputs and production loans.

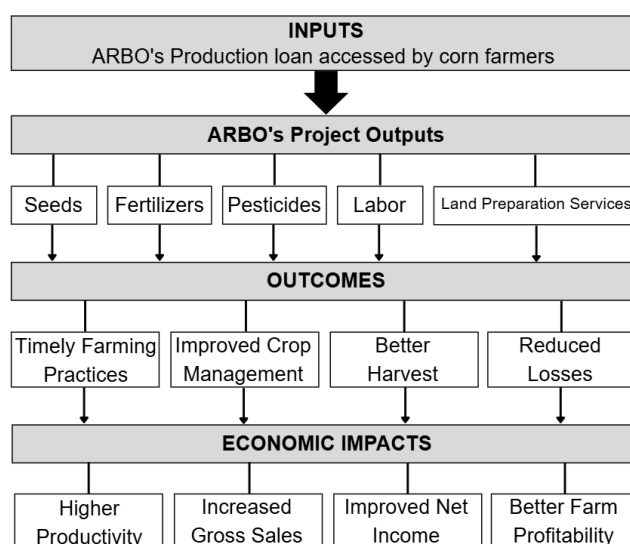
This aligns with the studies of Guo et al. (2023) and Liu et al. (2024), which emphasize that higher financial literacy enables farmers to make informed decisions regarding farm inputs, manage resources efficiently, and effectively utilize production loans. Consistent with the Human Capital Theory (Becker, 1964), these results highlight that investing in knowledge and skills directly improves productivity.

These highlight the importance for ARBOs to include financial management training as an element of their capacity-building programs to enhance agriculture and resource efficiency. Including a financial literacy module within their production loan program

will assist farmers in making informed decisions regarding investment opportunities, promote effective use of loans, and ultimately lead to greater corn yield. Consequently, assisting farmers in attaining financial management training will create a direct and positive impact on farm performance.

4.3. Impact Of Production Loans on Corn Productivity

The impact of production loans on corn productivity was analyzed using an impact pathway approach. This approach traces how loan assistance moves from inputs, to outputs, to outcomes, and finally to economic impacts. This is appropriate for the present study because Section D of the questionnaire gathered farmers' actual experiences on how they used the loan, how it affected farm inputs and activities, whether it helped with timing, what changes were observed in harvest, and how it affected the overall production process from planting to harvest.

**Figure 1.** Pathways of Production Loans on Corn Productivity

The impact pathway analysis shows that production loans primarily influenced corn productivity through the provision of working capital to farmers. The loan allowed farmers to purchase necessary items during the cropping season, providing an important source of farm input funding. This is important, because corn production relies on timely investment of resources, including seed, fertilizer, chemicals, labour, land preparation and postharvest activities. If there is insufficient cash available to farmers during the production phase of their crops, they may reduce their use of inputs, delay their preparation of land, or delay their use of fertilizers or chemicals.

The most commonly reported outcome based on the farm-related expenditures identified was improved seed and fertilizer usage, with 489 responses or 155.24%. The majority of farmers indicated that their production loans were spent on important production inputs. This suggests that production loans are most successful when used directly for farm production purposes.

The second major output was improved preparation of land for planting; with 279 coded mentions or 88.57%. Therefore, production loan allowed farmers to do the required pre-planting tasks on their farms so that they could successfully establish a good corn crop. The proper amount of land preparation carried out prior to planting is critical as it influences germination and

establishment of the crop, as well as develop root systems and enable crops to absorb moisture. With production loan, farmers have access to the funds necessary for them to pay for plowing, harrowing and clearing their land and to complete many of the other tasks related to prepared land prior to planting. This indicates that by providing farmers with access to production credit, can help complete essential production tasks at the time they need to help improve their productivity.

Timely agricultural activity is among the most prominent themes observed at the outcome level, with 253 coded mentions or 80.32%. Production loans enabled farmers to conduct agricultural work in compliance with the designated crop planting timetable. Timeliness therefore is a major component of the impact pathway. Timing is a significant factor in determining how useful an agricultural loan is to the farmer as it creates more value than if the loan was provided later than appropriate.

