BIBLIOGRAPHY

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ABSTRACT

This research was intended to determine the native pig population density and structure in the municipality of tinglayan, the specific production and utilization and productivity data.

The number of respondents is 90 for the survey from nine Barangays of Tinglayan, Kalinga Province.

It showed in the results of interview that rice cultivation is the highest means of livelihood of the respondents.

Native pigs were mainly raised because it does not require big capital as compared to hybrid pigs so cost of stocks is cheaper than hybrid breeds.

Deworming of stocks are not applied by the native pig raiser, castration of native pigs is done 2-6 months applications of antibiotics and feed supplements are not also applied by the native pig raiser but only few native pig raiser produce antibiotics. The stocks are fed 2 times a day in a morning and afternoon with camote leaves or tubers,taro/gabi, banana trunk/peelings, sayote fruits and rice bran. Native pig raiser observed that pig are sold regardless of its body and size.

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INTRODUCTION

The people of Tinglayan in Kalinga Province are engaged in swine raising because this activity provides additional income to the family. Some swine raisers raise native pigs for family consumption, but most of them raise pigs for rituals and special occasion such as wedding, family reunion and others. Most Tinglayan people do love eating pork.

Native pigs are easier to raise as compared to improved breeds since the farmer does not require intensive care and management. Most of all, a native can be fed with locally available feedstuffs such as comote leaves, gabi leaves, banana stalks, rice bran and kitchen left over. Native pigs play an important role in the culture of the people of Kalinga since it is used for rituals and sacrifice. The old folks believe in the unseen creatures to which they offer the sacrifice and are pleased with native pigs.

Today, many Kalinga households consider swine production as business enterprise to sustain their needs. Every raiser should emphasize on the productivity and performance of their swine herd to be successful in swine raising. However, there had been no written records about the production of native pigs in the municipality of Tinglayan.

There is a need to gather vital information on native pig population structure and herd performance for future reference. Through this research, it is hoped that we will be able to know the production system and practices adopted by native pig keepers including the problems being encountered by these pig raisers. We can determine which of the practices are to be preserved, or to be eliminated and replace with more appropriate technologies to improve productivity.

Moreover, a description of the social structure of the household within the communities associated with native pig production system is wanting. As has been said, “They learn from us and we learn from them, we must accept that there are things we do not know which the pig raiser know which later on be also known to us as we conduct our research”

The study aimed to attain the following objectives:

1. To describe the socio economic structure of households in Tinglayan, Kalinga including the roles of each member in native pig raising;

2. To describe the herd structure and functions of native pigs raised by the respondents;

3. To determine the production system and management practices for native pigs in the selected barangays;

4. To determine the herd performance of native pigs in these barangays: and

5. To identify constraints in native pig production as perceived by the respondents.

This study was conducted in Tinglayan, Kalinga province from October to December 2010. This municipality is composed of 20 barangays consisting of more or less 3000 household.

REVIEW OF LITERATURE

Available literature on production of native pigs in the Philippines is very scant. Thus, only those available to the researcher are included as review.

Galasgas (1996), as cited by Padiagan in 1999, reported that rural swine raisers had a big problem on feeds as one of the inputs for production. For this reason, pigs are not fed with pure commercial feeds but are added to their rations. They depend more on their crop by products and other foodstuff for substitute feeds.

Maddul (1991) wrote that native pigs in central Cordillera were commonly fed with banana stalks, rice bran, maize and some herbaceous plants. These foodstuffs are offered to pigs twice a day: in the morning and in the evening.

Native pigs were raised mainly on paddocks in the municipality of Kiangan, Ifugao (Regacho, 1995). Male pigs were castrated at 6 months of age with the use of bamboo bark and surgical wounds and minor ailments were treated with herbs. He further stated that pig raisers in Kiangan are dominated by males. On the other hand, Tay-og (1996) observed from her study that females play the main role for pig production and management n Bontoc, Mountain Province.

According to Fabricas (1999), observations of native sows in Sabangan, Mountain Province showed that the mean gestation period is 114.8 days. Litter size at birth increased with the number of parity from 5.86 for primiparous sows to 11 for 5^{th} parity sows. However, percent weaning decreased starting at 3^{rd} farrowing (92.67%) to 5^{th} farrowing (68.13%).

In the villages of Natonin, Mountain Province, Komicho (2005) reported that native pig herds are highly populated by young pigs and least by boars. Native pigs were mainly raised for their resistance to diseases and due to cheaper cost of stocks and feed. The pigs were reportedly used for food, as source of additional income and as sacrificial animals.

The reproductive performance of the original parent sows at the Highland Pig Development Project in Bektey, La Trinidad, Benguet was reported by Maddul (2009). The native sows required at least one service per conception in all parities. After 8 farrowings, a mean of 119.34 days was recorded as length of gestation. Litter size at birth averaged 6.0 among all sows with a mean of 87.93% weaning.

The feed is an important item in the cost of production of animals and their products. It accounts for about 50-75% of the cost of production in most of animal production enterprises. Hence, on enterprise may rise or fall depending on what and how the animals are feed considering economic returns (Castillo, 1975).

Lopez (1976) stated that ration formulation is an important part of swine breeding for a formula to be practical; it must be feasible enough to make use of the available feedstuff, palatable and economical while at the same time maintaining the necessary nutritive balance and adequacy. According to Lopez (1997), the basic pattern of a feed formula is fixed by the pigs requirement with a particular stage of growth as provided in the appropriate tables on the nutrient requirement.

Nutrient requirement of swine are dependent upon interaction of a number of specific factors such as body size, length of production or growth, stress conditions, environment with

emphasis on the temperature, the level of certain nutrients in diet, sex and the breed or stain of pigs being fed (Lopez, 1976).

