

# Supplementary Materials: The Effect of Supplementing Pig Diet with Chestnut Wood Extract or Hops on Fresh Meat and Dry-Cured Products

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**Table S1.** Carcass traits and body fatness (lsmeans) of pigs fed hops and sweet chestnut wood extract (Tannin).

Trait	Control	Hops	Tannin	<i>p</i> -value	RMSE
Warm carcass weight, kg	109.5	102.0	103.9	0.3413	12.26
Fat thickness over <i>gluteus medius</i> , mm	11.3	13.7	12.2	0.4177	4.16
Meat percentage, %	62.1	61.7	62.3	0.8341	3.51
Green ham weight, kg	13.1 <sup>b</sup>	12.2 <sup>a</sup>	12.6 <sup>ab</sup>	0.0288	0.49
Ham fat thickness, mm	14.5	12.6	11.8	0.3655	3.08
Belly weight, kg	5.1	4.6	4.7	0.2576	0.78

<sup>ab</sup> Values assigned different letters are significantly different, RMSE – root mean square error.

**Table S2.** Water holding capacity (WHC) of meat and dry cured products (lsmeans) of pigs fed hops and sweet chestnut wood extract (Tannin).

WHC as % weight loss	Control	Hops	Tannin	<i>p</i> -value	RMSE
LT muscle					
drip, %	4.05	3.27	3.85	0.4068	1.401
thawing, %	12.0	9.9	11.8	0.3580	3.79
cooking, %	31.6	29.6	29.1	0.1361	3.06
Ham					
salting, %	4.5	4.0	4.1	0.0983	0.57
ripening, %	35.5	34.6	34.6	0.5738	2.27
Belly					
salting, %	2.8	3.2	3.1	0.7562	1.29
ripening, %	37.1	38.0	38.2	0.9906	3.80

LT – *longissimus thoracis*, RMSE – root mean square error.

**Table S3.** Chemical analysis of meat and dry cured products (lsmeans) of pigs fed hops and sweet chestnut wood extract (Tannin).

Parameter	Control	Hops	Tannin	<i>p</i> -value	RMSE
LT muscle					
Dry matter, %	26.6	26.7	26.6	0.9801	0.65
IMF, %	2.7	2.6	2.1	0.3288	0.99
Protein, %	23.8	23.8	23.7	0.7813	0.42
Dry cured ham – BF muscle					
Dry matter, %	39.6	40.4	39.8	0.5424	1.39
IMF, %	2.5	2.8	2.7	0.7887	0.62
Protein, %	28.2	28.6	28.4	0.8028	1.14
NPN, g/kg	11.7	11.1	11.9	0.3929	1.04
PI, %	26.1	24.2	26.2	0.2715	2.26
Salt, g/kg	59.4	57.2	55.0	0.5169	6.60
<i>a<sub>w</sub></i>	0.918	0.914	0.912	0.3533	0.0060
Dry cured ham – SM muscle					

Dry matter, %	43.8	43.5	42.5	0.6954	2.81
IMF, %	3.3	3.4	3.3	0.9071	0.55
Protein, %	34.1	33.9	33.2	0.7728	2.43
NPN, g/kg	13.1	12.5	12.8	0.4315	0.76
PI, %	26.0	25.2	26.6	0.3880	1.60
Salt, g/kg	51.9	49.8	48.1	0.5095	5.55
$a_w$	0.909	0.919	0.911	0.4529	0.0136
Dry cured belly					
Dry matter, %	75.6	75.8	73.9	0.1800	2.73
Fat, %	39.9	39.4	37.6	0.7628	7.51
Protein, %	27.2	27.2	27.5	0.9895	4.94
NPN, g/kg	4.72	4.74	4.67	0.9260	0.44
PI, %	11.8	11.7	11.2	0.6063	1.53
Salt, g/kg	57.7	62.6	62.1	0.4210	9.18

LT – *longissimus thoracis*, IMF – intramuscular fat, BF – *biceps femoris*, NPN – non-protein nitrogen, PI – proteolysis index, SM – *semimembranosus*, RMSE – root mean square error.

**Table S4.** Objective color of meat and dry cured products of (lsmeans) of pigs fed hops and sweet chestnut wood extract (Tannin).

Parameter	Control	Hops	Tannin	<i>p</i> -value	RMSE
LT muscle					
<i>L</i> *	53.5	53.6	52.1	0.3159	2.49
<i>a</i> *	8.5	8.6	9.0	0.5969	1.16
<i>b</i> *	2.1	2.3	2.2	0.8453	0.79
<i>C</i> *	8.8	8.9	9.3	0.3747	1.21
<i>h</i> °	13.8	14.6	13.8	0.7166	3.75
Dry cured ham – BF muscle					
<i>L</i> *	43.7	43.8	44.0	0.9438	1.76
<i>a</i> *	15.3	15.3	15.7	0.7970	1.11
<i>b</i> *	4.7	5.0	5.1	0.4787	0.57
<i>C</i> *	16.2	16.1	16.3	0.8852	1.02
<i>h</i> °	19.8	20.6	20.2	0.8871	3.92
Dry cured ham – SM muscle					
<i>L</i> *	40.1	42.7	43.2	0.1994	3.03
<i>a</i> *	14.2	14.4	14.3	0.9438	0.94
<i>b</i> *	4.8	5.5	5.7	0.0590	0.59
<i>C</i> *	15.1	15.8	15.7	0.1848	1.02
<i>h</i> °	20.4	22.5	23.1	0.0845	3.03
Dry cured ham – fat					
<i>L</i> *	74.3	75.2	75.3	0.7909	2.63
<i>a</i> *	4.3	4.1	3.6	0.6738	1.21
<i>b</i> *	4.4	4.3	4.2	0.8852	0.68
<i>C</i> *	6.5	6.3	6.0	0.7066	1.33
<i>h</i> °	47.6	44.6	49.9	0.1734	6.69

LT – *longissimus thoracis*, BF – *biceps femoris*, SM – *semimembranosus*, RMSE – root mean square error. *L*\* - lightness, *a*\* - redness, *b*\* - yellowness, *C*\*- Chroma, *h*° - hue angle.

**Table S5.** Oxidative stability of meat and dry cured products (lsmeans) of pigs fed hops and sweet chestnut wood extract (Tannin).

Parameter	Control	Hops	Tannin	<i>p</i> -value	RMSE
LT muscle					
Carbonyl groups, $\mu\text{mol/g}$	0.818	0.833	0.845	0.9217	0.1576

Back fat					
Rancimat, h	6.6	5.8	5.2	0.2774	2.14
Dry cured ham – BF muscle					
TBARS, µg MDA/kg	11.6	11.1	11.5	0.5102	0.80
Dry cured ham – fat					
Rancimat, h	1.5	2.0	2.4	0.3780	1.14
Dry cured belly					
Rancimat, h	0.66	0.56	0.73	0.3781	0.284

LT – *longissimus thoracis*, BF – *biceps femoris*, TBARS – thiobarbituric acid reactive substances, MDA – malondialdehyde, RMSE – root mean square error.