The other significant outcome was greater productivity, which received 220 coded mentions, or 69.84%. Thus, many survey participants indicated there was improvement in their ability to produce after receiving the production loan. The evidence from this study indicates that the production loan increased productivity indirectly through subsequent use of the production loan to purchase input, finance land preparation, support labor, and ensure timely farm operations. This supports the view that credit is a resource that provides farmers with the means to relax their financial constraints in order to invest in productivity improvements.

The major benefit of obtaining a production loan is that it improves the farmers' production cycle, beginning with planting through to their harvests. Of the 315 total positive outcomes recorded in this study, 110 of those (34.92%) referenced an improvement of the overall farm operation; while 102 (32.38%) referenced an increase in their harvest yield. The results support the conclusion that farmers used the loan to better manage the production process from planting through to harvesting. Some farmers commented directly about the better harvest they received after utilizing the loan, while other farmers indicated better operated farm practices. As such, it is likely that the impact of a production loan will not only be noticed in terms of yield improvements, but will also include a smoother flow of activities related to farming.

The lower frequencies of improved crop management (61 or 19.37%) and reduced crop loss (29 or 9.21%), indicates that the production loan provided financial assistance for inputs and timely completion of production activities; however, its impact on technical crop management and reduction of crop losses has not been as frequently highlighted. There may be some evidence that credit alone does not ensure better care of crops or reduce production risk. Farmers may also need technical assistance, pest/disease management support, post-harvest facilities, and training on managing their finances.

This impact pathway illustrates a logical sequence through which the production loan provided corn farmer's productivity. Production loan first provided farm owners with financial capital; the farmers used that financial capital for farm inputs and production tasks. In turn, the farmers completed their work in a timely manner, improved their use of field inputs (seeds, fertilizer, soil) and created a better management structure on the farm. This created the end-products of improved farm production. Increased productivity, higher weight harvested, higher sales, and greater profits represent the economic impact that resulted from the improved farm operations.

These findings indicate that production loans are helpful when they are sufficient, timely, affordable, and used for an appropriate purpose. This model suggests that the effectiveness of loan programs will likely increase if credit is combined with technical training, financial education, farm planning, and market assistance.

Overall, the analysis of the impact pathway confirms that access to production loans positively contributed to the increase in the productive capacity of corn among the respondents. The most significant pathway leading to the increase in corn production and profitability of the farmers was from access to loan funds → purchase of seeds and fertilizers → timely farming practices → increased productivity and profitability. However, the analysis indicates that production loans should not be perceived as a stand-alone intervention. In order to maximize their impact, production loan programs need to be designed in conjunction with other forms of technical assistance, financial management training, timely distribution of funds, and support services to assist farmers in turning borrowed funds into productive output or economic benefits.

4.4. Profitability of Corn Production

This section presents the profitability of corn production among the 315 corn farmer-respondents based on the cost and return analysis for three cropping. The analysis considered the average yield per hectare, selling price per kilogram, total production cost, gross sales, net sales, benefit-cost ratio, return on investment, profit margin, break-even cost, and break-even yield. Cost and return analysis were used to determine whether corn production generated positive financial returns across the three cropping periods.

For Cropping 1, the respondents recorded an average yield of 5.00 metric tons per hectare and an average selling price of ₱17.23 per kilogram. The average total production cost was ₱45,309.87, while the average gross sales reached ₱87,088.73. After deducting production cost, the average net sales amounted to ₱41,778.86. The benefit-cost ratio was 1.98, meaning that for every peso spent on corn production, farmers generated about ₱1.98 in gross return. The average return on investment was 98.31%, while the profit margin was 46.69%. These results indicate that corn production during the first cropping was generally profitable. Out of the 315 respondents, 313 farmers or 99.37% were classified as profitable, while only 2 were not profitable.

