Sunshine meat originated from lamb meat submitted to the organic and conventional production models[1]

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INTRODUCTION

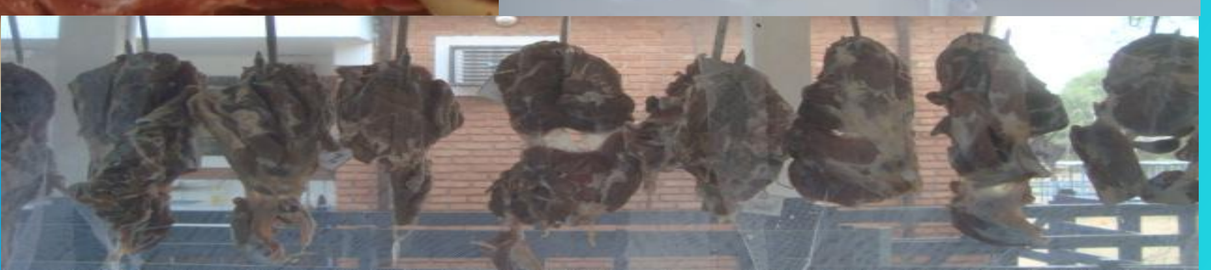
- Organic production model and animal welfare.
- Increasing of organic food consumption in the world.
- Lamb meat conservation using salt is a traditional practice in Brazil.
- Few researches were developed with sunshine meat produced with lamb meat submitted to organic production model .

OBJECTIVES

To evaluate qualitative characteristics of sunshine meat produced with lamb meat originated from organic and conventional production models.

MATERIAL AND METHODS

- The work was conducted in the Sheep Sector, of São Paulo State University, Department of Animal Science, Unesp, Jaboticabal, SP, Brazil.
- 48 Ile de France lambs were weaned and divided into two groups of 24 animals each: organic and conventional model.
- Tifton-85 pasture and rotational grazing
- Roughage: Concentrate ratio (50:50)
- Slaughter with 32 kg of body weight
- Dissection of 48 lambs Ile de France legs submitted to the organic and conventional production models were used to salting process, with inclusion of salt in the proportion of 15 and 20% of the meat weight.
- Qualitative characteristics evaluated: pH, color, water holding capacity, cooking loss, shear force and lipid oxidation and sensory analysis.



RESULTS

Table 1. pH and color (L*, a* e b*) of the sunshine meat elaborated with lamb meat originated from organic and conventional models associated to different salt tenors.

Production model (M)	Parameter			
		Color		
	pH	L*	a*	b*
Organic[1]	6,83	37,15	8,40	-0,26
Conventional[2]	6,82	36,79	8,26	-0,21
Salt tenor (S)				
0%[3]	5,60[b]	40,43[a]	13,47[a]	1,87[a]
15%[4]	7,44[a]	35,60[b]	5,34[b]	-1,46[b]
20%[5]	7,44[a]	34,88[b]	6,19[b]	-1,12[b]
F Test (M x S)	0,22	2,58	1,10	0,08
CV(%)	1,18	6,49	11,60	-254,03

[a,b] Inside of a same factor, followed averages for different letters in the column, differ to each other for the Tukey's Test. P - probability. CV – coefficient of variation [1]Organic production model; [2]Conventional production model; [3] Fresh meat; [4]15% of salt; [5]20% of salt.

Table 2. Water holding capacity (WHC), cooking loss (CL), shear force (SF) and 2-thiobarbituric acid reactive substances (TBARS) of the sunshine meat elaborated with lamb meat originated from organic and conventional models associated to different salt tenors.

Production model (M)	Parâmetro			
	WHC (%)	CL (%)	SF (Kgf/cm^2)	TBARS (mg of malonaldehyde/ 1000 g of meat)
Organic[1]	68,61	22,84[b]	2,77	3,97[b]
Conventional[2]	74,33	31,23[a]	3,55	6,49[a]
Salt tenor (S)				
0%[3]	56,05	41,07[a]	2,82	1,38[c]
15%[4]	81,78	21,75[b]	3,64	7,72[a]
20%[5]	76,58	18,27[b]	3,02	6,59[b]
F Test (M x S)	1,0602	0,5168	0,01	856,75**
CV(%)	32,50	18,64	32,88	1,17

[a,b] Inside of a same factor, followed averages for different letters in the column, differ to each other for the Tukey's Test. P - probability. CV – coefficient of variation [1]Organic production model; [2]Conventional production model; [3] Fresh meat; [4]15% of salt; [5]20% of salt.

Table 3. Sensory analysis of the sunshine meat elaborated with lamb meat originated from organic model associated to different salt tenors.

Parameter	Salt tenor (%)			F Test	CV (%)
	0	15	20		
Color	6,4	6,7	6,2	0,52	28,81
Flavor	7,4[a]	5,6[b]	5,4[b]	8,18**	33,57
Tenderness	8,3[a]	5,5[b]	5,2[b]	24,09**	29,14
Global acceptance	7,5[a]	5,8[b]	5,6[b]	9,47**	28,37

[a,b] Averages followed by different letters in the same line differ for the Tukey's Test. CV – coefficient of variation.

Table 4. Sensory analysis of the sunshine meat elaborated with lamb meat originated from conventional model associated to different salt tenors.

Parameter	Salt tenor (%)			F Test	CV (%)
	0	15	20		
Color	5,9[b]	6,8[ab]	7,1[a]	4,26*	24,99
Flavor	7,3[b]	6,0[a]	6,0[a]	3,93*	30,81
Tenderness	8,1[a]	5,6[b]	6,0[b]	15,64**	27,06
Global acceptance	7,5[a]	6,1[b]	6,1[b]	5,35**	27,58

[a,b] Averages followed by different letters in the same line differ for the Tukey's Test. CV – coefficient of variation.

CONCLUSIONS

The obtained values for the qualitative characteristics evaluated (color, water holding capacity, cooking loss, shear force and lipid oxidation and sensory analysis) were considered appropriate during the processing of sunshine meat, with exception of pH.