A number of management practices influenced largely the success of swine enterprises, some of these management practices are essentially under the control of the caretaker or the operator. While management inputs have been shown to have little influence on the hereditary capacity of the animals, proper care and management living about many advantages, such as increase in litter size, survival rate of pigs, from birth to weanling growth rate, and feed efficiently (Gonzales *et al*., 1969).

According to Gannad (2000), weanling pigs shoud be fed with the combination of plant and animal protein to enhance higher return of investment with lower cost of production. Wassit (1999) stated that litter management done by farmer includes castration at 3 months old. He explained that this might be due to their belief that that the male should be used for breeding purposes.

MATERIALS AND METHODS

Materials

The study made use of questionnaires and sampling forms for data gathering. A digital camera was used for photo documentation.

Methods

This research study involved a community survey to determine the native pig population density and structure, while a case study was made to inquire on specific production and utilization patterns and productivity data. The case study was undertaken through focus group discussion with key informants.

Survey. The 20 barangays of Tinglayan were grouped into three zones based on altitude: high, mid and low mountain zones. The top three barangays in native pig population represented each zone. Ten households from each barangay were chosen at random to serve as respondents. Socio-economic data and pig herd structure and production system were gathered through a structured questionnaire. All data and information were cross checked by indirect questions and observations.

The structure of the respondents for the survey is shown below:

Zones	Barangay	Number of Respondents
1.High	Tulgao East	10
	Tulgao West	10

	Butbut Proper	10
2. Mid	Bangad Centro	10
	Bangad Lower	10
	Bangad Upper	10
3. Low	Poblacion	10
	Old Tinglayan	10
	Ambato	10
Total		90

Case study. From the sample barangays involved in the survey, a total of nine respondents served as key informants for the practices on production, management and utilization of native pigs. The household with the most number of native pigs raised in the nine barangays were chosen as respondents. A focus group discussion was employed to obtain the needed information. Direct observation by the researcher also provided additional information.

The following data were gathered

1. General information on sample barangays and respondent
2. Gender roles in native pig raising
3. Information in native pig production
    a. Size and composition of pig herds
    b. Production inputs

c. Production outputs

d. Uses of native pigs

e. System of pig management

f. Risk factor and constraints to productivity

Statistical Analysis

The data sets were subjected to appropriate statistical analysis procedure. Statistical Package for Social Sciences (SPSS) was used. Analysis of variance was carried out on the parameters while Duncan's Multiple Range Test was used to determine significance of difference among the units of study. Correlation analysis were done to show the effects of factors on herd characteristics, performance and utilization patterns.

RESULTS AND DISCUSSION

Survey on Community Pig Production

Socio- economic Structure of Respondents

Table 1 presents the means of livelihood and other animals kept by the respondents of the study in Tinglayan, Kalinga, Multiple responses from the 90 respondents revealed that there are 34.46% involved in rice cultivation, 31.10% in swidden farming, 17.71% are employees, 9.05% are on retail trade, 6.29% are self- employed, and 2.36% are involved in banana farming.

Table 1 also shows that chicken has the highest number (63.56%) among animals kept beside pigs. Domestic duck comes next (17.18%), followed by carabao (8.90%), cattle (5.17%), and dog (4.76%). The least number of animals kept by respondents was the goat at 0.41% only.

The people of Kalinga are the most extensive rice farmers of the Cordillera peoples. Kalinga, have been blest with some of the most suitable land for both wet and dry farming. Like the Ifugaos, Kalingas are also terraces-builders. Rice terraces are found in the mountainous areas of Kalinga, including Tinglayan (Figure 1). Thus, many of the respondents in the survey cultivate rice as means of livelihood. The second biggest number of respondents are swidden farmers who grow root crops in their "Uma", Respondents who are employed are either in the government or private sector. Self-employed respondents are sari-sari store owners and craftsmen who make knives and tools for a living, Very few of the respondents are banana producers.

Table 1 Socio economic structure of farmers keeping native pigs in Tinglayan, Kalinga

PARTICULAR	FREQUENCY	PERCENTAGE
Occupation/Means of	85	33.46
Livelihood	79	31.10
Rice cultivation	45	17.71
Swiden farming	23	9.05
Employee	16	6.29
Retail trade	6	2.36
Self-employed		
Banana farming		
TOTAL	254	100.00
Other Animals Kept	307	63.56
Chicken	83	17.18
Duck	43	8.90
Carabao	25	5.17
Cattle	23	4.76
Dog	2	0.41
Goat		
TOTAL	483	100.00

Figure 1. Rice terraces in the mountainous of Tinglayan

Native Pig Herd Structure

Table 2 shows the native pig herd structure of respondents in Tinglayan, Kalinga. Piglets have the highest number (224) among the different classes of native pig studied. The same observation was reported by Komicho (2005) that native pig herds are highly populated by young pigs and least by boars. Respondents have 174 heads of growing/finishing pigs, 56 heads of pregnant sow and 55 nursing sow, Boars comprise the lowest number (45) in the pig herd structure. Usually, boars are kept in the barangay for breeding purposes, or are being slaughtered for meat or sold for rituals and ceremonial purposes. About 59% of the total pigs raised by the respondents are females.

