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Assessment of Philippine Native Pig (*Sus scrofa domesticus*) Raisers in selected Municipalities of Agusan del Sur, Philippines

Crishel S. Artiza [1], Chris Jiemel A. Menchavez [1], Kenneth Fel Collin L. Suase [1], and Jesse Jay O. Villanueva [1,2,]*

[1]Department of Animal Science, College of Agriculture, Mindanao State University, Marawi City, Lanao del Sur, Philippines, 9700

[2]Graduate School, University of the Philippines Los Baños, College, Los Baños, Laguna, Philippines, 4031

ABSTRACT

The native pig raising in the Philippines is continuously increasing because of the market potential as additional income for backyard farmers. Most locations, particularly rural areas like Agusan del Sur, Philippines, have backyard pig breeding enterprises. This study aimed to obtain baseline information about the production, feeding, and marketing practices of native pig raisers in selected municipalities of Agusan del Sur. A total of 300 Philippine native pig raisers were personally interviewed using either a self-assisted or self-administered survey questionnaire. The random sampling procedure was used in selecting municipalities covered by the study. Descriptive statistics were used in this research study. The majority of respondents were male, in their productive age, married, finished secondary education and, with 1-5 household members. Across municipalities, respondents have been into native pig raising for at least five years. Moreover, respondents mentioned that native pig raising had been a traditional enterprise in their community. Common problems encountered include inadequate capital, lack of technical knowledge, diseases, low market price and, high cost of feeds. Parents and friends are sources of knowledge and information in native pig raising. Overall, the majority of the respondents employed traditional practices in terms of feeds and feeding, housing, breeding, health and disease prevention, and marketing.

Keywords: *Pig, native pig, feeding, marketing, management, production, practices*

*Corresponding Author
*Email: jessejay.villanueva@gmail.com
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1 Introduction

Raising livestock particularly, native pigs, in addition to the planting field crops, is a significant source of livelihood in rural communities (Villanueva and Sulabo, 2018). As of 01 April 2021, the total swine inventory in the Philippines was estimated at 9.55 million heads (https://psa.gov.ph/inventory). The demand for the market of this animal commodity is continuously increasing. This is due to the love of meat products by local consumers in the Philippines. In a 2021 forecast, pork will be the most consumed type of meat in the Philippines at approximately 15 kilograms per person per annum (https://www.statista.com/statistics). Backyard farming has meager resources of labor and capital. Often, it is not able to derive a regular and adequate supply of food or an acceptable income and standard of living (Huynh et al., 2006). This represents a vast scene of small farms with large populations of small farmers owning a few pig heads using low inputs and producing low outputs (Devendra, 1993). There is a constant struggle by man to produce enough food to meet the needs of its ever-expanding population. Indigenous animals are a valuable part of the food chain since they are sources of food with high nutritional value, and often use feeds not eaten by people (Pond et al.,

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2012; Oosting et al., 2021).

Many Filipino farmer households considered swine raising a popular business enterprise, practicing the activity as part of the farmers farming operations. The swine industry remains the dominant force in the Philippines meat industry, accounting for over 60 percent of the country's total meat demand. Smallholder pig raisers, however, keep the majority of pigs in the Philippines, accounting for around 65 percent of all pigs (http://www.pcaarrd.dost.gov.ph/philippine-pork-to-the-world). Native pig raising can be a lucrative business. Unfortunately, not all farmers can afford to own a head of an animal, and even if the animal can be acquired, the problems of management, feeding, breeding, and health care are often limitations to its development. However, at present, there is currently no update on the status of Philippine native pig raisers in Agusan del Sur. The significance of the present study will provide information and guide farmers in the proper management of raising Philippine native pigs. The findings will serve as a useful guide to government change agents, students, and future researchers in undertaking and implementing the operation to enhance a better production of Philippine native pigs.

This study aimed to obtain baseline information about specific aspects of Philippine native pigs in Agusan del Sur. The areas addressed include management practices, feeds and feeding systems, marketing, and the farmers' general attitudes and perceptions with regard to native pigs as a potential vehicle for sustainable livelihood.

2 Materials and Methods

Locale of the Study

This study was conducted in 12 municipalities of Agusan del Sur, namely: Bayugan, Bunawan, Esperanza, Rosario, San Francisco, San Luis, Santa Josefa, Sibagat, Prosperidad, Talacogon, Trento, and Veruela, using a random sampling procedure.

Respondents of the Study

The respondents were backyard native pig raisers. The list of native pig raisers was obtained from the Municipal Agriculture Office and other sources (i.e., regional offices, Philippine Native Animal Development, or PNAD). Each town had at least 20 backyard native pig raisers chosen at random. The respondents were purposefully sampled in the absence of a list of native pig raisers. A total of 300 backyard native pig raisers responded to the survey.

Data Gathering

The respondents were personally interviewed using either a self-assisted or self-administered survey questionnaire translated into their local dialect. The data gathered include: the profile of the respondents, production and management practices and reasons for each practice; feeds and feeding practices, marketing practices and reasons (i.e., market outlets), and socio-economic dimensions in raising native pigs. The respondents were briefed on the content of the questionnaire before they started to fill it out. The data from the answered questionnaires were consolidated, tabulated, and classified according to the parameters to describe the general characteristics of the respondents.

Data Analysis

Descriptive statistics were used in this research study. Percentages were used as ratios to express how large or small one quantity is relative to another. The percentage is equal to (Calmorin, 1994):

$$P = \frac{X}{N}(100\%)$$

Where:

X = is the answer of the respondents
N = is the total number of the respondents, and 100% is constant.

Mean refers to the exact balance point of a distribution of values obtained by dividing the sum of all values by the number of cases. The mean is equal to (Calmorin, 1994):

$$X = \frac{\sum fM}{N}$$

Where:

X = is the arithmetic mean
fM = is the sum of the product of midpoints by frequencies; and
N = is the total number of cases or observations

Weighted mean was used to give the quantities

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being averaged their proper degree of importance. The weighted mean is equal to (Calmorin, 1994):

$$\bar{X}_w = \frac{\sum w\,(x)}{\sum w}$$

Where:

$\sum$ = means add them up
W = is the weights; and
x = is the value.

The ranking was used to determine the relationship between a set of items such that, for any two items, the first is either 'ranked higher than', 'ranked lower than', or 'ranked equal to' the second (Calmorin, 1994).

Likert scale was also used to determine the sum of responses on several Likert items, and the typical five-level Likert item format consists of (Rattray and Jones, 2007): 5 (Strongly disagree), 4 (Disagree), 3 (Uncertain/Neutral), 2 (Agree), and 1 (Strongly agree).

