

Lechon Data Recovery of the Yookah Native Pigs of KSU Native Pig R&D Project

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Abstract— This study was conducted to determine the lechon data recovery of the YOOKAH native pigs of KSU Native Pig R&D Project. This study is part of data gathering tool of the on-going Native Pig R&D Program entitled “Conservation, Improvement and Profitable Utilization of the Phil. Native Pigs”, funded by DOST-PCAARRD. Morphometric measurements of the thirty three (33) lechon animals weighing 15-20 kg were gathered and recorded, of which are 18 castrated males and 15 females. Data gathering covered a period of three (3) years from June 2015 to July 2018.

Data gathering was done during the pre-slaughter at the KSU native pig station, post-slaughter and lechon data were taken at Daliyong’s lechonan. The researchers only used one lechonan to maintain the consistency of the procedure during the slaughter, evisceration and pit roasting. A tape measure and digital weighing scale was used during the data gathering.

The total shrinkage of head length from live to lechon is recorded at 3.22 cm, the body length is recorded at 6.54 cm and the heart girth was recorded at 8.91 cm. The total shrinkage in body weight is recorded at 49.7% or a total of 8.98 kilograms. Most of the loss occurred during the evisceration process, the loss occurred during the pit roasting is due to the loss of water from the carcass of the animal. Leaner animals such as native pigs have leaner body with less fat thus loss during the roasting procedure is lesser.

Recommendation for further studies should focus on the comparison between the morphometric measurements and organoleptic comparison between the native pig lechon and commercial lechon to support these findings.

Keywords— Lechon pig, Philippine native pig, Native Lechon, Yookah native pig, Yookah native lechon.

I. INTRODUCTION

As a popular pork dish, *lechon* is derived from a Spanish term meaning leche (milk); thus it refers to the suckling pig meat (2-6 weeks old) which is skewered over the charcoal until roasted. According to Monleon, 2018, there is no better indicator of a seriously good party than a whole lechon (roast pig). For centuries, lechon has been the hallmark of the no-hold barred celebration. Nowadays, native pigs as *lechon* are becoming more popular especially for occasions and festivities because of their tastier and leaner meat value compared to the commercial pig meat. Additionally, the meat has more nutritional value as it has higher protein content and

lower fat and cholesterol content as compared to the commercial pig meat (Lesaca, 2012).

It can be noted that Cordillera Administrative Region is one of the sources of native pigs that reach the market in Manila and Bulacan which are known to produce native pig lechon. In Cordillera, native pigs are important sources of income, and food for rituals and occasions for backyard raisers or small farms. These pigs are considered sturdy and are more resistant to various diseases. They can survive on kitchen wastes and farm-grown feeds or farm by-products. Although native pigs may have long been the source of livelihood in smallholder production system, their numbers

are perceived to be declining at an alarming rate as the commercial sector continues to grow, thereby making them more expensive if at all available (e.g., Bondoc et al. 2017).

This study aims to gather data on native pig lechon recovery that may benefit the local native pig farmers and lechon processors and future researches.

The study determined the morphometric measurements of the carcass and lechon Yookah native pigs of the Kalinga State University Station.

II. MATERIALS AND METHODS

The data were gathered from the period three years from June 2015 to July 2018 in Kalinga State University Native pig station.

A total of 33 *lechon*-size native pigs (15-20 kgs), composing of 15 females and 18 castrated males, was used in the study.

Experimental animals were transported from the farm a day before slaughter and fasted for at least 12 h prior

to slaughter at the Daliyong's lechon in Purok Datu, Bulanao, Tabuk City, Kalinga. The pre-slaughter data consisted of live weight at purchase, head length, body length, and heart girth. The weight was taken using a digital weighing scale; using a measuring tape, the head length was taken from the tip of the snout to the base of the tail; the body length was taken from the base of the skull to the base of the tail; and the heart girth was taken by getting the circumference of the body behind the forelimb along the line of the heart.

Animals were slaughtered according to standard slaughtering practice (Ibarra 1983). Pigs were then scalded by dipping in hot water vat and dehaired manually. Evisceration followed thereafter.