Table 2. Native herd structure of respondents in Tinglayan, Kalinga

CLASSES		NUMBER
Piglets (suckling/weaning)		
Female	151	230
Male	73	
Growing/Finishing		
Male	110	174
Female	64	
Pregnant sow		56
Nursing sow		55
Boar		45
TOTAL		554

Functions of Native Pigs

Table 3 shows that native pigs mainly served for traditional ceremonies and relationships which are important for the family position in the community. The old folks still believe in the unseen creatures to which they offer the sacrifice and are pleased with native pigs. Some respondents also butcher native pigs for visitors and for campaign purposes during election period. About 35% of the raisers responded that native pigs are raised for sale as an additional source of income. The pig can be converted into cash anytime for buying household items and for covering unexpected expenses. Native pigs are also used for home consumption or as source of protein (26.05%).

Table 3. Functions of native pigs as reported by respondents

FUNCTION	REASON FOR IMPORTANCE OF PIG	FREQUENCY	PERCENTAGE
	For buying household items and for covering unexpected expenses	82	34.45
Consumption	For home consumption of pork or source of protein	62	26.05
Social integration	For traditional ceremonies and relationship which are important for the family position in local society	94	39.50
TOTAL		218	100.00

*Multiple response

Gender Roles in Pig Keeping

Table 4 shows the gender roles in pig keeping. Activities such as feed preparation, feed collection and feeding are mostly done by the wife. It also implies that both husband and wife do chores least the husband genders do the collection, feed preparation and feeding in cleaning the pig shelter children are tasked to do the cleaning compared to other gender. Husbands do the construction and fixing of the pig shelters and children also contribute in the work.

Table 4 also shows that most of the respondents depend on each other both husband and wife do the selection of new stock. Treatment and maintenance are done both of the husband and wife no contribution done by the children.

In this table it shows that wife sell the pigs more often than husband while children don't contribute, most husband and wife respondent sell pigs, in slaughtering of pigs husband slaughter pigs than children, children also do the work of bathing of pigs than other gender member, wife respondents are participating hen seminar is conducted.

System of Production and Management

Table 5 shows the production system of the native pig raisers (90%) of the respondents involved in irrigated mixed farming and (5.55%) involved in solely livestock production while rain fed mixed farming is lowest percentage among them.

It also shows in table 5 that (56.66%) of the respondents keep their animals in intensive system management this management is under pig paddock and pig pen this pig paddock is made

up of bamboo, cogon and wood as a fence to avoid the pigs roaming around the neighborhood area. This pig pen also are made up of cement as a floor and GI

Table 4. Roles of each household members in raising native pigs

ACTIVITY	HUSBAND		WIFE		BOTH HUSBAND AND WIFE		CHILDREN	
	F	%	F	%	F	%	F	%
Feed collection	3	3.33	44	48.9	38	42.2	32	35.55
Feed preparation	2	2.22	74	82.22	8	8.9	26	28.9
Feeding	2	2.22	44	48.9	38	42.2	48	35.6
Cleaning of pig shelter	20	22.22	10	11.11	16	17.8	26	28.9
Construction/fixing	47	52.22	0	0	0	0	21	23.23
Selection of new stock	1	1.10	2	2.22	5	5.6	0	0
Purchase of new stock	1	1.11	0	0	0	0	0	0
Treatment/Maintenance	4	4.44	11	1.11	7	7.8	0	0
Selling of pigs	3	3.33	26	28.9	54	60	7	7.8
Slaughtering of pig	37	41.11	0	0	0	0	10	11.11
Treatment of sick pig	1	1.11	0	0	7	7.8	0	0
Bathing of pig	4	4.44	2	2.22	1	1.11	5	5.6
Participation/Seminar	0	0	1	1.1	0	0	0	0

Table 5. System of production and management for native pigs in Tinglayan, Kalinga

PARAMETER	FREQUENCY	PERCENTAGE (%)
System of Production		
Irrigated mixed farming	81	90.00
Solely livestock production	5	4.44
Rain-fed mixed farming	4	5.55
TOTAL	90	100.00
System of Management		
Intensive	51	56.66

Extensive	39	43.33
TOTAL	90	100.00

sheets as a roof (Figure 2). These are common materials use by native pig raiser and another (43.33%) of respondent keep their animals in extensive management loose/free they scattered everywhere in a open pit, under the tree and under the house (Figure 3). In selling management most of the respondent practices are they sell pigs regardless of its body and size.

