

# Production Practices and Profitability Analysis of Swine Raisers in Mlang, Cotabato

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## ABSTRACT

Swine farming is an important agricultural activity that involves raising swine for pork production and income generation. It plays a significant role in the food supply and supports the livelihood of many farmers, especially in rural areas. This study examined the production practices and profitability analysis of swine raisers in Mlang, Cotabato. Specifically, it looked into the socio-demographic profile of the respondents, the production practices of the swine raisers, the cost and return analysis of swine raisers and the major constraints encountered by swine raisers.

A descriptive research design was employed in the study. The respondents consisted of 50 swine raisers who manage small-scale swine farms with fewer than twenty pigs (<20). A survey questionnaire was used to gather data from the respondents. The results revealed that most swine farmers were within the ideal age of 39-45 years old, were married, and had formal education. All respondents had no formal training in swine farming; most had 3-7 years of experience, and all used their personal savings as their source of capital. Most of them raised 6-10 crossbred pigs. Almost all respondents fed their swine three times a day and provided commercial feeds. Most kept their swine in concrete housing with swine drinkers and utilized family members as labor. All respondents also consulted veterinarians when needed.

The return on investment was 40.59%, which implies that swine raising was profitable. However, the major constraints faced by the respondents were the high cost of feeds and unstable pricing. The findings suggest that small-scale swine farming with fewer than 20 pigs (<20) in M'lang, Cotabato is profitable and can serve as a viable source of income for farmers despite challenges such as high feed costs and unstable prices. This study recommends that swine raisers be provided with training, technical support, and access to affordable feeds to improve production practices and address the challenges they face.

**Keywords:** Constraints, cost and return analysis, production practices, profitability analysis, swine raisers

## INTRODUCTION

To achieve the ideal quality of life every individual works hard for economic stability and others are putting themselves into intensive preparation to become more competent to achieve their desires in life. Some individual is considering more than one job to earn a living. Meanwhile, swine farming enables producers to generate additional income which in turn helps in achieving food security and self-employment for landless and unemployed people (Mekuriaw & Asmare, 2014). The problem is that swine raisers need to produce quality swine and through proper management of swine farming, it can generate income and can help in the daily needs of every farmer's family. It returns the investment faster since it is marketable at all stages as stated by (Maharjan & Fradejas, 2005).

The biggest among the domesticated animals and poultry industries of the country is swine production, and it has a long history of giving food and fat to humankind. Other than that, the reason for keeping swine is also for consumption and financial security. The importance of poultry production to human beings has brought about the high demand for swine products in the Philippines. It is the second-highest contributor to Philippine

agriculture coming in second to rice. Raising swine has the opportunity to provide a quality of life through increased cash income from the sales. Swine have been one of the most productive and fast-growing livestock species that can convert food leftovers to valuable products. The development of the swine herd's quality and quantity will contribute to the improvement of the livestock sector of the Philippines, and it can be a source of income generation for the rural population.

The result of the study can be useful to the benefit of swine farmers provided that swine farmers play an important role in Philippine industries since this result can be used as a guideline and additional ideas on what proper management can help them make a profit and for the others who want to start keeping swine. The greater demand for swine meat (pork) justifies the need for more hog growers to engage in keeping swine. Thus, swine raisers that apply the recommended result from the study will be having insights to attain better care of swine, make it profitable, and lastly, return the investment fast. The aim of this study is to determine the management practices that they apply that help the swine farming business be profitable. This research could be useful also to those students at the University of Southern Mindanao who want to make research on other areas of swine farming; this could serve as material and a guide to the research topic they want to study. Furthermore, the findings of this research could serve as a basis for further research endeavors that aim to uncover critical areas that were not able to be explored by various researchers.

## Objectives

1. To describe the socio-demographic profile of the respondents.
2. To determine the production practices in swine raising.
3. To determine the costs and return analysis of swine raising.
4. To identify the major constraints in swine raising.