3 Results and Discussion

Respondents' Profile

Demographic characteristics

Table 1 shows the demographic profile of the respondents from the 12 municipalities of Agusan del Sur covered by the study. The majority (52%) of respondents were male, and the remaining were female (48%). Less than half (46%) belonged to the age bracket of 18-40 years old; another 44% belonged to the age bracket of 41-60 years old, and (10%) belonged to the age bracket 61 years old and above. The respondents in Bunawan and Talacogon were older by 16 years, with a mean age of 48 years, than those in Prosperidad, having a mean age of 32 years. The majority were married (75%), and more than half finished secondary education (54%). More than 40% of respondents have 1-5 household members.

Length of experience in pig raising

Among the selected municipalities, about 40% of the respondents were engaged in pig raising from 5 years and below, while 29% were engaged in pig raising from 6 to 10 years (Table 2). This suggests that native raising has been a backyard enterprise in the different regions of the country and has become a source of income among the members of the rural community. The respondents from Trento had more extended experience in raising native pigs with 11 years than other selected municipalities.

Source of income and capital

Most of the respondents indicated that the primary source of their income came from crops (30%), followed by an incurred wage (24%) (Table 3). Others cited motorcycle driving (20%), livestock (17%), practice of profession (5%), and poultry (3%). Results indicate that crop and incurred wages are the primary sources of income and capital among the selected municipalities. The majority (90%) of the respondents have minimal capital in native pig raising. Less than half of the respondents derived their capital from crops (31%), while (37%) derived their capital from unspecified sources. About 49% of respondents earned a monthly income ranging from ₱5,001 to ₱10,000, and another 33% earned a monthly income ranging from ₱10,001 to ₱20,000.

Reasons and problems encountered in raising native pigs

The majority (79%) of respondents from the selected municipalities were engaged in native pig raising for additional income (Table 4). Only 21% of the respondents were into the business. The three (3) most common problems encountered are the high cost of feeds (42%), not enough capital (24%), and diseases (21%). Other problems include low market price (9%) and lack of technical knowledge (4%). Similar to these findings are those mentioned by other livestock raisers that expensive feeds and capital inadequacy as significant constraints in their enterprise (Muhanguzi et al., 2012).

Knowledge and information in native pig raising

Table 5 shows that most respondents mentioned that their knowledge and information on native pig raising came from their parents (76%), and a few others said it was from friends (19%). Friends and training or seminars were the two top sources of additional knowledge and information about native pig raising with 88% and 8%, respectively. The majority (88%) of respondents had not attended any training or seminar on native pig raising. Less than half of the respondents had the chance to be visited by government extension workers (27%). At the same time, a bigger percentage said they

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Table 1. Demographic profile of the respondents in selected municipalities of Agusan Del Sur, Philippines.

VARIABLES	Bayugan		Bunawan		Esperanza		Rosario		San Francisco		San Luis		Sibagat		Santa Josefa		Prosperidad		Talacogon		Trento		Veruela		TOTAL	
	n=20		n=20		n=20		n=25		n=25		n=20		n=25		n=30		n=25		n=20		n=35		n=35		N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Gender																										
Male	10	50	15	75	13	65	9	36	15	60	12	60	14	56	14	47	14	56	12	60	16	46	13	37	157	52
Female	10	50	5	25	7	35	16	64	10	40	8	40	11	44	16	53	11	44	8	40	19	54	22	63	143	48
Age																										
18-40	8	40	9	45	10	50	12	48	17	68	11	55	16	64	8	27	21	84	8	40	10	29	8	23	138	46
41-60	7	35	10	50	10	50	13	52	8	32	7	35	9	36	15	50	4	16	10	50	15	43	25	71	133	44
61-above	5	25	1	5	-	-	-	-	-	-	2	10	-	-	7	23	-	-	2	10	10	29	2	6	29	10
Mean	46		48		38		40		36		42		37		45		32		48		42		44		42	
Civil Status																										
Single	4	20	2	10	6	30	2	8	3	12	2	10	5	20	4	13	7	28	5	25	3	9	5	14	48	16
Married	16	80	18	90	14	70	23	92	22	88	18	90	20	80.	17	57	18	72	15	75	24	69	20	57	225	75
Widowed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	30	-	-	-	-	8	22	8	23	25	8
Separated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	2	1
Educational Attainment																										
Elementary	6	30	7	35	7	35	15	60	6	24	8	40	9	36	9	30	10	40	4	20	9	25	9	26	99	33
Secondary	14	70	10	50	11	55	9	36	15	60	10	50	9	36	14	47	12	48	16	80	23	66	20	57	163	54
Tertiary	-	-	3	15	2	10	1	4	4	16	2	10	7	28	7	23	3	12	-	-	3	9	6	17	38	13
Household Size																										
1-5	5	25	-	-	2	10	20	80	23	92	1	5	15	60	15	50	15	60	-	-	9	26	20	50	125	42
6-10	11	55	12	60	12	60	5	20	2	8	9	45	9	36	8	27	9	36	10	50	14	40	8	27	109	36
11-above	4	20	8	40	6	30	-	-	-	-	10	50	1	4	7	23	1	4	10	50	12	34	7	23	66	22
Mean	13		12		12		4		3		13		5		4		5		13		7		4		8	

F - frequency

Table 2. Respondents' length of experience in raising native pigs.

Range (years)	Bayugan		Bunawan		Esperanza		Rosario		San Francisco		San Luis		Sibagat		Santa Josefa		Prosperidad		Talacogon		Trento		Veruela		TOTAL	
	n=20		n=20		n=20		n=25		n=25		n=20		n=25		n=30		n=25		n=20		n=35		n=35		N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Gender																										
5-below	8	40	19	95	8	40	10	40	14	56	15	75	14	56	5	17	13	52	10	50	-	-	5	14	121	40
6-10	8	40	1	5	11	55	13	52	8	32	4	20	7	28	5	17	8	32	9	45	5	14	9	26	88	29
11-15	2	10	-	-	-	-	1	4	3	12	1	5	3	12	7	23	4	16	1	5	10	29	5	14	37	12
16-20	2	10	-	-	1	5	1	4	-	-	-	-	1	4	9	30	-	-	-	-	12	34	6	17	32	11
21-above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13	-	-	-	-	8	23	10	29	22	8
Mean	10		5		9		6		6		6		6		8		7		7		11		7		7	