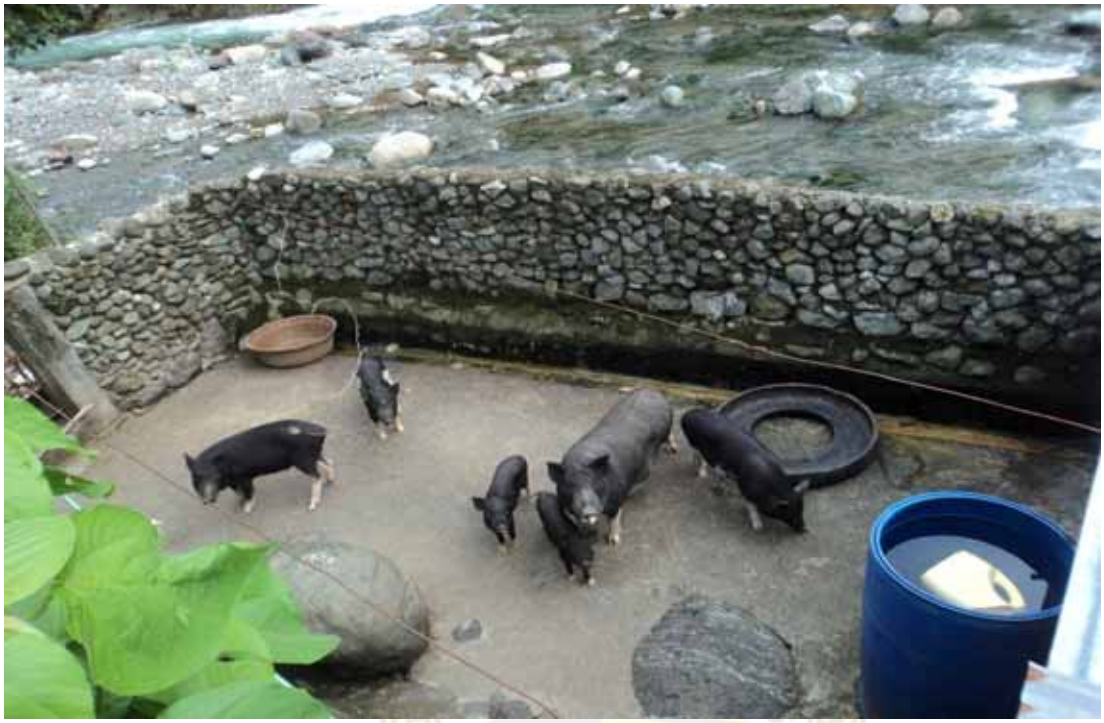
Case Study on Native Pig Production

Socio-economic Structure of Respondent

Table 6 presents the information on household members who are raising native pigs, the age of respondents ranged 10-70 years old. Most of them had ages of 31-40 years old (17.86%) which means that the native pig raisers are at their middle ages. Most of the respondents have 4-6 children which means that most of the respondents have more numbers of children. The largest proportion had gone to college (52.17%) therefore, majority are government employee 31.43%.

The respondents who are responsible for pig keeping are mothers (52.94%). Most women are responsible for their kids while the gentlemen are busy with their jobs, the children also assist their mother in their stocks, however most of the time they are busy in school works. They are also responsible most of the household work, being left in the house, women have more time to manage livestock, after helping their husband in their field women must go home earlier so they can feed their animals on time, making sure that their children are already home also, father and

children also assist their mother in raising native pigs. But most of the time they can busy with their work.



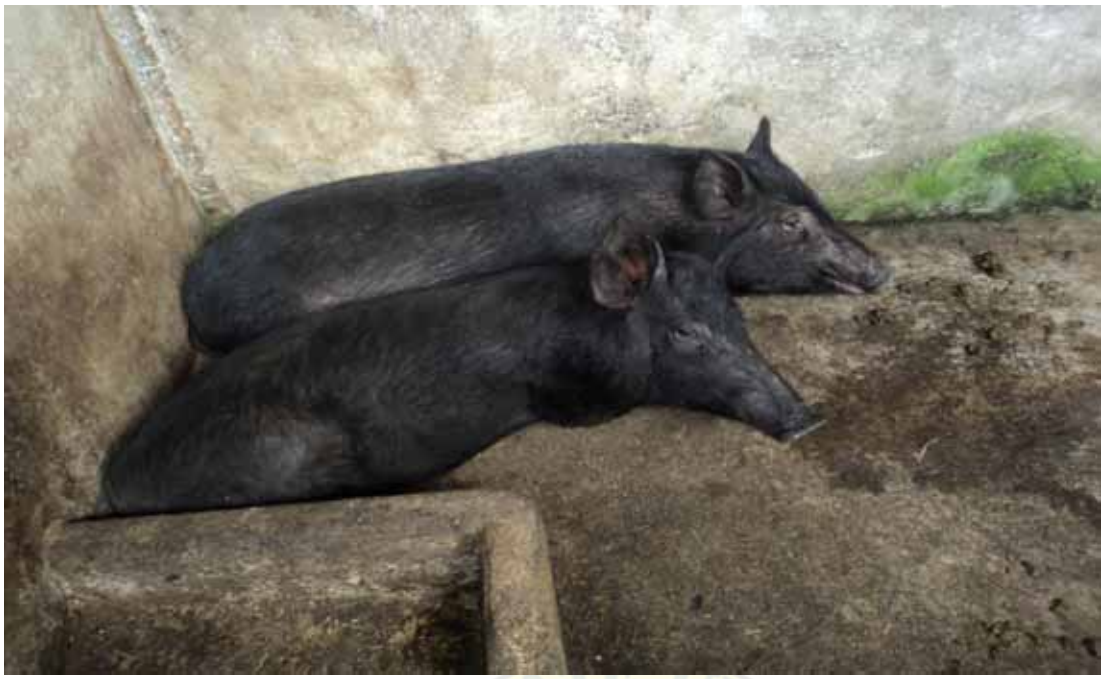
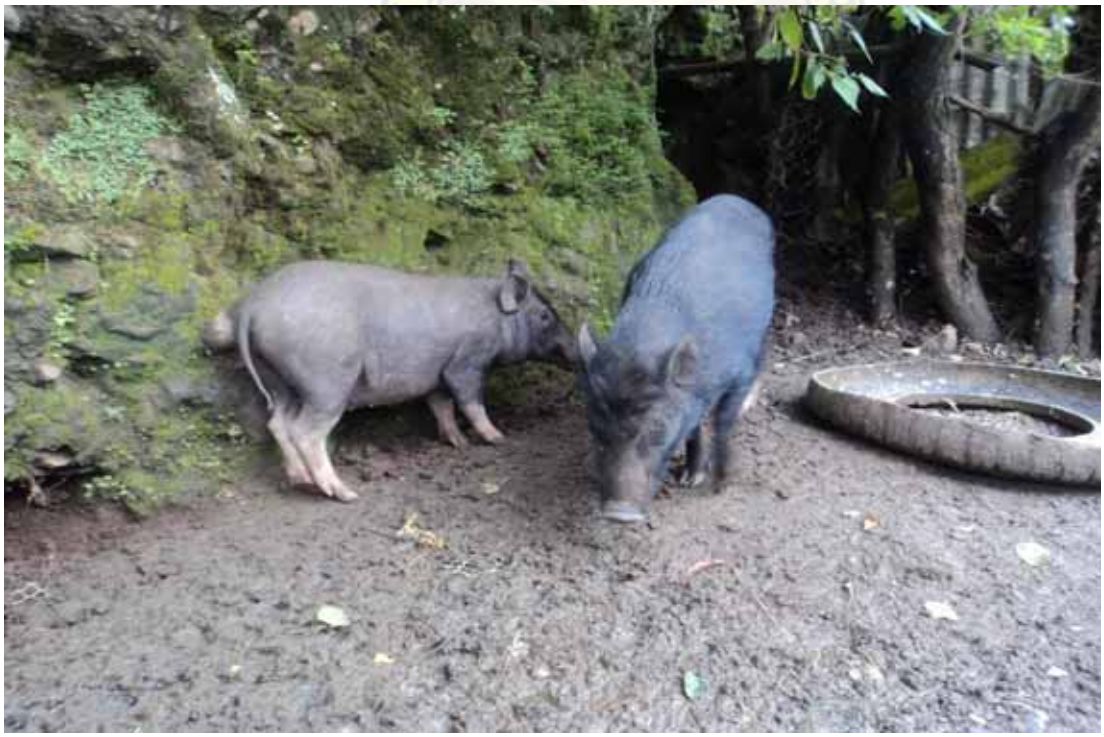


