Sensory Characteristics of Chevon Processed in Four Methods

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Abstract: *This research study was conducted purposely to assess the sensory characteristics of chevon from native wether goats processed in four methods. Meat samples from the leg of three (3) experimental goats were processed in four methods of curing like sun-dried, air dried, air-sun-smoke dried (combination) and smoke-dried. The chevon lean meat samples were subjected in a 3-day 3-hour sun drying and 3-day 3-hour smoking in the combination method, 3-day 6 hours daily smoking, 3-day 6 hours sun drying and 3-day air drying in the study. Statistical results showed that in terms of color parameter, the smoke method is the best followed by combination method and sun-dried while air-dried showed the least. Further, aroma parameter showed similar in the three methods: sundried, air dried and combination but the smoked chevon had the best aroma. Other sensory parameters like flavor, tenderness and acceptability were the same.Therefore, chevonis best if smoke-cured and cooked dried.*

Keywords: aroma, chevon, flavor, sensory characteristics, processed

1. Introduction

The call to safe animal food products is still on the hall in the whole world. Many red meats are processed with nitrite and other food preservatives which are proven to have side effects to the human health.

In the cordillera, beef and carabeef have been cured by sun drying. This is one of their treasured cultures of processing meat beside "etag". Nevertheless, pork consumption is known to cause hypertension and other human diseases due to its cholesterol content.

Chevon on the other hand is heart-friendly and it contained the best nutritive component as compared to other red meats. However, its popularity as food delicacy is slim due to its "goaty" odor thus, its sensory characteristics were evaluated using the four methods of curing chevon.

2. Materials and Methodology

The experimental treatments were treated with un-mineralized salt in the ratio of 100 grams of salt to 500 grams lean chevon. The lean chevon were smashed in salt placed in clean container then pierced with barbecue sticks and suspended in their respective treatment areas.

The experimental treatments were arranged in Randomized Complete Block Design (RCBD). The seven point Hedonic Scale was used in the assessing the sensory characteristics of the processed chevon. A sensory taste panelists composed of (50) faculty and students of the Isabela State University were selected at random. Number coding was used to identify the samples and score cards were given to the taste panelists to rate the acceptability of the processed chevon based on color, aroma, flavor, tenderness and general acceptability.

3. Result and Discussion

In terms of color parameter sun-dried, air-dried and smoked cured chevon had the same qualitative description of like very much and with combination method it had a qualitative description of like moderately. Aroma parameter revealed the same qualitative description of like moderately for the three methods of curing (sun-dried, air-dried and combination while like very much was obtained on smoked cured meat.

In terms of flavor parameter like moderately were obtained on sun-dried, combination and smoked cured while like very much was obtained on the air-dried method of curing.

Tenderness parameter had similar descriptive of like moderately in all the four methods of curing. The general acceptability of the cured meat had the same for sun-dried, air-dried and smoked cured meat with a qualitative description of like very much and the combination treatment had like moderately.

Table 1: Qualitative Analysis of Chevon Processed in Four Methods

Treatments	Color	Aroma	Flavor	Tenderness	General Acceptability
I. Sun-dried	5.62 (LVM)	5.30 (LM)	5.18 (LM)	5.46 (LM)	5.70 (LVM)
II. Air-dried	5.60 (LVM)	5.48 (LM)	5.54 (LVM)	5.46 (LM)	5.64 (LVM)
III. Combination	5.48 (LM)	5.40 (LM)	5.30 (LM)	5.48 (LM)	5.42 (LM)
IV. Smoked-dried	5.64 (LVM)	5.74 (LVM)	5.28 (LM)	5.44 (LM)	5.62 (LVM)

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Table 1: Statistical Analysis of Chevon Processed in Four Methods

Tests of Between-Subjects Effects

Dependent Variable:color

Source	Type III Sum of Squares	df	Mean Square	F	F-Critical 5%
panelist	101.905	49	2.080	2.612	1.44
method	20.215	3	6.738	8.464	2.667
Error	117.035	147	0.796		
Total	239.155	199			

a. R Squared = .982 (Adjusted R Squared = .975)

method	Mean
1	5.340ab
2	5.240a
3	5.620b
4	6.060c

Tests of Between-Subjects Effects

Dependent Variable:aroma

Source	Type III Sum of Squares	df	Mean Square	F	F-Critical 5%
panelist	149.480	49	3.051	7.764	1.44
method	4.740	3	1.580	4.021	2.667
Error	57.760	147	.393		
Total	211.98	200			

a. R Squared = .991 (Adjusted R Squared = .987)

method	Mean
1	5.460a
2	5.340a
3	5.480a
4	5.760b

Dependent Variable:flavor

Source	Type III Sum of Squares	df	Mean Square	F	F-Critical 5%
panelist	174.625	49	3.564	5.421	1.44
method	2.615	3	.872	1.326	2.667
Error	96.635	147	.657		
Total	273.875	200			

a. R Squared = .984 (Adjusted R Squared = .978)

Tests of Between-Subjects Effects

Dependent Variable:tender

Source	Type III Sum of Squares	df	Mean Square	F	F-Critical 5%
panelist	188.680	49	3.851	6.403	1.44
method	.600	3	0.200	0.333	2.667
Error	88.400	147	0.601		
Total	277.680	200			

a. R Squared = .986 (Adjusted R Squared = .981)

Tests of Between-Subjects Effects

Dependent Variable:accept

Source	Type III Sum of Squares	df	Mean Square	F	F-Critical 5%
panelist	134.605	49	2.747	5.418	1.44
method	2.215	3	.738	1.456	2.667
Error	74.535	147	.507		
Total	211.355	200			

a. R Squared = .989 (Adjusted R Squared = .984)

4. Conclusion

From the results obtained, the sensory characteristics of the different cured meat showed various assessment as perceived by the panelists. However, among the different methods of curing sun-dried, air-dried and smoking obtained similar results in color parameter and general acceptability.

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Author Profile

Genevieve L. Valdez received the B.S. Agricultural Education at theIfugao State College of Agriculture and Forestry (now Ifugao State University)in 1991, M.S. Animal Science and Ph. D. in Agriculture atthe Isabela State University in 2008 and 2013 respectively. She is at present finishing her Trainer's Methodology 1 in preparation for being an Assessor in Poultry Production. She is currently designated as Project Manager of the Cattle Production of the Campus and Program Chairman of the Graduate School of the College of Agriculture and Forestry of IFSU, Potia Campus.