F - frequency

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Table 3. Respondent's sources of income and capital in raising native pigs.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Primary Source of Income																										
Crop	5	25	4	20	6	30	7	28	4	16	11	55	10	40	15	50	3	12	-	-	15	43	10	29	90	30
Poultry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	-	-	-	-	2	6	5	14	10	3
Livestock	7	35	6	30	7	35	1	4	4	16	4	20	4	16	2	6	3	12	4	20	4	11	5	14	51	17
Wages	6	30	5	25	3	15	9	36	6	24	2	10	-	-	5	17	7	28	10	50	10	29	10	29	73	24
Profession	-	-	-	-	-	-	1	4	1	4	-	-	6	24	-	-	3	12	1	5	3	9	-	-	15	5
Motorcycle	2	10	5	25	4	20	7	28	10	40	3	15	5	20	5	17	9	36	5	25	1	2	5	14	61	20
Initial Capital (₱)																										
600-5,000	20	100	20	100	20	100	24	96	23	92	20	100	20	80	23	77	22	88	20	100	29	83	30	86	271	90
5001-10,000	-	-	-	-	-	-	1	4	2	8	-	-	4	16	7	23	3	12	-	-	6	17	5	14	28	9
10,001-15,000	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	1	1
Mean	3,100		2,100		3,250		2,988		3,176		2,600		3,940		2,671		3,364		2,950		2,323		2,419		2,907	
Source of Initial Capital																										
Crops	7	35	4	20	9	45	7	28	4	16	10	50	7	28	15	50	1	4	-	-	15	43	15	43	94	31
Livestock	3	15	2	10	3	15	-	-	2	8	2	10	1	4	2	7	-	-	2	10	4	11	5	14	26	9
Poultry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	-	-	2	10	2	6	5	14	12	4
Lending	4	20	6	30	-	-	1	4	1	4	-	-	5	20	-	-	11	44	4	20	10	29	-	-	42	14
Motorcycle	1	5	-	-	-	-	3	12	3	12	-	-	2	8	-	-	1	4	2	10	3	9	-	-	15	5
Others	5	25	8	40	8	40	14	56	15	60	8	40	10	40	10	33	12	48	10	50	1	3	10	29	111	37
Monthly Income (₱)																										
600-5,000	5	25	6	30	2	10	1	4	-	-	1	5	6	24	5	17	1	4	1	5	9	26	6	17	43	14
5,001-10,000	9	45	13	65	8	40	11	44	14	56	6	30	8	32	15	50	13	52	9	45	20	57	20	57	146	49
10,001-20,000	6	30	1	5	8	40	10	40	9	36	11	55	11	44	10	33	8	32	9	45	6	17	9	26	98	33
20,000-above	-	-	-	-	2	10	3	12	2	8	2	10	-	-	-	-	3	12	1	5	-	-	-	-	13	4
Mean	8,000		5,300		12,250		10,432		9,081		15,000		8,232		8,534		9,472		13,000		5,562		7,128		9,333	

F - frequency

Table 4. Respondent's reason(s) and problems encountered in raising native pigs.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Reasons for engaging in native pig raising																										
For additional income	10	50	20	100	8	40	23	92	25	100	16	80	24	96	25	83	19	76	13	65	28	80	25	71	236	79
Family business	10	50	-	-	12	60	2	8	-	-	4	20	1	4	5	17	6	24	7	35	7	20	10	29	64	21
Problems encountered in native pig raising																										
High cost of feed	17	85	8	40	10	50	2	8	6	24	10	50	4	16	15	50	4	16	20	100	18	51	12	34	126	42
Low market price	1	5	3	15	1	5	-	-	2	8	1	5	1	4	3	10	2	8	-	-	5	14	7	20	26	9
Not enough capital	1	5	8	40	7	35	10	40	11	44	9	45	2	8	4	13	9	36	-	-	7	20	5	14	73	24
Lack of technical knowledge	-	-	-	-	1	5	-	-	1	4	-	-	1	4	3	10	-	-	-	-	2	6	3	9	11	4
Diseases	1	5	1	5	1	5	13	52	5	20	-	-	17	68	5	17	10	40	-	-	3	9	8	23	64	21

F - frequency

Table 5. Respondent's knowledge and information in native pig raising.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Source of initial knowledge in native pig raising																										
Parents	20	100	14	70	18	90	8	32	10	40	14	70	12	48	20	66	13	52	16	80	30	86	27	77	202	67
Friends	-	-	5	25	2	10	8	32	6	24	6	30	5	20	5	17	7	28	4	20	3	9	5	14	56	19
Others	-	-	1	5	-	-	9	36	9	36	-	-	8	32	5	17	5	20	-	-	2	5	3	9	42	14
Source of additional knowledge																										
Extension workers	20	100	20	100	20	100	24	96	23	92	20	100	20	80	23	77	22	88	20	100	29	83	30	86	271	90
Friends	-	-	-	-	-	-	1	4	2	8	-	-	4	16	7	23	3	12	-	-	6	17	5	14	28	9
Trainings/ seminars	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	1	1
Internet	7	35	4	20	9	45	7	28	4	16	10	50	7	28	15	50	1	4	-	-	15	43	15	43	94	31

F –frequency

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Table 5. Respondent's knowledge and information in native pig raising (continuation).

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Attended seminars on native pig raising																										
Yes	-	-	-	-	-	-	5	20	4	16	-	-	2	8	7	23	3	12	-	-	10	29	5	14	36	12
No	20	100	20	100	20	100	20	80	21	84	20	100	23	92	23	77	22	88	20	100	25	71	30	86	264	88
Visited by government extension workers																										
Yes	10	50	6	30	10	50	-	-	-	-	11	55	1	4	7	23	-	-	20	100	10	29	5	14	80	27
No	10	50	14	70	10	50	25	100	25	100	9	45	24	96	23	77	25	100	-	-	25	71	30	86	220	73
Visited by private extension workers																										
Yes	8	40	16	80	3	15	2	8	-	-	7	35	-	-	3	10	1	4	-	-	5	14	-	-	45	15
No	12	60	4	20	17	85	23	92	25	100	13	65	25	100	27	90	24	96	20	100	30	86	35	100	255	85
Information to learn																										
Breeds	-	-	-	-	-	-	-	-	1	4	-	-	2	8	3	10	-	-	-	-	1	3	5	14	12	4
Diseases prevention	-	-	2	10	4	20	11	44	5	20	-	-	15	60	16	53	19	76	-	-	26	74	23	65	121	40
Feeds/ nutrition	2	10	3	15	14	70	-	-	-	-	8	40	4	16	4	13	-	-	18	90	3	9	3	9	59	20
Management practices	10	50	14	70	2	10	14	56	18	72	12	60	3	12	5	17	5	20	2	10	5	14	2	6	92	31
Marketing	8	40	1	5	-	-	-	-	1	4	-	-	1	4	2	7	1	4	-	-	-	-	2	6	16	5
Source of native pigs																										
Agricultural station	-	-	-	-	-	-	3	12	4	16	-	-	-	-	7	23	-	-	-	-	2	6	-	-	16	5
Commercial pig raisers	-	-	-	-	-	-	6	24	1	4	-	-	3	12	-	-	10	40	-	-	-	-	-	-	20	7
Backyard raisers	20	100	17	85	20	100	16	64	20	80	20	100	16	64	23	77	15	60	20	100	33	96	35	100	255	85
BAI breeding station	-	-	3	15	-	-	-	-	-	-	-	-	6	24	-	-	-	-	-	-	-	-	-	-	9	3