Figure 2. Native pigs in confined in concrete pens



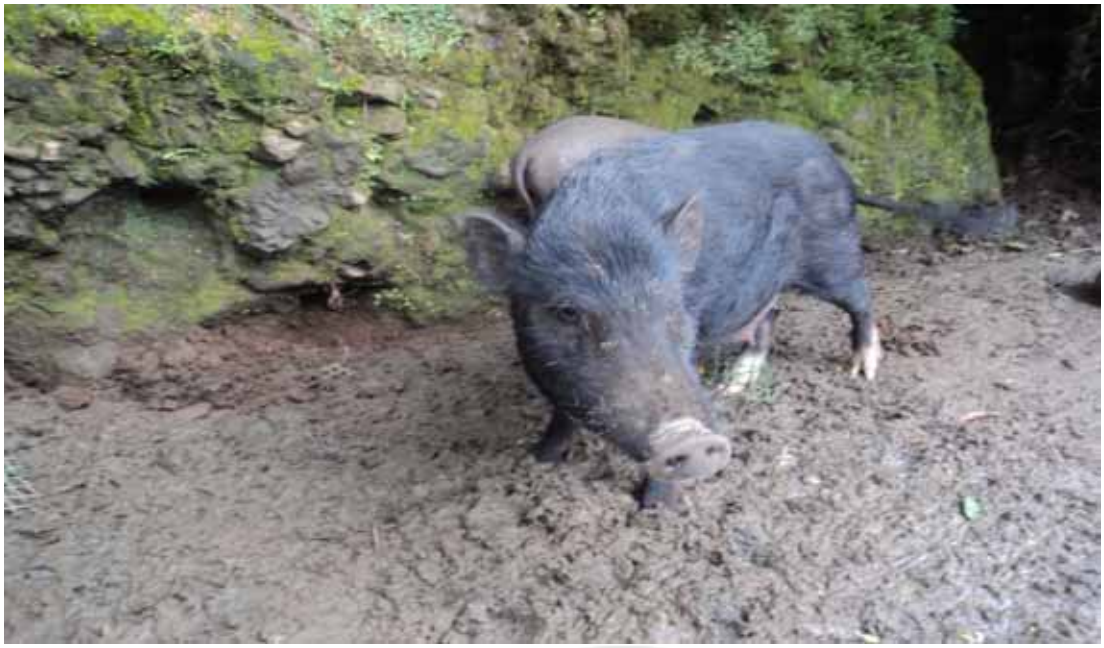


Figure 3. Native pigs under extensive system of management

Table 6. socio-economic structure of household members

PARAMETER		MEAN (%)
Age in Years		
Father		44.11
Mother		45.00
Children		18.25
Highest Educational Attainment	FREQUENCY	PERCENTAGE (%)
Father		
Elementary	1	11.11
Secondary	3	33.33
Tertiary	5	55.55
TOTAL	9	100.00
Mother		
Elementary	1	11.11
Secondary	2	22.22
Tertiary	5	55.55
OSY	1	11.11
TOTAL	9	100
Children		
Elementary	6	27.27
Secondary	4	18.18

Tertiary	12	54.54
TOTAL	22	100
Number of Children		
1-3	4	44.44
4-6	4	44.44
7-8	1	11.11
TOTAL	9	100
Occupation		
Father		
Farming	3	33.33
Government employee	5	55.55
Self employee	1	11.11
Mother		
Housewife	7	77.77
Government employee	2	22.22
Self employee	1	11.11

Table 6. *Continued . . .*

PARAMETER	FREQUENCY	PERCENTAGE (%)
Highest Educational Attainment		
Children	1	4.16
Unemployed	1	4.16
Farmer	6	25.00
Government employee	5	20.83
Self employee	11	45.83
Student		
TOTAL	24	100.00
Responsible for Pig Keeping		
Mother	9	52.94
Father	6	35.29
Children	2	11.76
TOTAL	17	100.00
Area of Landholding		
0-1 hectare	2	22.22
2-3 hectare	3	33.33
38 above hectare	4	44.44
TOTAL	9	100.00

Most of the respondents have 3 and above hectare of area in land holdings, among the 9 respondents 3 have 2-3 hectare of land holdings while 2 respondents have 0-1 hectare of land holdings.

