

CONTRIBUTION TO THE STUDY OF BLACK CANARY PIG

CONTRIBUCION AL ESTUDIO DEL CERDO NEGRO CANARIO.

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Zoometría. Raza autóctona.

SUMMARY

The Black Canary Pig is an autochthonous breed, that lives in the archipelago before Castillian conquest, as was confirmed by recent archaeological excavations. Its origin is unknown, because of the lack of write language of aborigins, and the scarcity of investigation. Nowadays the pig is bred in family farms because of its very esteemed meagre meat, and so has avoided its extinction. We study the zoometry of Black Pig measuring 16 variables on 11 adult (4 male and 7 female) animals. We calculate correlations among them and some ethnologic and functional indexes. Black Canary Pig, is a short (corporal ratio 73.46 for males and 75.62% for females) and ultraconcave (Cephalic ratio 42.97 y 39.24% for males and females respectively) animal.

escrito de los aborígenes y a la escasez de investigaciones al respecto. Actualmente se explota familiarmente obteniendo una carne magra, muy apreciada en lugares concretos del Archipiélago, lo que ha evitado en gran medida su posible extinción. En el presente trabajo se realiza una zoometría sobre 11 animales adultos (4 machos y 7 hembras), realizándose en cada individuo 16 medidas que se utilizaron para un estudio de correlación y elaboración de índices etnológicos y funcionales. Se consideran animales brevilineos (índice corporal de machos 73,46 y de hembras 75,62%) y ultracóncavos (índice cefálico 42,97 para machos y 39,24% para hembras).

RESUMEN

El cerdo Negro Canario es una raza autóctona presente en el Archipiélago en tiempos anteriores a su conquista e incorporación al reino de Castilla, como se pone de manifiesto en recientes excavaciones arqueológicas. Su origen es desconocido debido a la carencia de lenguaje

INTRODUCTION

The Black Canarian Pig, as it was named by García and Capote (1982), is the only autochthonous pig in the Canary Islands, despite the fact that at present it is fundamentally being exploited in the Occidental Islands, especially La Palma.

The origins of this animal are obs-

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cure, because of scarcity of rigorous work regarding its ancestry. García and Capote (1982) suppose that, given the history, geography and the relations with the Iberian Peninsula, the Black Canarian Pig predecessors could be Spanish, English and African pigs.

Alongside other historians, Abreu Galindo (1977) believes that the aborigines possessed pig for food. This can be corroborated by the recent archeologic cohabitation discoveries of porcine, ovine and caprine species (Atoche *et al.*, 1989). Delgado *et al.* (1990) agree with this opinion, cataloguing the Black Canarian Pig as being of prehistoric origin.

The Canarian Black Pig is similar to Chinese Pig. There are three morphologic compatibilities, such as the abundance of bristles wrinkles of the skin and large ears which cover the eyes. Likening them to various Asiatic pigs such as the Ming from China, and the Fengjing (Taihu type) from the Changjiang River Basin.

This animal is threatened of extinction with subsequent loss of genetic reserve of a breed very well adapted in the environment. It needs an official programme to be set up to save it, which up to now has not been set in motion.

The Cabildo Insular de La Palma maintains a small number of these animals at its farm in Garafía, with the aim of donate it, and so, increase the breed census on the island. Recently the Cabildo of Tenerife and Lanzarote and the Town Hall of Teror have incorporated some examples of this breed so as to protect it from the threat of extinction.

MATERIAL AND METHODS

11 animals, 4 male and 7 female; proceeding from north east of La Palma, where they are most prolific, were measured.

All specimens used in this study were more than one year old, as younger animals are not sufficiently developed. The small number of animals is a true reflection of the state in which the breed was until recently. This group is interesting because of it is the nucleus from which the breed will be increased, difusing the animals throughout the island.

The measurement taken are:

A - Height (with zoometric Aparicio measuring stick)

At the withers

At the middle of the spine

At the start of the rump

At the point of the tail

B - Lenght

Head

Rump

Occipital Coccyx

Width of the head

Widht between the eyes

C - Perimeters

Straight Perimeter of thorax

Oblique Perimeter of thorax

Perimeter of the cannon bone

D - Diameters

Breastbone diameter

Longitudinal diameter

Between rib diameter

Interiliac diameter

THE CANARY BLACK PIG

E - Ethnological Indexes

$$\text{Cephalic} = \frac{\text{Width of head} \times 100}{\text{Length of head}}$$

$$\text{Corporal} = \frac{\text{Longitudinal diameter} \times 100}{\text{Straight thoracic perimeter}}$$

$$\text{Thoracic} = \frac{\text{Two rib diameter} \times 100}{\text{Spine sternum diameter}}$$

Table I. *Canary Black Pig. Descriptive statistic of studied variables.* (Cerdo Negro Canario. Estadística descriptiva de las variables estudiadas).