For Cropping 2, the average yield slightly increased to 5.12 metric tons per hectare, with an average selling price of ₱17.48 per kilogram. The average total production cost also increased to ₱47,831.34, while average gross sales reached ₱90,727.84. The resulting average net sales was ₱42,896.50. The benefit-cost ratio was 1.95, which still indicates a positive return, as gross sales were almost twice the total production cost. The average return on investment was 95.07%, and the profit margin was 45.60%. Although Cropping 2 remained profitable, its benefit-cost ratio and ROI were slightly lower than those of Cropping 1. This may be due to the increase in production cost, which partially offset the higher yield and selling price. In this cropping, 312 respondents or 99.05% were profitable, while 3 were not profitable.

For Cropping 3, which represents the most recent harvest, the respondents recorded the highest average yield at 5.40 metric tons per hectare and the highest average selling price at ₱18.43 per kilogram. The average total production cost also increased to ₱49,548.92, but the average gross sales rose substantially to ₱100,764.87. The average net sales reached ₱51,215.95, the highest

among the three cropping. The benefit-cost ratio was 2.08, showing that every peso spent generated about ₱2.08 in gross return. The return on investment was 108.18%, and the profit margin was 49.04%. These figures indicate that Cropping 3 was the most profitable among the three production periods. A total of 314 respondents or 99.68% were classified as profitable, while only 1 respondent was not profitable.

Comparing the three cropping, the results show a generally increasing trend in yield, selling price, gross sales, and net sales. Average yield increased from 5.00 MT/ha in Cropping 1 to 5.12 MT/ha in Cropping 2 and further to 5.40 MT/ha in Cropping 3. This suggests an improvement in production performance over time. Similarly, average selling price increased from ₱17.23/kg in Cropping 1 to ₱17.48/kg in Cropping 2 and ₱18.43/kg in Cropping 3. The increase in both yield and selling price contributed to the higher gross and net returns observed in the most recent cropping.

However, production costs also increased across the three cropping, from ₱45,309.87 in Cropping 1 to ₱47,831.34 in Cropping 2 and ₱49,548.92 in Cropping 3. This reflects the continuing burden of input and operational expenses in corn production. Costs may include land preparation, seeds, fertilizers, pesticides, labor, harvesting, hauling, drying, and other production-related expenses. Despite the increase in cost, the higher yield and better selling price in Cropping 3 were sufficient to produce the highest net sales and profitability indicators.

The benefit-cost ratio across the three croppings remained above 1.00, with values of 1.98, 1.95, and 2.08, respectively. A BCR above 1.00 indicates that the enterprise is financially viable because the gross return is greater than the cost incurred. In this case, all three croppings were profitable, but Cropping 3 showed the strongest performance. The ROI values also confirm this result, as all croppings generated high returns relative to production costs, with Cropping 3 recording the highest ROI at 108.18%.

The break-even indicators further support the profitability of corn production. The average break-even cost was ₱9.13/kg in Cropping 1, ₱9.43/kg in Cropping 2, and ₱9.32/kg in Cropping 3. Since the actual average selling prices were higher than these break-even costs, farmers were able to sell their corn above the minimum price needed to recover production expenses. Likewise, the break-even yield values ranged from 2.61 to 2.72 MT/ha, which were much lower than the actual average yields recorded in all three cropping. This means that farmers produced more than the minimum yield required to cover their costs.

Overall, the cost and return analysis shows that corn production among the respondents was generally profitable across the three cropping. The most recent cropping showed the highest profitability, with the highest average yield, selling price, gross sales, net sales, benefit-cost ratio, ROI, and profit margin. These results suggest that corn farming remains a viable livelihood activity for the respondents, especially when farmers are able to achieve good yield performance and favorable selling prices.

The findings also imply that production loans may have contributed to profitability by enabling farmers to finance important production activities such as seed purchase, fertilizer application, land preparation, labor, and crop management. When production loans are used for these farm-related purposes, they help farmers sustain the production cycle and improve the possibility of achieving higher yields and better returns. However, profitability is still influenced by several factors, including production cost, input prices, weather conditions, market price, farm management practices, and the timing of loan release.