Why Respondents Prefer Native Pigs

Table 7 shows why they prefer raised native pigs. The respondents stated their reason why they prefer on native pigs rather than other pigs. Native pigs do not require big capital as compared to hybrid pigs so the cost of stocks is cheaper than hybrid breeds. It is also easy to manage unlike other improved breeds since they do not require great

Table 7. Reason of preference for native pigs

REASON	FREQUENCY	PERCENTAGE (%)
Low cost requirement	10	66.66
Easy to manage	3	20.00
Good taste of meat	2	13.33
People prefer to buy		14.28
TOTAL	15	100.00

effort during farrowing because they can successfully farrow without the assistance of owners of pigs. Native pigs also have great taste or tastier than improved breeds and people prefer to buy them even though the price is almost the same.

Herd Structure and Source of Stocks

Table 8 present the number of pig raiser and the source of stocks of respondent half of the respondents raised 7-9 heads of pigs which the rest raised 4-6 heads and 1 respondent raised 1-3

heads. The number of native pigs raised includes the young ones but most of the pigs are matured ones.

Majority of the respondents got their stocks from neighbors who are raising native pigs too. Only 1 respondent barrow her stocks from other source and 1 also respondent also buy her stocks.

Table 8. Herd structure and source of stocks

HERD STRUCTURE	FREQUENCY	PERCENTAGE (%)
Boar	4	8.33
Sow	16	33.33
Gilt	5	10.41
Growing/finishing	14	29.16
Piglets	9	18.75
TOTAL	48	100.00
Source of Stock		
Neighbors	7	77.77
Barrow	1	11.11
Buy	1	11.11
TOTAL	9	100.00

System Mangement

Table 9 shows the system of management practiced by the native pig raiser. The type of shelter and age of breeding. Most of the respondents keep their animals loose/free around the backyard, under their house and under the tree and some also respondents keep their animals in close confinement with the use of pig pen as a type of shelter, this pig pen as a type of shelter, the pig pen is made up of cement and soil as a floor, he roof is made of cogon and G.I. sheet and the fence is made up of wood or interlinks this type of shelter is applicable for larger herds, but it is also to prevent for destroying the garden or crops of neighbors. (44.44%) of the native pigs are bred at the ages of 8 months. Another 33.33% of the respondents breed their pigs at 1 year and above and 22.22%

Table 9. System of management and housing

PARTICULAR	FREQUENCY	PERCENTAGE
System Management		
Penned	3	33.33
Tethering	0	0
Loose/free	6	66.66
TOTAL	9	100.00
Type of Shelter		
Pig pen	2	22.22
Pig paddock	1	11.11
Under the house	3	33.33

Under the tree	2	22.22
Under the granary	1	11.11
TOTAL	9	100.00
Age of Breeding		
8 months	4	44.44
10 months	2	22.22
1 year and above	3	33.33
TOTAL	9	100.00

of the respondents breed their pigs at the ages of 10 months, mating occurs below 1 year of ages on those animals that are loose/free where males and females mixed together. In this case the raiser cannot control mating of animals. The animals which are breed at 1 year and above of age are those which are confined in a pig pen where animals are separated males and females. Native pig raiser who do not have boar tend to barrow boars of their neighbors or relatives. As payment for boar service, the boar owner is given one piglet when pregnant sow is farrow.

Feeding Management

Table 10 shows the feeding management practiced by native pig raisers. Native pigs fed with local feedstuff such as camote leaves/tubers, taro/Gabi, banana trunk peelings rice bran and other kitchen left over's, the feeds max be given as a single feed or can be mixed together before giving to native pigs for feed. What is commonly done is the native pig raiser mixed with camote leaves/tubers with feeds and taro/gabi before feeding the native pigs. Camote leaves also fed

cooked or uncooked while taro/Gabi, banana trunk peelings must be cooked because native pigs would not eat or consumed if it given raw. Native pig raiser fed their animals twice a day in a morning and afternoon.

Table 10. Feeding management Practices

KINDS OF INDIGENOUS	FREQUENCY	PERCENTAGE (%)
Camote leaves/tubers	8	23.33
Taro/Gabi	7	29.16
Banana trunk/peelings	1	4.16
Rice bran	6	25.00
Commercial feeds	2	8.23
TOTAL	24	100.00

Litter Management Practices

Table 11 shows the litter management of the respondents. Native pig raiser believe that native pigs farrow themselves without their assistance, cutting of umbilical cord is not applied by the native pig raiser, the umbilical cord is hanging until it falls down to the ground the fact that sows bite anyone who touches it piglets, even the pig raiser from going near and touching the herd.

It is not necessary to cut the teeth of the piglets since the pig raiser believes that an early age the piglets try to eat the indigenous feeds, unlike other improved breeds where in the piglets fed with commercial feeds until they are growing.

All the respondents castrate their pigs, males do the most of the job, castration is done by individuals who are expert in castrating pigs, the activity of castration is done with the use of very clean knife and bamboo stick sharp to prevent infection after castration.

Castration is done at ages 2-6 months, animal raiser in Tinglayan believes that castrated male pigs grow faster than the animals which are not castrated so they require pigs to be castrated.

Pig Health Management

Table 12 shows how the native pig raiser applied in health management. Native pigs raiser in Tinglayan Kalinga are not applying bathing of animals only those who believe that through bathing, parasites and diseases from their body are prevented so animals are healthy in and out.

