



**SIMILAR SUSCEPTIBILITY TO FOOT PAD DERMATITIS IN FOUR GENETIC LINES OF TURKEYS**

**P. M. Hocking and K. Wu**

Roslin Institute and R(D)SVS, University of Edinburgh, Roslin, Midlothian

A total of 240 male poults were obtained at 1 d-old from Aviagen Turkeys Ltd, Chester, UK. The poults were from two Large White female lines (FL1 and FL2), a commercial female line cross (FLC) from the USA and traditional (TRL) Narragansett turkeys. They were brooded in 2 large rooms and transferred to 16 experimental pens at 10 d of age. At 26 d 5 birds from each line were randomly allocated to one of 32 clean pens with 20 to 30 mm fresh wood shavings litter. At 28 d, for each of the 4 lines, 6 pens were made wet with 36 l tap water and 3 pens were left dry. Water was applied to the wet pens daily as necessary to maintain constant wetness. Footpad dermatitis (FPD) scores were assessed daily using the foot pad scoring system of Mayne *et al.*, (2007). Daily body weight gain, food and water intake were measured. Results are summarised in the Table.

**Table.** Mean foot pad score at day 6, mean daily weight gain, feed and water intake of four lines of male turkeys kept on wet or dry litter for 6 days starting at 28 days of age.

Line	Footscore		Gain, g/d		Feed intake, g/d		Water intake, ml/d	
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
FLC	0.27	6.05	74	61	125	141	284	263
FL1	0.23	5.32	71	62	124	139	281	281
FL2	0.40	4.98	61	53	101	112	217	223
TRN	0.27	4.75	44	44	86	105	179	195
SED	0.280 <sup>1</sup>	0.456 <sup>1</sup>	3.1/2.6/3.6 <sup>2</sup>		5.4/4.5/6.3 <sup>2</sup>		16/13/19 <sup>2</sup>	
Significance								
Line	NS	NS	***		***		***	
Litter	-	-	***		***		NS	
Interaction	-	-	NS		NS		NS	

<sup>1</sup> Standard error of difference between lines on the dry and wet treatments.

<sup>2</sup> Standard error of a difference between/within wet/within dry treatments.

\*\*\* =  $P < 0.001$ ; NS = not significant.

Line differences for FPD approached significance on the wet litter (separate analysis,  $P=0.051$ ). The interaction of Line x Litter was almost significant ( $P=0.056$ ) for weight gain: the weight gain of the commercial lines was higher on dry compared with wet litter whereas weight gain was similar on both treatments in TRL. Mean feed intakes were 109 and 124 (SED 2.7,  $P < 0.001$ ) g/d/bird respectively for the dry and wet litter treatments and there was no difference in mean water intake. The results suggest that all 4 genotypes were susceptible to FPD in this experimental model. Wet litter increased feed intake in all 4 lines and resulted in lower daily weight gain in commercial but not traditional turkeys.

**Keywords:** Foot pad dermatitis, turkeys, wet litter, weight gain, feed intake

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MAYNE, R. K., ELSE, R. W. and HOCKING, P. M. (2007). High litter moisture alone is sufficient to cause footpad dermatitis in growing turkeys. *British Poultry Science* **48**: 538-545.