This finding is consistent with Mayo and Villarta (2023), who reported high corn production and profitability among corn farmers in Palimbang, Sultan Kudarat. It also supports Chen (2021), Diallo et al. (2020), and AT et al. (2022), who emphasized that access to credit helps farmers finance farm inputs and improve agricultural productivity and profitability.

However, the finding partly contradicts the broader reports cited in the RRL, particularly the Philippine Statistics Authority 2024 report showing a decline in corn production and Balita (2025) noting the declining contribution of agriculture, forestry, and fishing to GDP. In this study, corn production among the respondents remained profitable across the three cropping periods, although the increasing production cost still supports the concern that input and operational expenses continue to affect farm profitability.

In summary, the profitability results indicate that corn production generated positive returns for nearly all respondents. The high benefit-cost ratios and positive net sales across the three croppings demonstrate that corn farming can be financially rewarding when supported by adequate capital, proper input use, and favorable market conditions. Nevertheless, the increasing production cost observed across the croppings highlights the need for continued support in input financing, access to affordable credit, technical assistance, market linkage, and financial management training to sustain and improve profitability among corn farmers in Sarangani Province.

5. Conclusion

The results of the study show that production loans have a positive and significant impact on the productivity of corn among farmers in Sarangani. The loans provided timely access to necessary cash so that farmers could purchase necessary inputs, prepare their land, hire labor, and perform good farm management, crop growth, and yield. Several socio-economic characteristics were shown to be significant determinants of productivity; however, some did not have statistical significance including: gender; marital status; and number of dependents. Access to training in both corn production and financial management enhanced the benefits of these loans and created greater yields. By combining financial resources with technical knowledge and resource management all farmers in Sarangani Province were benefited by increased productivity and profits.

6. Recommendation

Farmers who grow corn in Sarangani Province should apply for production loans as early as possible so that their funds can be spent on the required input materials, such as seed, fertilizer, pesticide, and preparation of the land. These farmers should adhere to the standard farming schedule; use mechanized services or hired labor to improve the efficiency of their farming operations; and take part in training for corn production and financial management to develop their skills. Farmers should monitor their crops regularly throughout the entire production process; use proper spacing between plants to ensure proper growth and yield; establish a reliable irrigation system for the plants; and accurately record information about their production activities to assist them with planning their future production. Farmers should also work with cooperatives and ARB organizations to obtain technical assistance, gain access to resources, and receive help with the use of production loans that will increase the efficiency and profitability of their farms.

Government and policymakers should ensure timely provision of production loans prior to planting season; as well as loan amounts that accurately reflect what it costs to purchase farm inputs such as seed, fertilizer, pesticide, labor and land preparation costs. The loan programs should include some level of technical support for crop management, financial literacy, or extension services in order to increase the productive capacity of the farmer while at the same time helping them to use their production loans effectively. In addition, policies should create easier access through cooperatives, ARBOs, and community-based lenders with clear terms on repayments. A monitoring and evaluation system is also needed to evaluate the effectiveness or efficiency of loan use and crop yields while providing assistance to small, low-income and inexperienced farmers to ensure equal access to, and improve corn production, in Sarangani Province.

Agrarian Reform Beneficiary Organizations (ARBO) are encouraged to assist corn growers with production loans through document preparation, applications, and guidance on repaying loans. In addition to assisting with the loan process, ARBOs should ensure that loan proceeds are used as intended on the farm such as for seed, land development, and labor. ARBOs are encouraged to provide technical assistance and training in financial management, make loan programs easier to access, and act as mentors or provide peer support. Special emphasis must be placed on small, newer, and less educated farmers to develop greater productivity and increase profit potential.

The effects of production loans on corn yield could be analyzed in future research by further incorporating climate, irrigation access, and market linkages into the analysis. Studies with larger or longitudinal samples would assist in determining the long-term impacts and sustainability over the life of multiple cropping seasons. Different loan delivery systems such as banks vs. cooperatives vs. digital platforms may also be compared to determine their effectiveness and to provide farmers with some perspective on loan usage and financial management through using qualitative methods. Finally, the combination of socio-economic factors, on-farm practices, and loan access could identify more accurate strategies for increasing productivity and profitability for smallholder corn farmers.

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