	S	X ± s.d.	C.V. (%)	C.I.
Height at withers (HAW)	m	87,2 ± 10,4	11,98	80,7 - 94,0
	f	81,1 ± 6,7	8,31	76,2 - 86,1
Height at back (HAB)	m	86,2 ± 6,5	11,76	80,7 - 91,7
	h	83,9 ± 3,3	5,16	79,8 - 88,1
Height at head of tail (HHT)	m	72,5 ± 9,2	12,74	67,4 - 77,6
	h	66,3 ± 4,2	6,35	62,4 - 70,1
Oblique lenght (OL)	m	104,5 ± 11,6	6,16	98,9 - 110,1
	f	99,7 ± 11,7	7,30	95,5 - 104,0
Straight thoracic perimeter (STP)	m	142,2 ± 11,6	8,16	132,9 - 151,6
	h	131,9 ± 11,7	8,89	124,8 - 138,9
Oblique thoracic perimeter (OTP)	m	155,0 ± 16,3	10,56	144,2 - 165,7
	h	138,9 ± 16,4	10,56	130,7 - 147,0
Depth of chest (DOC)	m	47,7 ± 2,7	5,74	45,3 - 50,2
	h	48,1 ± 3,2	6,59	46,3 - 50,0
Occipital coccyx lenght (OCL)	m	145,5 ± 7,8	5,39	128,5 - 162,5
	h	132,8 ± 25,6	19,31	118,9 - 146,7
Width between eyes (WBE)	m	9,7 ± 2,6	26,97	7,9 - 11,6
	h	9,7 ± 2,1	21,80	8,3 - 11,1
Length of head (LOH)	m	30,2 ± 2,9	9,52	27,9 - 32,6
	h	27,2 ± 3,0	11,14	25,5 - 29,1
Width of head (WOH)	m	13,0 ± 2,4	18,84	11,4 - 14,6
	h	10,7 ± 1,8	16,79	9,5 - 11,4
Length of rump (LOR)	m	30,4 ± 5,9	19,49	27,1 - 33,6
	h	30,3 ± 2,6	8,65	27,8 - 32,7
Width across hips (WAH)	m	26,5 ± 4,6	17,51	23,3 - 29,7
	h	26,3 ± 3,7	13,99	23,8 - 28,7
Perimeter of metacarpian (POM)	m	24,7 ± 4,7	18,82	20,1 - 27,4
	h	22,7 ± 2,4	10,70	20,7 - 24,7
Width across 6th ribs (WAR)	m	35,0 ± 3,9	11,14	32,7 - 37,3
	h	31,9 ± 2,2	7,06	30,1 - 33,6
Length of ham (LOH)	m	47,5 ± 6,8	14,23	41,5 - 53,5
	h	44,1 ± 7,8	17,68	39,6 - 48,7

Sex : m - male; f - female. X : Average in cm. s.d.: Standar deviation. C.I.: Confidence interval for mean 95 %. C.V.: Variation coefficient

$$\text{Pelvic} = \frac{\text{Interiliac diameter} \times 100}{\text{Lenght of rump}}$$

F - Functional Indexes (meat aptitude)

$$\begin{aligned} \text{Relative depth thorax} &= \\ &= \frac{\text{spine sternum diameter} \times 100}{\text{Height at the withers}} \end{aligned}$$

$$\begin{aligned} \text{Pelvic transversal} &= \\ &= \frac{\text{Interiliac diameter} \times 100}{\text{Height at the withers}} \end{aligned}$$

$$\begin{aligned} \text{Pelvic Length} &= \\ &= \frac{\text{Lenght of rump} \times 100}{\text{Height at the withers}} \end{aligned}$$

The statistical expression of the data give an average (x), standard deviation (SD) variation coefficient, confidence interval for the 95 %.

Finally, the matrix of simple corelations between the variables are presented so as to take into account the degree of interdependence between them.