## LITERATURE REVIEW

### Socio-demographic Profile of Swine Raisers

The characteristics of swine farmers have an influence on their interest and choice of swine farming management. Swine management fundamentally includes the association and coordination of all exercises of a pig farming unit in order to maximize the output from input, for example, feed, medications, and supplementation. The Management is exceptionally significant in light of the fact that it, at last, decides the output from human efforts, machines, materials furthermore, cash. The management issues have been seen to emerge from helpless pig production knowledge, wasteful abilities, and regular ignorance of new techniques (Ogunniyi & Omoteso, 2011).

A study conducted by Aminu and Ahonkhai (2017) showed that swine raisers are mostly in ages between 36-45 years old and 82.5% of them are male pig raisers. One reason they can see is that men are more capable of carrying out more tedious labor than females. But it doesn't mean that females are not likely to get involved in pig-raising. It was shown in the same study that females are actually in another level of labor. They tend to be the owner of the pig sector or they are assigned to lighter farm labor. This could be credited to that pig requires work; difficult work and steadiness particularly during the farrowing time and heavier undertaking were dependent on males. Another study from Ume, Ezeano, and Gbughemobi (2018) shows that males who is relatively stronger are mostly involved in pig production and also suggested that sex may increase technical efficiency as male producers who often are the head of the family, who are energetic to procure and administer production inputs are the majority of pig farmers as resulted in the studies.

According to the result of the study (Motsa'a et al., 2013), the majority of the swine farmers have 1-10 years of experience in keeping pigs, the majority have farming as the main occupation, they are married and just a little proportion has no formal education. It also showed in the same study that education might be of help to extension officials for easy communication and comprehension of extension messages, particularly for use of new innovation in pig production and management. Proficient swine farmers may be bound to embrace great

husbandry and health-management practices. In the study of Obayelu, Ogunmola, and Sowande (2017) the characteristics of the farmers were innovativeness, risk-bearing abilities, and mental capacity to cope with daily challenges and demands of the farming business which decreases with advancing age.

### **Production Practices of Swine Raisers**

The farming extension is one of the arrangement instruments which is utilized to help rural agricultural development, and extension workers assume an indispensable part in educating swine farmers to create better yields and more productive animals at a lower cost. Farmers of Etayi Constituency of Namibia additionally demonstrated that they struggled to get extension services furthermore, clients. They likewise had no access to micro-finance or credit to expand their herd sizes (Petrus et al., 2011).

According to the study made by Abiyong, Bidoli, and Nyiatagher (2019), results show that most pig products are raised by family businesses and include traditional agricultural production. It also showed that average farmers exhaust all available labor force in the family members first before hiring additional labor to also reduce the cost of production. This study will also determine what portion of males and females raise pigs more.

The study will also determine the management strategies of pig farmers in connection with the profitability of their pig farms. According to the study of Casa (2017), swine raised in an intensive management system were a lot more smallest spaces than they would regularly be involved in case they were allowed to wander unreservedly. Furthermore, a study by Lekule and Kyvsgaard (2003) show that the majority of the pig farmers in Africa use traditional systems like “free-range”, “tethering”, and “small scale” because it is more sustainable, less costly and therefore, more profitable to the owners. It also showed that they were practicing housing of pigs, using compounded house-made feeds, preferring crossbreeds to be raised and they relied mostly on intensive systems.

Another study from Muhanguzi et al. (2012) shows that people in Uganda practiced intensive system and semi-intensive systems. The study shows similarities with the study of Lekule and Kyvsgaard (2003) but farmers from Uganda show that they prefer crossbreeds but also keep indigenous breeds which could also be attributed to their socio-economic factors. In a study from Ezeibe (2010), the extensive system is characterized by a high mortality rate, absence or minimal health care, and improper housing and feeding. This has led to poor production and development of the pigs and also encourages the spread of disease, low productiveness, and low meat yield (Ugwu, 1996). Conferring to Karrol and Krider (2001), a free-ranging/extensive system of pigs is reflected as one of the risk factors for porcine cysticercoids.