Carcass data consisted of carcass/slaughter weight, and external body measurements consisted of the head length, body length, and heart girth was also collected. The internal organs such as the heart, lungs, liver, kidney, spleen, stomach, small intestines, large intestines, visceral fats, reproductive organs and blood was removed prior to carcass data collection.

Picture showing gathering of body length and heart girth



Processing (dehairing and evisceration)
Data gathering of lechon



Yookah Native Lechon

Data gathered for sample analysis:

1. Age and sex of the sample native animals
2. Pre-slaughter data – The animals were weighed. The external body measurements consisted of the head length, body length, and heart girth was gathered.
3. Carcass/Slaughter data – The animals were weighed (internal organs were removed and was not included in the weight data). The external body measurements consisted of the head length, body length, and heart girth was gathered.
3. Lechon Recovery Data – The animals were weighed. The external body measurements consisted of the head length, body length, and heart girth was gathered.

Table 2. The mean live weight, carcass weight and lechon weight of the Yookah native pigs.

Weight of animal	Male (n=18)	Female (n=15)	Total
Live weight (kg)	17.57	18.67	18.12
Carcass weight (kg)	12.34	13.03	12.65
Lechon weight (kg)	8.46	9.92	9.12

The mean weight of the animals before slaughter is 18.07 kilograms, the mean carcass weight is 12.65 kilograms and the mean lechon weight is 9.12 kilograms.

Table 3. The percentage loss of the Yookah native pig

Percent loss (%)	Male (n=18)	Female (n=15)	Total
Live to carcass weight (%)	30.07	30.60	30.34
Carcass to lechon weight (%)	31.45	24.23	27.84
Live to lechon weight (%)	52.03	47.36	49.70

The table shows the percentage loss of Yookah native pig from live to finished product. With the removal of the internal organs and the hair, there is a loss of 30.34% or 5.48 kilograms from the live weight. The total loss or shrinkage from carcass to lechon is 27.84% or 3.51 kilograms of moisture. The total percentage loss from live to lechon is 49.7% or 8.98 kilograms.

From these figures, we can conclude that almost half of the body weight is lost from the live weight to the finished product (lechon) through the processing. Most of the loss occurred during evisceration where in the organs are removed.

III. RESULTS AND DISCUSSION

Morphometric measurements during pre-slaughter, post-slaughter and lechon data

Table 1. Mean linear measurement of the Yookah native pigs

n=33	Head length (cm)	Body Length (cm)	Heart girth (cm)
	22.64	60.09	59.27
	21.82	59.00	57.67
	19.42	53.55	50.36

The mean head length of the live animal is 22.64 cm and after processing, the carcass head length is 21.82 cm, a total of 0.82 cm was lost during the scalding and dehairing. This shrinkage is due to the skin retraction when the animal was placed in the hot water. The lechon head length is 19.42 cm, a shrinkage from the carcass of 2.40 cm. A total shrinkage of 3.22 cm from the live measurement to the lechon recovery data, this shrinkage is from the moisture evaporation and contraction of the tissues of the head.

The mean body length of the live animal is 60.09 cm and after processing, the carcass length was measured to be 59.00 cm, a total of 1.09 cm shrinkage during scalding and dehairing. The lechon body length was recorded at 53.55 cm with a total shrinkage of 6.54 cm from the live measurement. This shrinkage is from the contraction of tissues particularly on the tissues of the vertebral column during the pit roasting

The mean heart girth of the live animal is 59.27 cm in diameter. The carcass heart girth is 57.67 cm with a shrinkage of 1.60 cm during the processing. The lechon heart girth is 50.36 cm with a shrinkage of 8.91 cm from the live measurement. This shrinkage is due to removal of the organs during the evisceration process and contraction of the rib muscles during roasting.

The recorded biggest shrinkage is the heart girth, followed by the body length and lastly the head length.

IV. CONCLUSIONS

We can conclude that the greatest loss in lechon processing is through the evisceration process. With regards to the total loss during the roasting process, less water was lost due to the fact that native pigs have leaner meat and less fat.

RECOMMENDATIONS

The researchers recommend study on the comparison between the morphometric measurement and organoleptic study between the commercial lechon and native lechon. This studies will support if not strengthen the findings of the researchers.

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