Table II. *Ethnologic and functional indexes. Sexual differences.* (Diferencias sexuales para los índices etnológicos y funcionales calculados).

Index	Males	Females
Cephalic	42,97	39,24
Corporal	73,46	75,62
Thoracic	73,30	66,18
Pelvic	87,26	86,79
Relative depth of thorax	54,73	59,33
Transverse pelvic	30,37	32,40
Longitudinal pelvic	34,81	37,33

RESULTS

Table I show the results obtained for males and females. In **table II** ethnological and functional differences are shown from the calculated indexes of male and female. **Table III** show the principal correlations observed between the zoometric measures made.

DISCUSSION

There are not significant statistical differences between males and females, that are short animals as the corporal and thoracic indexes denote.

The head is ultraconcave, length is approximately twice as width. Between one and two years of age the ultraconcavity of the head may reach extremes, the periorbital folds impede the vision and rend it blind for ever.

The pigs have got a sloping rump, falling more than 15 cm from the rump to the point of the tail. The rump is wide, as seen by the proportions of width and length in the pelvic indices.

The depth of thorax is 4 (males) and 9 (females) units than the minium value as considered by Aparicio (1956), thus indicating meat potential.

On the other hand, the pelvic transversal and longitudinal indices present values slightly inferior to those proportioned beforehand by the author (33 % transversal and 37 % longitudinal), the females being closer (32 % and 37 % respectively).

According to the information given on indexes, the females have got better meaty aptitude than the males.

THE CANARY BLACK PIG

Table III. Principal correlations observed among between zoometric variables studied; $r > 0.60$. (Correlaciones principales observadas entre las variables zoometricas estudiadas; $r > 0.60$)

	HAB	HHT	OL	STP	OTP	DOC	OCL	WBE	LOH	WOH	LOR	WAH	POM	WAR	LH
HAB	0.79														
HHT	0.89	0.77													
OL	0.65	0.60	0.66												
STP	0.67	-	-	0.60											
OTP	0.70	-	0.81	0.68	-										
DOC	-	-	-	-	-	-									
OCL	-	-	-	0.80	-	0.60	-								
WBE	-	0.80	-	-	-	-	-	-							
LOH	-	-	-	-	0.64	0.65	-	-	-						
WOH	-	-	-	-	-	-	-	-	0.67						
LOR	-0.60	0.82	-0.69	-0.60	-	-	-	-	-	-	-				
WAH	-	-	-	-	0.79	-	-	-	-	-	-	-			
POM	-	-	-	-	-	0.76	-	-	-	-	-	-	-		
WAR	-	-	-	-	0.72	-	-	-	-	-	-	-	-	0.71	
LH	0.93	-	0.84	-	-	-	-	-	0.64	-	-0.67	-	0.70	0.71	

Abbreviations as in table I

The partial correlation analysis show that the length of the hams, is the variable better correlated with height at withers, $r=0.93$ and width between ribs, 0.71.

It can be observed by the comparison of our data with those obtained by García and Capote (1982), that there are no great differences except in the

longitudinal diameter in the male, this being 15 cm shorter, possibly due to the animals being older.

Finally, there is no doubt that these animals can not compete with the production of industrial pork today. However a study evaluating meat quality is necessary.

REFERENCES

- Abreu Galindo, FR. J. 1955.** Historia de la conquista de las siete islas Canarias. Ed. Crit. por A. Cioranescu. Ed. Goya. Santa Cruz de Tenerife
- Aparicio, G. 1959.** Zootecnia Especial. Imp. Moderna. Córdoba.
- Atoche, P., D. Rodríguez, A. Ramirez. 1989.** El yacimiento arqueológico de El Bebedero. Universidad de La Laguna, Secretariado de Publicaciones. Ayuntamiento de Teguiise. Lanzarote.
- Buxadé Carbó, C. 1983.** Ganado Porcino. Ediciones Mundi-Prensa
- Delgado, J.V., J. Capote, M. Fresno, E.**

Archivos de zootecnia, vol. 41, núm. 154 (extra), p. 535.

LOPEZ *et al.*

Camacho. 1990. Exposición de Animales Autóctonos Canarios. Ed. Consejería de Agricultura y Pesca.

García y Capote. 1982. El Cerdo Negro Canario. Ed. Excmo. Cabildo Insular. de la Palma.