Table 11. Litter management

LITTER MANAGEMENT	FREQUENCY	PERCENTAGE (%)
Cutting of the umbilical cord of piglets		
Yes	0	0
No	9	100
TOTAL	9	100
Do you cut the teeth of piglets		
Yes	0	0
No	9	100
TOTAL	9	100
Do you castrate your pigs	9	100
Yes	0	0
No		
TOTAL	9	100
At what age do you castrate your pigs	0	0
Below 1 month	9	100
Above 1 month 2-6 months		
TOTAL	9	100

Table 12.Health management Practices

HEALTH PRACTICES	FREQUENCY	PERCENTAGE (%)
Bathing of Animals	2	
Yes	7	22.22
No		77.77
TOTAL	9	100.00
Deworming of Stocks		
Yes	0	0
No	9	100.00
TOTAL	9	100.00
Application of Antibiotics and Feed Supplement		
Yes	4	44.44
No	5	55.55
TOTAL	9	100.00

Deworming of stocks are not applied by the native pig raiser. Another way of health maintenance for the stocks is application of antibiotics and feed supplement, but only few native pig raiser produce antibiotics, feed supplement are also use by other native pig raiser. But most of the respondents feed their animals with the mixture of indigenous and commercial feeds because their purpose is to fatten their animals.

Marketing

This table shows the marketing practices of the native pig raiser, native pig raiser sell their pigs either one year or above of age, pig raiser observed that pigs are sold regardless of its body and size, however, when the need arises specially during emergency cases where money is badly needed pigs are sell it in indigenous practices (tumpok) that cost the price of P200-250 pesos only.

Production Constraint

Table 14 shows the problem and difficulties in raising native pigs, 58.33% of the respondents stated that native pigs grow slowly which is just natural to native pigs, they said that native pigs grow slowly even if they are feed adequately, another 33.33% of the

Table 13. Marketing

SELLING OF PIGS	FREQUENCY	PERCENTAGE
Base on body size	8	90
Tumpok/per kilo	1	10
TOTAL	10	100

Table 14. Production constraint

PROBLEM AND DIFFICULTIES	FREQUENCY	PERCENTAGE (%)
Slow growth rate	7	58.33
Source of stocks	1	8.33
Susceptibility to disease(pannah)	4	33.33
TOTAL	12	100.00

respondents stated that they had been encountering also diseases to native pigs. Source of stocks is one also problem encountering by some native pig raiser because of the small population in their barangay of native pigs, it is difficult to look for sources of stocks to be raised unless you are going to look or buy to near barangays.

Sow and Litter Performance

Table 15 shows the native performance of the respondents the gestation period, litter size at birth, litter size at weaning and age at weaning, it shows n the mean gestation period in first parity was 118.22 in second parity the near gestation period is 160.66 and 3rd parity is 126.00 this is based on days, litter size at birth shows that 6.44 of the native pigs produced in first parity while in second parity it produced 7.33 and in 3rd parity it produced 9 it shows in table 16 that in litter size at weaning native pigs weaned an average of 5 in first party piglets in second parity native pigs weaned a mean of 7.33 and in 3rd parity native pigs had a mean a litter size at

weaning of 9 In age at weaning most of the respondents wean their native pigs when their pigs reach 2 months and higher.

Table 15. Some data on sow and litter performance as observed by respondent

PARAMETER	1st PARITY (Days)	2nd PARITY (Days)	3rd PARITY (Days)
Gestation period	118.22	160.66	126.00
Litter size at birth	6.44	7.33	9.00
Litter size at weaning	5.00	6.66	8.00
Age at weaning	65.33	60.66	56.00

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study involved in survey to determine the native pig population density and structure and case study for an in-depth inquiry on specific production and utilization patterns and productivity data the case studies involved focus group discussion with native pigs raisers or key informants. This study also will make use of questioners and sampling forms for data gathering a digital camera will be use for photo documentation.

Socio-economical structure, shows that the common means/livelihood of the respondents are rice cultivation and swidden farming, few of them were involved in other means of livelihood. Native pigs also were mainly used for rituals and ceremonies and other uses such as food and additional source of income to family.

Native pig herd structure, boars had the lowest population among them with the percentage of (118.42%) while piglets had the highest population with a percentage of (310.81%). Majority of the respondent involved in irrigated mixed farming pigs were kept on loose/free, pig paddock or in pig pen, native pig raiser sell their pigs regardless of its body and size under pig production system.

Information household members show that most of the native pig respondents ranged 10-70 years old. Most of them had ages of 31-40 years old, majority of the respondents have 4-6 children which means most of the native pig raiser have more numbers of children, the lowest proportion had gone to college, therefore majority are government employee.

The reason for preference of native pigs_rather than other pigs was because they can successfully farrow without the assistance of the owner, native pigs does not require big capital and it is easy to manage compared to hybrid pigs, and due to its taste which is better and a lot tastier than any other breeds.

Feeding and health management,the stocks were fed twice a day once in the morning and afternoon with a mixture of any fallowing feeds, camote leaves/tubers, banana trunk peelings, cassava tubers and rice bran, some pig raiser mix commercial feeds if they want to fatten their animals, some raiser also give feed supplement but majority do not. Deworming of stocks is not applied.

Litter management: cutting of umbilical cord is not applied by the native pig raiser until the umbilical cord falls down to the grown. Cutting of teeth of the piglets are not performed, castration is done at ages 2-6 months.

Pig raiser observed that they sell their pigs regardless of its body and size however when the need arises specially during emergency they sell it in indigenous practice (tumpok). 58.33% of the respondents stated that native pigs grow slowly which is just natural to native pigs, even if they are feed adequately. Encountering of disease is also a problem, and lastly source of stocks is one of the problems also of the raiser.