F –frequency; BAI – bureau of animal industry

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were not visited by private extension workers (85%). Respondents also needed to learn more about disease prevention and management practices (40% and 31%, respectively). Feed or nutrition (20%) was another area they wanted to learn more about. Marketing (5%) and breeds (4%) were cited the least among the information they wanted to learn. Most of the respondents got their native pigs from other backyard raisers (85%). The remaining sourced their stock from commercial pig raisers (7%), agricultural pig raisers (5%), and the Bureau of Animal Industry or BAI breeding station (3%) in descending order.

Findings reveal that native pig raising is an activity passed from parents to their children and that knowledge about this enterprise is mainly a product of an individual's interaction with family, friends, and his community (Villanueva and Sulabo, 2018). It was also observed that respondents across regions follow conventional management practices in native pig raising.

Management Practices

Table 6 presents the knowledge on production and management practices in native pig raising. Data are shown in weighted mean with their corresponding descriptive ratings. Respondents in all communities overwhelmingly agree that they keep pigs primarily for sale and food. It was also found that most of the respondents agree that fathers, mothers, and children take turns in taking care of the native pigs. In raising native pigs, respondents from selected municipalities agreed on tethering, and most of the respondents agreed on the use of natural materials for walls, roofing, and fencing. In terms of frequency of vaccination, respondents across municipalities agree and or disagree. Respondents from selected municipalities of Agusan del Sur disagree on the vaccination program for hog cholera and foot and mouth disease. In the practice of de-worming, respondents agreed on the use of commercially available anthelmintics. In contrast, other respondents were uncertain about using naturally available. Respondents from selected municipalities disagree in seeking the services of private veterinarians and are uncertain about the services of government veterinarians, while pig owners agree to vaccination of native pigs. Meanwhile, respondents from selected municipalities were uncertain of consulting government veterinarians for vaccination, while others disagreed. Respondents in Agusan del Sur were uncertain that scouring and pneumonia are the most common health problems of their native pigs. Agusan del Sur respondents were uncertain about the process of cleaning, while other respondents agreed on the processes of cleaning, like the combination of water and scraping. On the other hand, they all disagree on treating and recycling pigs' feces. Agusan del Sur respondents disagree with recording feed consumption and health information, while respondents from the selected municipalities were uncertain about keeping records about farrowing time.

The findings agree with Geromo (1993) and Villanueva and Sulabo (2018), who reported that improved practices are still not being adopted, which could be attributed to the limited access to information and services about native pig raising.

Feeds and Feeding Practices

Respondents from the selected municipalities of Agusan del Sur strongly agree on the use of farm products (corn, rice, soybean) and by-products (corn bran, rice bran, soybean meal) as feeds for native pigs (Table 7). However, they were not sure of scavenging as a form to feed their pigs. Most respondents across municipalities strongly agree on feeding their pigs three times a day. Troughs are used in feeding the native pigs. The combination of the wet and dry methods is the common method of feeding. Improvised water troughs are used to provide water in uncertain frequencies. Furthermore, most of the respondents from the selected municipalities disagree on feed supplementation practices in native pig raising. However, the studies of Philippine native pigs are not conclusive because of the very limited information on the animal (Villanueva and Sulabo, 2018).

Marketing Practices

Table 8 shows the marketing practices of respondents across Agusan del Sur. Most of respondents across municipalities agree and strongly agree with considering age and weight as bases for marketing native pigs, respectively. They also agree that selling is on a per weight and/or per head basis. Respondents from Agusan del Sur agree and strongly agree that they sell their pigs every three months and whenever there is a need, respectively.

The common places of selling pigs, according to most of the respondents from selected