The swine raisers mostly give their animals compounded feed, twice daily in feeding troughs, have gotten their starter stock from the neighborhoods, also, together with keep local, exotic, and crossbreeds. Farmers for the most part house their pigs in wooden made piggery, to keep away from destruction furthermore, infections, however, the number of farmers as yet practicing an unfenced production system is generally sufficiently high to support the spread of diseases. The majority of the farmers give their animals compounded feed twice day by day in feeders mostly made of plastic materials and cement (Motsa'a et al., 2013).

### **The Costs and Return Analysis of Swine Raising**

The Filipino average rural family for the most part raises few pigs to expand their requirements for cash or potentially food and for arranged and crisis costs. Besides being a source of income, there are different reasons why families keep pigs. Pig raising gives open positions, the monetary jobs for certain individuals from the family especially ladies, children, and the mature, and usage of kitchen extras, vegetable trimmings, and by-products of farm products processing (Perey, 2017).

According to the study of Aminu and Ahonkhai (2017), pig production is a profitable endeavor in the review region as shown by the different benefit proportion procedures utilized in the analysis. In the study from Defang et al. (2014), the result shows that using locally available materials for housing, as feedstuffs or ethnoveterinary medicine has brought down the capital needed for pig production. Feeding is one of the most important aspects of pig farming. Results from the study of Rahman et al. (2008) in Azawa District of Mizoram, India stated that

feeding kitchen waste and by-products associated with post-harvest crop remains to pigs of all categories is a means of decreasing feed cost with a negative impact on the pig performance.

The piglets and pork meat demand in the present are continuously increasing and it represents a great opportunity for better livelihood security and increasing incomes. The future appears to be brighter in swine farming. Along these, better marketing, improved access to credit, and training on improved pig farming practices are the key interventions expected to support the productivity of pig production (Karthiga et al., 2020). Most farmers utilize what is available in the surroundings first before using materials that need to be purchased or using a workforce that needs not to be paid before acquiring paid labor from other people.

A result from the study of Motsa'a et al. (2013) in Cameroon, showed that only 24.44% use exotic breeds by farmers, mostly to improve the performances of local ones through crossbreeding (40%), but the highly represented free will mating and the increased use of own stock and that of neighbors could give rise to inbreeding that will consequently lower performance and productivity. And this contributed to the profitability of the swine productions in the farms. Breeding pigs that can perform and reproduce quality products can increase the profit gained by the farms.

On the other hand, according to Costales (2002), the presence of institutions like cooperatives that directly link the producers to the whole market chain is of equal importance to expand their production and increase the profit. Along these, to build up the entire pig industry of the Philippines, it is vital to address the various issues of the backyard pig area which assumes a significant part in the country's domesticated animals' industry.

### **Major Constraints of Swine Raisers**

A few reports highlighted that the primary motivation behind keeping pigs was to acquire crisis cash and additionally meet the home utilization. It showed up as a likely source of animal proteins and avenues for extra income and employment that can improve livelihood in an economical way (Petrus et al., 2011).

Despite a few changes in pig-based business person, the pig farmers face a few difficulties because of high feed cost, absence of value germplasm, and medical care service in everyday activity according to the study of Patra, Begum, and Deka (2014).

According to the study of Maharjan and Fradejas (2005), there are various major constraints in raising pigs. The study they conducted in Batangas determined expensive feeds as one of the factors, which is also seen to be because of wide hoarding of corn in other places which is mainly the ingredient of feeds, especially the corn products from provinces of Luzon and Mindanao. Their study shows that one of the coping strategies of these farmers is to use swamp cabbage and gabi (tubers) or marsh commercial feeds whose nutrient content and price are lesser, which was also seen as one reason for the lesser production in the pig industry. Another factor is the low price per unit output which is due to middleman participation that lowers the pigs' selling price to favor the buyer who pays them.