Recommendations

1. The barangay official should implement rules to punish native pig raiser who do not confine their stocks in pen or paddock. These can prevent animals to destroy the garden or crops of their neighbors.

2. Every native pig raiser should attend seminar on effective proper pig raising impose by local government and to improve the stocks so that farmers will gain more knowledge and skills.

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APPENDICES

APPENDIX A

Questionnaire

SURVEY ON COMMUNITY PIG PRODUCTION

Household no. : _____ Name of Barangay: _____

A. Pig population and herd structure

CLASSES	MALE	FEMALE	TOTAL
1. Boar 2. Pregnant sow 3. Nursing Sow 4. Piglets (birth to weaning) 5. Growing/ finishing			

B. Gender roles in pig keeping

ACTIVITIES	HUSBAND	WIFE	BOTH H&W	CHILDREN
1. Feed collection 2. Feed preparation 3. Feeding 4. Cleaning of pig shelter 5. Construction/Fixing/ Repair of pig shelter 6. Selection of new stock 7. Purchase of new stock 8. Treatment/Maintenance of the pig health 9. Selling of pigs 10. Slaughtering of pigs 11. Treatment of sick pig 12. Bathing of pig 13. Participation in seminars				

/training on pig raising 14. others				

C. Socio-economic structure

1. Number of children: ____male ____ female

2. Main occupation / means of livelihood:
_____ Swidden farming (uma)

_____ Rice cultivation

_____ Banana farming

_____ Mining / Gold panning

_____ Cottage industry / handicraft

_____ Retail trade

_____ Employee: ____ government ____ private

_____ Others (specify) _____

3. Reason for raising native pigs:
_____ For prestige

_____ For food (home consumption)

_____ For sale (as source of income)

_____ For rituals / ceremonies

_____ Others (specify) _____

4. Number of animal kept beside pigs:

_____ carabao _____ duck _____ chicken

_____ cattle _____ geese _____ others (specify)

_____ goat _____ turkey

D. Pig Production system

1. Production System

_____ Solely livestock production

_____ Landless livestock production

_____ Mixed-farming

_____ Rain-fed mixed farming

_____ Irrigated mixed farming

2. System of management

_____ Extensive/Loose system (describe: _____)

_____ Tethering (describe: _____)

_____ Pig paddock (describe the fence: _____)

_____ Pig sty (describe the materials: _____)

_____ Pig pen (describe the materials: _____)

3. Selling management

_____ Sold as weanlings at P_____ per head

_____ Sold as growers at P_____ per head

_____ Sold as finisher at P _____ per head

_____ Sold based on size

_____ Sold based on age at P_____ per year

_____ Others (specify)_____

II. CASE STUDY INTERVIEW SCHEDULE

Case No._____ Barangay: _____ Date: _____

A. Information on Household Members

Family Member	Age	Highest Educ'l Attainment	Occupation	Responsible for Pig keeping	Estimated Area of Landholding
Father					
Mother					
Children					
1st					
2nd					
3rd					
4th					
5th					

B. Information on Pig Production and Management

1. What are the reasons why you prefer to raise native pigs?

_____Easily manage

_____Does not require big capital

_____Low cost of stocks and feeds

_____Others (specify)_____

2. Management

A. What kind of indigenous feeds do you use?

_____Camote leaves and tubers

_____Taro/gabi

_____Banana trunk/peelings

_____cassava tubers

_____Rice bran

_____Others (specify) _____

B. How often do you feed your animal?

_____Twice a day (morning and afternoon)

_____Once a day (morning only)

_____Thrice a day (morning noon and afternoon)

_____Others (specify) _____

C. Do you bath your animals?

_____Yes _____No

D. Do you deworm your stocks?

_____Yes _____No

E. Do you apply antibiotics and feed supplements?

_____Yes _____No

F. Do you cut the umbilical cord of the piglets?

_____Yes _____No

G. Do you cut the teeth of the piglets?

_____Yes _____No

H. Do you castrate your pigs?

_____Yes _____No

I. At what age do you castrate your pigs?

_____Below 1 month

_____Above 1 month (Specify) _____

J. What system of management do you practice?

_____Penned

_____Tethering

_____Loose/free

K. What type of shelter is provided for the pigs?

_____Pig stay

_____Pig paddock

_____Under the house

_____Under the granary

_____Under the tree

_____Others (specify) _____

M. At what age do you breed your pigs?

_____8 months old

_____10 months old

_____12 months old

_____ (specify) _____

N. What did you experience as problems/ difficulties in raising native pigs?

_____Slow growth rate

_____Source of stocks

_____ lack of services

_____Susceptibility to diseases

_____Marketing of stocks

_____Others (specify) _____

3. Where do you get your stocks?

_____Neighbors

_____Government disposal programs

_____Others (specify) _____

4. How many heads pigs do you raise?

_____One

_____Two

_____Three

_____Others (specify) _____

5. What is the herd structure?

_____Boar _____Growing/finishing

_____Sow _____piglets(birth to weaning)

_____Gilt

_____ others (specify)_____

6. How do you sell your pigs?

_____ As weanlings at P _____/head

_____ As growers at P _____/head

_____ As finisher at P_____/head

_____ Based on body size

_____ Based on age of pig

7. What are the constraints/problems encountered in raising native pigs? _____

C. Data on native productivity performance

	Parity 1	Parity 2	Parity 3	Parity 4	Parity 5	Parity 6
1. Gestation period	_____	_____	_____	_____	_____	_____
2. Litter size at birth	_____	_____	_____	_____	_____	_____
3. Litter size at weaning	_____	_____	_____	_____	_____	_____
4. Age at weaning	_____	_____	_____	_____	_____	_____