Table 6. Respondents' knowledge on production and management practices in native pig raising.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Raising native pigs																										
As food	3.05	U	2.55	A	2.55	A	2.20	A	2.48	A	2.25	A	1.60	SA	3.1	U	2.36	A	2.70	U	2.1	A	2.3	A	2.4	A
For sale	1.15	SA	1.10	SA	1.20	SA	2.32	A	1.80	SA	1.50	SA	2.68	U	2.0	A	2.16	A	1.20	SA	1.1	SA	2.1	A	1.7	SA
Take care of native pigs																										
Grandparents	4.90	SD	4.95	SD	4.95	SD	4.32	SD	4.28	SD	4.90	SD	4.20	D	4.2	D	4.12	D	4.90	SD	4.6	SD	4.6	SD	4.6	SD
Father	1.10	SA	1.45	SA	1.50	SA	2.08	A	2.24	A	1.25	SA	2.68	U	3.8	D	2.60	A	1.90	A	3.7	D	3.7	U	2.3	A
Mother	1.40	SA	1.50	SA	1.00	SA	1.64	SA	1.92	A	1.60	SA	1.72	SA	4.0	D	1.76	SA	2.05	A	3.7	D	3.9	U	2.2	A
Children	2.15	A	2.55	A	2.40	A	3.64	D	3.00	U	1.25	SA	3.88	D	3.1	U	3.16	U	1.85	A	1.7	SA	2.2	A	2.6	A
Relatives	4.90	SD	4.85	SD	4.90	SD	4.84	SD	4.56	SD	4.70	SD	4.68	SD	3.3	U	4.68	SD	4.35	SD	3.0	U	3.5	D	4.4	U
System of raising																										
Complete confinement	4.40	SD	4.15	D	4.80	SD	1.84	A	2.04	A	4.20	D	1.84	A	4.2	D	2.16	A	4.90	SD	4.1	D	3.7	D	3.5	D
Semi-confinement	3.70	D	2.65	U	3.50	D	1.92	A	2.20	A	3.60	D	2.12	A	3.8	D	2.32	A	4.05	D	2.8	U	2.9	U	2.9	U
Range with shelter	3.05	U	2.70	U	2.70	U	2.84	U	2.48	A	2.05	A	3.24	U	4.0	D	2.72	U	2.80	U	1.6	SA	1.6	SA	2.6	U
Range without shelter	3.60	D	4.15	D	4.25	SD	3.00	U	2.92	U	3.70	D	3.56	D	3.1	U	2.96	U	3.85	D	4.1	D	4.4	SD	3.6	D
Tethering	2.15	A	2.40	A	2.55	A	2.12	A	1.72	SA	2.30	A	2.44	A	3.3	U	2.36	A	1.45	SA	1.7	SA	2.0	A	2.2	SA
Materials for walls																										
Natural	3.40	U	2.80	U	2.90	U	1.84	A	1.72	SA	2.80	U	1.96	A	1.3	SA	1.80	SA	4.00	D	1.6	SA	1.3	SA	2.3	A
Commercial	4.65	SD	4.90	SD	4.50	SD	1.64	SA	2.12	A	4.40	SD	2.00	A	2.9	U	2.20	A	4.55	SD	1.9	A	2.3	A	3.2	U
Roofing materials																										
Natural	4.20	D	2.30	A	2.95	U	1.72	SA	1.84	A	2.45	A	1.96	A	2.5	A	1.92	A	2.75	U	1.3	SA	1.9	A	2.3	A
Commercial	4.60	SD	4.95	SD	4.25	SD	1.72	SA	2.12	A	4.50	SD	2.00	A	2.9	U	2.08	A	4.65	SD	1.9	A	1.7	A	3.1	U
Materials for fencing																										
Natural	3.80	D	2.80	U	3.05	U	1.92	A	1.96	A	2.70	U	1.96	A	2.2	A	1.88	A	3.75	D	1.4	SA	2.1	SA	2.5	A
Commercial	4.50	SD	4.90	SD	4.80	SD	2.00	A	2.04	A	4.60	SD	2.16	A	2.8	U	2.08	A	4.55	SD	2.0	A	2.9	U	3.3	U

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S - scale

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Table 6. Respondents' knowledge on production and management practices in native pig raising (continuation).

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Frequency of vaccination																										
Once a year	1.00	SA	2.45	A	1.15	SA	3.12	U	3.08	U	2.50	A	2.96	U	3.4	U	3.12	U	1.95	A	2.4	A	3.6	D	2.6	A
Every six months	4.20	D	3.90	DA	4.15	D	3.08	U	3.44	D	4.45	SD	3.24	U	3.4	U	3.52	D	4.10	D	2.7	U	3.3	U	3.6	D
Vaccination program																										
Hog cholera	4.40	SD	4.80	SD	4.05	D	3.72	D	3.52	D	4.60	SD	3.76	D	2.5	A	3.72	D	3.90	D	1.5	SA	2.3	A	3.6	D
FMD	4.40	SD	4.95	SD	4.10	D	3.60	D	3.36	U	4.45	SD	3.64	D	2.5	A	3.88	D	4.15	D	1.7	SA	1.9	A	3.6	D
Pneumonia	4.40	SD	4.80	SD	3.45	SD	3.48	D	3.44	D	4.30	SD	3.52	D	1.8	SA	3.72	D	4.35	SD	1.6	SA	1.6	SA	3.4	U
Deworming																										
Commercial	1.00	SA	1.05	SA	1.15	SA	1.56	SA	1.40	SA	1.60	SA	1.60	SA	1.1	SA	1.84	A	1.80	SA	1.0	SA	1.0	SA	1.3	SA
Natural	2.70	U	4.80	SD	4.05	D	3.28	U	3.24	U	3.60	D	3.56	D	2.5	A	3.20	U	4.35	SD	2.2	A	1.3	SA	3.2	U
Persons who vaccinate																										
Private veterinarian	4.35	SD	2.60	A	4.20	D	3.88	D	4.04	D	4.85	SD	3.92	D	2.9	U	4.04	D	4.40	SD	3.1	U	2.4	A	3.7	D
Government veterinarian	4.40	SD	4.35	SD	3.60	D	3.72	D	3.28	U	3.60	D	3.80	D	2.3	A	3.76	D	2.35	A	1.7	SA	2.1	A	3.2	U
Piggery owner	1.20	SA	3.55	D	1.60	SA	3.12	U	2.84	U	1.90	A	3.08	U	3.4	U	3.36	U	2.10	A	2.1	A	2.9	U	2.6	A
Visits the pig	2.15	A	2.40	A	2.55	A	2.12	A	1.72	SA	2.30	A	2.44	A	3.3	U	2.36	A	1.45	SA	1.7	SA	2.0	A	2.2	SA
Nobody	1.05	SA	3.25	U	2.80	U	3.24	U	3.56	D	2.65	U	3.12	U	3.9	D	3.32	U	1.70	SA	3.9	D	3.9	D	3.0	U
Veterinarian	4.40	SD	2.35	A	3.95	D	3.92	D	3.96	D	4.55	SD	3.92	D	3.0	U	3.80	D	4.15	D	3.2	U	3.2	U	3.7	D
DA	4.50	SD	4.30	SD	3.75	D	3.68	D	3.12	U	3.50	D	3.80	D	2.1	A	3.68	D	4.45	SD	2.0	A	2.0	A	3.4	U
Health problems																										
Scouring	5.00	SD	5.00	SD	4.35	SD	2.68	U	2.48	A	4.74	SD	2.60	A	2.0	A	2.80	U	4.10	D	1.2	SA	1.5	SA	3.2	U
Pneumonia	3.20	U	5.00	SD	3.85	D	2.36	A	2.48	A	4.25	SD	2.52	A	2.8	U	2.84	U	4.05	D	1.4	SA	2.1	A	3.1	U
Process of cleaning																										
Water only	4.25	SD	3.20	U	4.45	SD	2.28	A	1.84	A	3.95	D	2.56	A	1.8	SA	2.16	A	4.40	SD	2.1	A	1.9	A	2.9	U
Scrape the feces	1.35	A	2.35	A	1.15	SA	3.72	D	3.28	U	1.45	SA	4.00	D	4.3	SD	3.64	D	1.80	SA	3.4	U	3.5	D	2.8	U
Water and Scrapping	3.80	D	2.70	U	4.35	SD	1.00	SA	1.08	SA	3.75	D	1.00	SA	1.0	SA	1.04	SA	3.70	D	1.1	SA	1.1	SA	2.1	A

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S - scale; FMD – foot and mouth disease

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Table 6. Respondents' knowledge on production and management practices in native pig raising (continuation).