Another constraint in pig-raising is the spread of disease which is due to low access to biosecurity measures, farms cleanliness, effective disease control, and technical seminars for pig raisers (Delgado et al., 2003). It has been a huge problem for pig raisers the spread of the African swine fever which led to a great number of dying pigs from different pig farms. ASF also led to the decrease in pig products available in the market and to the increase in the pig meat (pork) price. Another one is poor breeding practices which employ inferior crossbreeds without records of their productive and reproductive performances as well as the untimely breeding of gilt or over-using of sows beyond its breeding capacity that can lead to low animal performance and cause lower profit in pig products (ILRI 2000). Replacement to breeders that manifest defects should also be always ready. Lack of knowledge was also one of the constraints encountered by raisers (Nanda et al., 2018). The number of buyers available was one factor under inefficient marketing, as to the longer the marketable pig remains in the pen, the greater the consumption and product cost. It was also observed that pigs beyond 90 kilograms generally give a low prices per unit output.

Another factor observed in the study of (Motsa'a et al., 2013) that contributes to the constraints that pig farmers encounter medical issues confronted are generally because of the absence of preventative measures, non-accessibility of veterinary items, and lacking specialized help. This contributed to lower production of pig meat or pork products and even live pigs in the livestock industry. Failure in pig-raising is also connected to this issue as well as the profitability of the backyard pig sectors in the Philippines.

In the study of Villanueva and Sulabo (2018) the most well-known issues experienced are insufficient capital and absence of specialized information. Different issues incorporate disease, low market value, and high cost of feeds. Similar to these discoveries are those referenced by other domesticated animals' raisers that insufficiency of capital and absence of knowledge as major constraints in their swine farming enterprise.

## METHODS

### Study Design

This study utilized a descriptive research design in determining important data that describe the socio-demographic profile of the respondents, the production practices in swine farming, the costs and return analysis in swine farming, and identifying the major constraints in swine farming.

### The Respondents

The respondents of the study were the selected swine farmers in Barangay Buayan, Mlang, Cotabato, considering the accessibility of the respondents during this COVID pandemic and who are currently managing their small-scale or fewer than twenty pigs (<20) swine farm.

### Sampling Procedure

The researcher used the convenience quota sampling technique to select the respondents for this study. This method involves selecting participants who are easily accessible and available while ensuring that a predetermined number of respondents from specific subgroups is included. In this study, a total of 50 swine farmers was chosen as respondents, all of whom were small-scale swine raisers managing fewer than twenty pigs (<20). This approach allowed the researcher to efficiently gather data during the pandemic while representing the target population of swine farmers in Barangay Buayan, Mlang, Cotabato.

### Research Instrument

The study utilized primary sources. In primary sources, the data were collected through individual swine farmers, observation, and used survey questionnaire. The survey questionnaire was composed of four parts. Part I consisted of the socio-demographic profile of swine farmers that included information on the age, gender, marital status, education levels of swine farmers, farming experience. Part II included the production practices of swine raisers. Part III included the cost and return analysis and finally, Part IV comprised the major constraints that they encountered in swine raising.

### Data Gathering Procedures

In gathering the data of the study, the researcher first obtained the total number of swine farmers of Barangay Buayan, Mlang, Cotabato. Next, the researcher sought the approval of the Barangay Captain to conduct the study within the barangay.

After approval was granted, the respondents were identified using convenience and quota sampling techniques. Once the respondents were identified, the researcher conducted house-to-house visits to request their participation in the study and to administer the survey questionnaire. The researcher explained to each respondent the objectives, purpose, and procedures of the study. The questionnaires, prepared in English, were then distributed, and respondents were guided in completing them. All data gathered from the respondents were recorded and served as the basis for the analysis in this study.

## Data Analysis

This study used descriptive methods such as frequency counts, percentages, and average responses to summarize the collected data. The researcher used descriptive analysis to determine the socio-demographic profile of the respondents, production practices, costs and return, and the major constraints in swine raising in Mlang, Cotabato.

## RESULTS AND DISCUSSIONS

### Socio-demographic profile of the respondents

Table 1 shows the socio-demographic profile of the respondents. It includes age, gender, civil status, household size, educational attainment, source of income, training, monthly income, years in swine farming, and source of capital.

Table 1. Socio-demographic profile of the respondents in Mlang, Cotabato.

VARIABLES	FREQUENCY (n=50)	PERCENTAGE (%)
<b>Age</b>		
25-31	6	12
32-38	1	2
39-45	20	40
46-52	16	32
53-60	7	14
<b>Sex</b>		
Female	23	46
Male	27	54
<b>Civil Status</b>		
Single	3	6
Married	39	78
Widowed	8	16
<b>Household Size</b>		
2-4	28	56
5-7	20	40
8-10	2	4
<b>Educational Attainment</b>		
Elementary Graduate	9	18

High School Level	3	6
High School Graduate	23	46
College Level	12	24
College Graduate	3	6
<b>Source of Income</b>		
Employment	2	4
Farming	37	74
Business	11	22
<b>Trainings</b>		
No formal	50	100
<b>Estimated Monthly Income</b>		
5,000 and below	1	2
5,001-10,000	21	42
10,001-15,000	16	32
15,001-20,000	11	22
20,001-30,000	1	2
<b>Years in Swine Farming</b>		
3-7	30	80
8-12	3	6
13-17	7	14
<b>Source of Capital</b>		
Personal Savings	50	100

The result showed a greater number of the respondents were aging 39-45 while 2% were aging 32-38. Also, the majority of the respondents were males while 46% were female. The result showed that a greater majority of the respondents were married while 6% were single and a majority of the respondents has a household size 2-4 while 4% has an 8-10 household size. Furthermore, a greater number of the respondents were high school graduates while 6% were high school level and college graduates and a greater majority of the respondent's sources of income was rice farming while 4% of the respondents were employed. This suggests that swine farming in the area is commonly managed by individuals with basic educational backgrounds, which may influence how they access information, technologies, and modern farming practices. It may also indicate that higher education is not necessarily required to engage in small-scale livestock production.

The result showed that all of the respondents had no formal training in raising swine and a greater number of the respondent's estimated monthly income was 10,000 while 2% of the respondents has 5,000 and 30,000 estimated

monthly income. Moreover, most of the respondents were 3-7 years in swine farming while 6% of the respondents were 8-12 years in swine farming and all of the respondent's sources of capital were personal savings.

The findings of the study showed that most swine farmers were in their active working age, with the majority aged 39–45 years old. The results also revealed that most of the swine farmers were male, farming was their main occupation, and the majority were married. These findings are supported by the study of Aminu and Ahonkhai (2017), which stated that most swine farmers were male and between 36–45 years old. They explained that men are often involved in swine farming because they are considered more capable of performing the physically demanding labor required in the activity. Similarly, Motsa'a et al. (2013) found that most swine farmers were married, and that farming was their primary occupation.

### Production Practices of Swine Raisers

Table 2 shows the production practices of swine raisers. It includes a number of swine raised, breeds, management system, type of feeds, frequency of feeding, source of piglets, sow farrowed(year), castration, time weaning, swine housing, pig cleaning, watering frequency, source water, labor, and health care.

Table 2. Production Practices of Swine Raisers in Mlang, Cotabato.

Variables	Category	Frequency (n)	Percentage (%)
No. of Swine Raised	6–10	42	84
	11–15	3	6
	16–20	2	4
	26–30	1	2
	41–46	2	4
Breeds	Landrace	2	4
	Crossbreeding	33	66
	Large White	8	16
	Duroc	7	14
Management System	Intensive	50	100
Type of Feeds	Commercial feeds	50	100
Frequency of Feeding	Twice	2	4
	Thrice	48	96
Source of Piglets	Market	3	6
	Neighbor	37	74
	Owning a Sow	10	20
Sow Farrowed (per year)	Twice	9	18

	More than twice	1	2
Castration	Yes	10	20
Time of Weaning	1 Month	6	12
	2 Months	4	8
Swine Housing	Concrete floor, wooden wall, thatched roof	4	8
	Concrete floor, wall, iron roof	46	92
Swine & Pigsty Cleaning	Once	1	2
	Twice	10	20
	Thrice	39	78
Watering Frequency	Twice a day	4	8
	Other (drinker)	46	92
Source of Water	Tap Water	10	20
	Water Well	40	80
Labor	Family members	50	100
Health Care of Sick Pig	Consult Veterinarian	50	100