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	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Pigs' feces																										
Disposed	1.15	SA	2.10	A	1.00	SA	2.40	A	2.60	A	1.20	SA	2.56	A	3.3	U	2.88	U	1.65	SA	2.0	A	1.6	SA	2.0	A
Treat	4.65	SD	3.80	D	4.65	SD	3.60	D	3.24	U	4.40	SD	3.80	D	3.5	D	3.32	U	4.55	SD	2.9	U	2.9	U	3.8	D
Recycle	4.90	SD	4.45	SD	4.60	SD	3.36	U	3.32	U	4.85	SD	3.56	D	1.4	SA	3.28	U	4.90	SD	2.3	A	2.3	A	3.6	D
Recording practices																										
Farrowing time	2.60	A	3.70	D	3.00	U	3.48	D	3.04	U	4.15	D	3.64	D	1.8	SA	3.28	U	4.45	SD	2.0	A	2.0	A	3.1	U
Feed consumption	5.00	SD	5.00	SD	4.90	SD	3.52	D	3.44	D	4.65	SD	3.72	D	3.8	D	3.40	U	4.70	SD	3.1	U	3.4	U	4.1	D
Health/ disease	5.00	SD	5.00	SD	4.60	SD	3.76	D	3.76	D	4.90	SD	3.84	D	3.5	D	3.92	D	4.85	SD	2.9	U	3.3	U	4.1	D

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S - scale

Table 7. Respondents' knowledge on feeds and feeding practices in native pig raising.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Feeds in native pig																										
Commercial feeds	3.05	U	3.05	U	2.50	A	1.56	SA	1.72	SA	2.30	A	1.96	A	2.4	A	2.16	A	1.95	A	2.0	A	3.2	U	2.3	A
Self-mix	2.00	A	2.00	A	1.85	A	1.92	A	1.84	A	2.00	A	2.20	A	2.0	A	2.16	A	2.60	A	1.7	SA	3.1	U	2.1	A
Farm products	1.10	SA	1.10	SA	1.10	SA	1.96	A	1.84	A	1.00	SA	1.88	A	1.7	SA	1.84	A	1.00	SA	1.5	SA	1.4	SA	1.5	SA
Farm by-products	1.05	SA	1.05	SA	1.30	SA	2.08	A	1.84	A	1.00	SA	2.32	A	1.7	SA	2.04	A	1.00	SA	1.6	SA	1.3	SA	1.5	SA
Domestic left-overs	1.05	SA	1.05	SA	1.40	SA	2.24	A	2.16	A	1.00	SA	2.20	A	3.4	U	2.32	A	1.00	SA	3.1	U	3.4	U	2.0	A
Scavenging	3.55	D	3.55	D	3.55	D	2.60	A	2.68	U	2.70	U	2.76	U	4.3	SD	2.64	U	3.40	U	4.7	SD	4.7	SD	3.4	U
Frequency of giving feeds																										
Thrice per day	2.80	U	1.85	A	1.85	A	1.44	SA	1.56	SA	1.00	SA	1.52	SA	2.5	A	1.64	SA	1.15	SA	1.9	A	2.6	A	1.8	SA
Twice per day	2.90	U	3.30	U	3.30	U	1.96	A	2.12	A	4.60	SD	2.20	A	2.2	A	2.16	A	3.70	D	1.9	A	2.1	A	2.7	U
Once a day	4.80	SD	4.75	SD	4.85	SD	3.68	D	3.28	U	4.95	SD	4.00	D	3.7	D	3.52	D	5.00	SD	4.0	D	3.9	D	4.2	D
Only when there is feedstuff available	5.00	SD	4.80	SD	4.85	SD	4.52	SD	4.24	SD	4.95	SD	4.72	SD	5.0	SD	4.60	SD	5.00	SD	4.7	SD	4.9	SD	4.7	SD

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S – scale

Table 7. Respondents' knowledge on feeds and feeding practices in native pig raising (continuation).

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Place to provide feeds																										
In feeding trough	1.00	SA	1.60	SA	1.10	SA	1.28	SA	1.32	SA	1.30	SA	1.40	SA	1.0	SA	1.56	SA	1.05	SA	1.0	SA	1.0	SA	1.2	SA
Scattered in the ground	3.25	U	2.55	A	3.15	U	2.64	U	2.84	U	1.95	A	3.04	U	4.3	SD	2.88	U	2.05	A	3.9	D	4.5	SD	3.1	U
Form of feeding																										
Dry feeding	2.00	A	1.60	SA	2.00	A	2.68	U	3.04	U	2.00	A	2.84	U	3.7	D	3.08	U	2.00	A	2.9	U	3.9	D	2.6	A
Wet feeding	2.00	A	1.50	SA	2.00	A	1.36	SA	1.60	SA	2.00	A	1.48	SA	2.7	U	1.72	SA	2.00	A	2.0	A	1.8	SA	1.8	SA
Combination	1.00	SA	1.10	SA	1.00	SA	2.40	A	2.08	A	1.00	SA	2.80	U	1.7	SA	2.24	A	1.00	SA	1.6	SA	1.3	SA	1.6	SA
Provide water in native pigs																										
Never	4.90	SD	5.00	SD	5.00	SD	4.12	D	4.08	D	5.00	SD	4.36	SD	4.0	D	4.48	SD	5.00	SD	4.4	SD	3.0	U	4.4	SD
Once a day	4.05	D	4.65	SD	4.40	SD	1.96	A	2.52	A	4.80	SD	2.12	A	2.7	U	2.52	A	4.40	SD	2.1	A	2.1	A	3.2	U
Occasionally	1.00	SA	1.00	SA	1.05	SA	4.36	SD	4.08	D	1.00	A	4.64	SD	3.4	U	4.40	SD	1.00	SA	3.5	D	3.4	U	2.7	U
Place to provide water																										
In commercial water trough	4.65	SD	4.60	SD	4.45	SD	1.88	A	2.20	A	4.95	SD	2.32	A	4.2	D	2.56	A	5.00	SD	3.5	D	4.1	D	3.7	D
In improvised water trough	1.00	SA	1.20	SA	1.50	SA	1.96	A	1.76	SA	1.00	SA	2.08	A	1.5	SA	1.92	A	1.00	SA	1.1	SA	1.0	SA	1.4	SA
Practice feed supplementation																										
Always	4.95	SD	4.95	SD	4.45	SD	3.12	U	2.88	U	4.55	SD	3.04	U	3.6	D	2.80	U	4.70	SD	2.6	A	3.6	D	3.8	D
Sometimes	4.95	SD	4.95	SD	4.25	SD	3.16	U	3.12	U	4.00	D	3.28	U	2.4	A	3.32	U	4.65	SD	2.5	A	3.1	U	3.6	D

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S – scale

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Table 8. Respondents' knowledge on marketing practices in native pig raising.