The result showed that most of the respondents raised 6-10 swine while 2% of the respondents raised 26-30 swine and a greater majority of the respondents raised swine crossbreeds while 4% of respondents raised landrace. All of the respondent's management systems were intensive system and all of them feed their swine with commercial feeds. Almost all of the swine farmers feed their swine thrice a day (morning, noon, and afternoon) while 4% of respondents feed their swine twice a day and a greater majority of swine raisers acquired their piglets in the neighborhood while 6% of respondents source of piglets were in the market. There were 10 out of 50 respondents who owned a sow and the greater the number of respondents sows farrowed twice a year while 2% of respondents sow farrowed more than twice a year. Also, all 10 respondents owning a sow did castration and 12% of the respondents weaned their piglets aging 1 month while 8% of the respondents weaned their piglets aging 2 months.

Furthermore, almost all of the respondents keep their swine on a concrete floor, wall, and iron roof while 8% of respondents keep their swine on a concrete floor, wooden wall, and thatched roof and a greater majority of the respondents sanitized the swine and pigsty thrice a day while 2% of the respondents cleaned the house of swine once. Also, almost all of the respondents used a pig drinker while 8% of respondents watering frequency was twice a day and most of the respondent's source of water was a water well while 20% of respondents' source of water was tap water. Moreover, all of the respondents utilized the available resources of labor which were family members that had the majority of 2-4 household size while all of the respondents consulted a veterinarian for the treatment of the sick pig.

The finding of the study was that swine farmers raised crossbreeds, used intensive systems, fed the swine with commercial feeds, fed the swine thrice a day, housing was concrete with iron roofs, and family members were utilized for labor. This finding was supported by the study of Lekule and Kyvsgaard (2003) from farmers in Uganda who prefer crossbreeds. The findings were also supported by the study of Muhanguzi et al. (2012) that the majority used the intensive system, and according to the study of Casa (2017), pigs are raised in much smaller

spaces than they would normally occupy if they were allowed to wander freely. In contrast, the study of Lekule and Kyvsgaard (2003) on farmers in Africa showed that they used a traditional system like extensive “free-range” because it is sustainable and less costly. This finding was supported by the study of Motsa’a et al. (2013) that the majority of swine farmers gave their swine commercial feed. However, in contrast, the study of Motsa’a et al. (2013) showed that they fed their animals twice a day. Moreover, in contrast, the study of Motsa’a et al. (2013) revealed that most housed their swine in wooden-made piggeries to avoid destruction. The study made by Abiyong, Bidoli, and Nyiatagher (2019) supported the result that farmers exhaust all available labor force from family members first.

**Cost and Return Analysis of Swine raisers**

Table 3 shows the cost and return analysis of swine raisers intended for one cycle (3-4months). It includes return gross income, cost piglets, feeds, boar services, hired labor, vitamins, vaccines, and water bill. The result showed that the average gross income of swine farmers was ₱127,809.20 from an average of 10 swine, with an average weight of 95 kilograms and an average live weight price of ₱140.00.

Table 3. Cost and Return Analysis of Swine raisers in Mlang, Cotabato.

ITEMS	AVERAGE
Return	
Gross Income	127,809.20
Total Return [P]	127,809.20
Cash Costs	
Piglets	25,861.90
Feeds	
Pre-starter	8,820.70
Starter	15,260.80
Grower	25,117.86
Finisher	6,444.00
Boar Services/ Artificial Insemination	3,000.00
Vitamins	791.93
Vaccines	660.00
Utilities Expense	1,950.00
Non-cash Cost	87, 907.19
Labor (family members)	3,000.00
Total cost [P]	90,907.19
NET RETURN	36,902.01
Return on Investment	40.59%

The study revealed that the cost of piglets had an average of ₱25,861.90, while the average cost of pre-starter feeds was ₱8,820.70. The starter feed cost had an average of ₱15,260.80, while the grower feed cost had an average of ₱25,117.86. Also, the finisher feed cost had an average of ₱6,444.00, while the boar services/artificial insemination had an average cost of ₱3,000.00 from 10 out of 50 respondents who owned sows. The average cost of vitamins was ₱791.93, while ₱660.00 was the average cost of vaccines. The average cost of utility expenses was ₱1,950.00, and the average total cost was ₱87,907.19, while the non-cash cost of labor from family members had an average of ₱3,000.00. Moreover, the average net return was ₱36,902.01, and the return on investment was 40.59%.