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Process of marketing the native pigs																										
Age	2.20	A	1.75	SA	2.55	A	3.20	U	3.52	D	1.80	SA	3.12	U	3.2	U	2.96	U	1.65	SA	2.4	A	2.9	U	2.6	A
Weight	1.20	SA	1.45	SA	1.40	SA	1.48	SA	1.32	SA	1.55	SA	1.36	SA	1.2	SA	1.28	SA	1.25	SA	1.3	SA	1.2	SA	1.3	SA
Methods of selling the native pigs																										
Per weight Basis	1.40	SA	1.50	SA	1.25	SA	1.64	SA	1.40	SA	1.50	SA	1.76	SA	1.2	SA	1.60	SA	1.15	SA	1.0	SA	1.3	SA	1.4	SA
Per head basis	1.40	SA	1.30	SA	1.65	SA	2.28	A	2.20	A	1.80	SA	2.44	A	3.0	U	2.36	A	1.70	SA	2.8	U	2.9	U	2.2	A
Sells the native pig																										
Every three months	1.25	SA	1.75	SA	1.25	SA	3.16	U	3.28	U	1.65	SA	3.12	U	3.3	U	3.16	U	1.15	SA	3.2	U	3.5	D	2.5	A
Every six months	2.75	U	4.10	D	3.75	D	3.36	U	3.20	U	3.65	D	3.08	U	3.2	U	3.04	U	4.45	SD	2.9	U	3.3	U	3.4	U
When there is a need	2.15	A	1.25	SA	2.30	A	1.52	SA	1.56	SA	1.45	SA	1.52	SA	1.3	SA	1.64	SA	2.40	A	1.3	SA	1.3	SA	1.6	SA
Place to sell the native pig																										
Own farm	1.20	SA	3.55	D	1.25	SA	2.24	A	2.44	A	2.00	A	2.32	A	2.3	A	2.52	A	1.35	SA	2.3	A	2.3	A	2.1	A
Market (regular)	2.55	A	3.95	D	3.70	D	3.20	U	2.96	U	4.15	D	3.36	U	2.3	A	3.08	U	4.25	SD	2.2	A	2.2	A	3.2	U
Flea market	2.60	A	3.10	U	3.75	D	2.88	U	3.16	U	4.00	D	3.08	U	3.8	D	3.28	U	3.50	D	3.5	D	3.5	D	3.3	U
Neighborhood	2.30	A	2.00	A	2.75	U	2.32	A	2.68	U	1.80	SA	2.80	U	2.4	A	2.92	U	1.35	SA	1.6	SA	1.4	SA	2.2	A
Middlemen	2.10	A	1.85	A	2.25	A	2.72	U	2.64	U	2.35	A	2.56	A	2.3	A	2.76	U	2.05	A	1.8	SA	3.1	U	2.4	A
Sets the price of native pigs																										
Owner	1.20	SA	1.00	SA	1.40	SA	1.36	SA	1.60	SA	1.25	SA	1.48	SA	2.3	A	1.80	SA	1.05	SA	1.5	SA	1.7	SA	1.5	SA
Middlemen	3.10	U	3.00	U	3.35	U	3.28	U	3.36	U	3.80	D	3.24	U	3.0	U	3.40	U	3.35	U	3.2	U	3.6	D	3.3	U
Buyers	2.85	U	3.30	U	3.50	D	3.56	D	3.64	D	3.55	D	3.64	D	3.2	U	3.80	D	3.20	U	2.9	U	3.3	U	3.4	U
Prevailing market price	2.95	U	3.70	D	3.05	U	3.80	D	3.60	D	3.80	D	3.92	D	1.9	A	3.68	D	3.45	D	1.7	SA	1.6	SA	3.1	U

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S – scale

Table 8. Respondents' knowledge on marketing practices in native pig raising (continuation).

VARIABLES	Bayugan n=20		Bunawan n=20		Esperanza n=20		Rosario n=25		San Francisco n=25		San Luis n=20		Sibagat n=25		Santa Josefa n=30		Prosperidad n=25		Talacogon n=20		Trento n=35		Veruela n=35		TOTAL N=300	
	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Demand for native pig in your area																										
Age	2.20	A	1.75	SA	2.55	A	3.20	U	3.52	D	1.80	SA	3.12	U	3.2	U	2.96	U	1.65	SA	2.4	A	2.9	U	2.6	A
Weight	1.20	SA	1.45	SA	1.40	SA	1.48	SA	1.32	SA	1.55	SA	1.36	SA	1.2	SA	1.28	SA	1.25	SA	1.3	SA	1.2	SA	1.3	SA
Methods of selling the native pigs																										
Very low	4.70	SD	2.70	U	4.60	SD	1.76	SA	1.72	SA	3.95	D	1.88	A	1.2	SA	1.88	A	4.65	SD	1.2	SA	1.8	SA	2.7	U
Low	1.40	SA	1.45	SA	1.60	SA	2.84	U	2.80	U	1.75	SA	2.84	U	2.1	A	2.92	U	1.45	SA	1.8	SA	2.2	A	2.1	A
Moderate	1.35	SA	1.55	SA	1.50	SA	3.04	U	3.00	U	2.35	A	2.96	U	2.7	U	3.08	U	1.35	SA	2.8	U	2.8	U	2.4	A
High	3.65	D	4.10	D	4.00	D	3.76	D	3.76	D	4.50	SD	3.44	D	3.5	D	3.52	D	3.80	D	4.3	SD	3.5	D	3.8	D
Very high	3.95	D	4.45	SD	4.30	SD	4.24	SD	4.12	D	4.85	SD	4.08	D	4.6	SD	4.00	D	4.55	SD	4.8	SD	4.8	SD	4.4	SD
Methods to select which native pig to be sold or slaughtered																										
Age	1.00	SA	1.30	SA	1.15	SA	2.72	U	3.28	U	1.45	SA	2.68	U	2.2	A	3.00	U	1.00	SA	2.0	A	2.2	A	1.9	A
Productivity	3.50	D	2.95	U	3.15	U	2.04	A	2.32	A	2.60	A	2.36	A	1.7	SA	2.40	A	2.95	U	1.3	SA	1.3	SA	2.4	A
Behavior	4.25	SD	3.25	U	3.40	U	3.04	U	3.00	U	4.65	SD	3.08	U	1.4	SA	2.88	U	3.80	D	1.6	SA	2.7	U	3.1	U
Phenotypic characteristics	5.00	SD	3.90	D	4.50	SD	2.52	A	2.44	A	4.85	SD	2.76	U	2.2	A	2.64	U	4.85	SD	2.2	A	2.4	A	3.3	U
By chance only	2.05	A	2.25	A	2.35	A	2.24	A	2.24	A	1.55	SA	2.44	A	1.2	SA	2.24	A	1.90	A	1.4	SA	2.3	A	2.0	A
Buyers' preferences in native pigs																										
Body conformation	1.70	SA	1.60	SA	1.15	SA	2.04	A	2.04	A	1.30	SA	2.00	A	1.2	SA	2.16	A	1.00	SA	1.2	SA	1.1	SA	1.5	SA
Body size	1.00	SA	1.05	SA	1.20	SA	1.56	SA	1.68	SA	1.30	SA	2.04	A	1.3	SA	2.04	A	1.00	SA	1.4	SA	1.4	SA	1.4	SA
Color	4.80	SD	3.55	D	4.45	SD	3.28	U	3.40	U	4.50	SD	3.20	U	2.2	A	3.48	D	4.60	SD	2.2	A	2.7	U	3.5	D

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S – scale

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	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
Socio-economic reasons																										
As main source of income	2.20	A	1.75	SA	2.55	A	3.20	U	3.52	D	1.80	SA	3.12	U	3.2	U	2.96	U	1.65	SA	2.4	A	2.9	U	2.6	A
As sideline to permanent job	1.20	SA	1.45	SA	1.40	SA	1.48	SA	1.32	SA	1.55	SA	1.36	SA	1.2	SA	1.28	SA	1.25	SA	1.3	SA	1.2	SA	1.3	SA
As hobby or past time																										
Keep members busy	4.70	SD	2.70	U	4.60	SD	1.76	SA	1.72	SA	3.95	D	1.88	A	1.2	SA	1.88	A	4.65	SD	1.2	SA	1.8	SA	2.7	U
Utilize existing building	1.40	SA	1.45	SA	1.60	SA	2.84	U	2.80	U	1.75	SA	2.84	U	2.1	A	2.92	U	1.45	SA	1.8	SA	2.2	A	2.1	A
Utilize extra area into profitable enterprise	1.35	SA	1.55	SA	1.50	SA	3.04	U	3.00	U	2.35	A	2.96	U	2.7	U	3.08	U	1.35	SA	2.8	U	2.8	U	2.4	A

1.00-1.80 – Strongly Agree (SA); 1.81-2.60 – Agree (A); 2.61-3.40 – Uncertain (U); 4.21-5.00 – Strongly Disagree (SD); 3.41-4.20 – Disagree (D); W – weighted mean; S – scale

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municipalities, are their own farms, neighborhoods and, middlemen, while other respondents were uncertain whether they sell their pigs in the flea markets and regular markets. Respondents across municipalities strongly agreed that it was the owner who would set the price of their pigs, while other respondents were uncertain. All respondents across municipalities agree that the demand for native pigs is low and moderate. Age, productivity, and by chance are the common bases for selecting pigs for sale or slaughter across municipalities. Across municipalities, respondents strongly agree on the use of body conformation and size as common preferences of buyers rather than color. In general, all respondents from Agusan del Sur agree to strongly agree that their reason for native pig raising is primary because it is a source of income and sideline to their permanent job. Additional incomes, hobbies, keeping family members busy, and utilizing existing buildings are also some of the socioeconomic reasons for engaging in native pig raising.

Results revealed the differences in marketing practices of native pig raisers in the country. This also implies the continued existence of the Philippine native pig due to the current demand for pigs coupled with the support of the local government units through its dispersal program (Monleon, 2006; Villanueva and Sulabo, 2018).

4 Conclusions and Recommendations

Philippine native pig raisers in Agusan del Sur's selected municipalities are still operating on a small scale, employing traditional production methods for feeds and feeding, housing, breeding, health and disease prevention, and marketing. It is also suggested that funds be allocated to research and development (R&D) projects in order to improve the country's native pig. Native pigs in the Philippines provide a lot of benefits in terms of extra money, high-quality protein food, and socio-cultural and economic services.

5 Statement of Conflict of Interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

6 Literature Cited

Calmorin, L. (1994). Educational research measurement and evaluation 24K Printing Co. Inc., Valenzuela, MMp **26**, 27, (1-293)

Devendra, C. (1993). Sustainable animal production from small farm systems in South-East Asia (No. 106). Food & Agriculture Organization, 1-143.

Geromo, F. B. (1993). Survey and evaluation of indigenous pig production and management practices in the Zamboanga Peninsula [Philippines], Food & Agriculture Organization of the United Nations, 1-126.

Huynh, T. T. T., Aarnink, A. J. A., Drucker, A., & Verstegen, M. W. A. (2006). Pig production in Cambodia, Laos, Philippines, and Vietnam: a review. *Asian Journal of Agriculture and Development,* **3** (1362-2016-107621), 69-90.

Monleon, A. M. (2006). Local conservation efforts for the Philippine native pig (*Sus domesticus*) in Marinduque. *Philippine Journal of Veterinary and Animal Sciences,* **32**(1), 1-1.

Muhanguzi, D., Lutwama, V., & Mwiine, F. N. (2012). Factors that influence pig production in Central Uganda-Case study of Nangabo Sub-County, Wakiso district. *Veterinary World,* **5**(6), 346-51.

Oosting, S., van der Lee, J., Verdegem, M., de Vries, M., Vernooij, A., Bonilla-Cedrez, C., & Kabir, K. (2021). Farmed animal production in tropical circular food systems. *Food Security,* 1-20.

Pond, W. G., Church, D. B., Pond, K. R., & Schoknecht, P. A. (2004). Basic animal nutrition and feeding. John Wiley & Sons, 1-608.

Rattray, J., & Jones, M. C. (2007). Essential elements of questionnaire design and development. *Journal of clinical nursing,* **16**(2), 234-243.

Villanueva, J. J. O., & Sulabo, R. C. (2018). Production, Feeding and Marketing Practices of Native Pig Raisers in Selected Regions of the Philippines. *Global Advanced Research Journal of Agricultural Science*, **7**(12), 383-392.

https://psa.gov.ph/inventory

https://www.statista.com/statistics

http://www.pcaarrd.dost.gov.ph/philippine-pork-to-the-world