The finding of the study showed a 40.59% return on investment, which implies that for every ₱1.00 invested, there is a return of ₱0.40, indicating that engaging in swine raising is profitable based on the data gathered. This finding is supported by the study of Aminu and Ahonkhai (2017), which stated that swine production is a profitable endeavor in the reviewed region, as shown by the different benefit-proportion procedures utilized in the analysis.

### Major Constraints of Swine raisers

Table 4 shows the major constraints of swine raisers. The table reveals that a greater majority of the respondent’s major constraints in raising swine were the high cost of feeds while 40% of the respondent’s constraints in swine farming were unstable pricing.

Table 4. Major Constraints of Swine Raisers in Mlang, Cotabato.

ITEMS	FREQUENCY (n=50)	PERCENTAGE (%)
1. High Cost of Feeds	30	60
2. Unstable pricing	20	40

The finding of the study was that the major constraints of swine raising in the study were the high cost of feeds and unstable pricing. This finding is supported by the study of Maharjan and Fradejas (2005), which reported that the major constraint in swine production was expensive feeds. On the contrary, the study of Delgado et al. (2003) found that the spread of disease, caused by low access to biosecurity measures, poor farm cleanliness, inadequate disease control, and limited technical seminars for swine raisers, was the major constraint.

### CONCLUSION

The study inferred that swine farmers were still in their active age, married, and that the production practices they applied can affect the profitability of swine raising. It was concluded that swine raisers had small farms and reared swine in the intensive system to minimize movement, which also helps prevent the transmission of diseases. Engaging in swine raising was considered manageable, as farmers can raise and produce swine in a relatively short amount of time. Household swine producers rely mostly on family labor due to household sizes of 2–4, and men tend to spend more time than women attending to swine. The findings revealed that swine farming has potential as a source of income, with the major challenges being high feed costs and unstable pricing. With better production practices and experience, swine raising is highly profitable. Swine farmers should have more available funds to increase the output of their farms.

### RECOMMENDATIONS

Based on the findings and conclusions of the study, several recommendations are proposed to improve the productivity and profitability of swine raising in Mlang. First, it is recommended that swine farmers seek support from the local government, particularly the Municipal Agriculture Office, to receive training on feed formulation and other technical aspects of swine production. Such training can equip farmers with the knowledge to produce cost-effective and nutritionally balanced feeds, which can significantly reduce overall production costs. Second, farmers are encouraged to organize themselves into an association of swine raisers in Mlang. By forming a

cooperative or group, farmers can gain better access to resources, technical support, and financial assistance from government agencies or non-government organizations, which would enable them to expand their production and increase their income. Third, it is recommended that farmers explore alternative feed ingredients, such as cassava, rice bran, soybean, and locally available vegetables, in their feed formulations. Utilizing these alternative feed components can reduce dependency on commercial feeds, lower production costs, and promote sustainable farming practices while maintaining the growth and health of the swine. Implementing these recommendations can help swine farmers improve efficiency, increase profitability, and sustain their livelihood in the long term. The study can be improved by adopting more rigorous research methods and expanding its scope. Future researchers should consider using random sampling techniques and increasing the number of respondents to enhance the representativeness and reliability of the findings. It is also recommended to incorporate inferential statistical analysis to better examine relationships between variables such as production practices and profitability. Additionally, further investigation into the lack of formal training among swine raisers should be conducted to identify specific knowledge gaps. Including factors such as disease management, market trends, and price fluctuations would also provide a more comprehensive analysis and strengthen the overall study.

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