Supplement to:

Journal of Agriculture and Rural Development in the Tropics and Subtropics

Vol. 122 No. 2 (2021) 219–230 | https://doi.org/10.17170/kobra-202110274960

Genotypic differences in body weight and physiological response of local and exotic turkeys challenged with *Salmonella typhimurium*

Babatunde Moses Ilori, David Oluwafemi Oguntade, John Adesanya Abiona, Samuel Olutunde Durosaro, Clement Ebanehitah Isidahomen & Michael Ohiokhuaobo Ozoje

Table S1: Monthly distribution of temperature and rainfall in Abeokuta, Ogun state

Months	Average Temperature (°C)	Average Temperature (°F)	Rainfall (mm)
January	27.7	81.9	13
February	28.6	83.5	29
March	29.1	84.4	92
April	28.4	83.1	140
May	27.7	81.9	158
June	26.4	29.5	197
July	25.4	77.7	169
August	25.1	77.2	84
September	25.9	78.6	152
October	26.4	79.5	146
November	27.5	81.5	45
December	27.4	81.3	13

Table S2: *Effect of genotype and sex interaction on body weight, rectal temperature, pulse rate and respiratory rate of challenged turkeys (from week 1 to 10) (LSM ± SE)*

Age (week)	Genotype	Sex	Bodyweight (g)	Rectal temperature (°C)	Pulse rate (beats/min)	Respiratory rate (breath/min)	Heat stress index (HSI)
1	Local	M	85.46±2.55[b]	40.29±0.20	176.96±4.58	80.32±2.61	1.53±0.06
	Local	F	80.05±2.35[c]	39.98±0.19	185.30±4.22	84.82±2.41	1.56±0.06
	Exotic	M	95.21±2.65[a]	40.87±0.21	184.58±4.75	67.77±2.71	1.23±0.04
	Exotic	F	75.79±2.28[d]	40.26±0.18	187.66±4.09	72.32±2.34	1.31±0.06
2	Local	M	138.81±4.50	41.41±0.08	177.46±6.45	61.29±2.24	1.19±0.07
	Local	F	121.23±4.14	41.29±0.07	179.42±5.94	63.36±2.06	1.25±0.08
	Exotic	M	155.85±4.67	40.53±0.08	167.08±6.70	68.62±2.32	1.49±0.13
	Exotic	F	129.27±4.02	40.64±0.07	176.26±5.77	74.54±2.00	1.46±0.07
4	Local	M	286.83±10.27	39.95±0.62	207.86±3.65	63.00±2.44	1.01±0.04
	Local	F	253.14±9.46	41.20±0.58	200.70±3.36	58.33±2.24	0.99±0.05
	Exotic	M	390.02±10.66	41.15±0.65	191.31±3.78	56.81±2.53	0.99±0.05
	Exotic	F	329.96±9.19	41.29±0.56	195.20±3.26	58.51±2.18	1.01±0.04
6	Local	M	585.71±20.69	41.43±0.07	210.25±2.66	48.50±2.58	0.77±0.03
	Local	F	492.12±19.06	41.57±0.06	214.55±2.45	52.36±2.37	0.81±0.02
	Exotic	M	804.55±21.48	41.05±0.07	207.23±2.76	50.77±2.67	0.81±0.06
	Exotic	F	651.29±18.51	41.12±0.06	208.46±2.38	52.00±2.31	0.83±0.04
8	Local	M	865.83±35.89[c]	41.10±0.09	218.57±2.15	72.84±4.19	1.10±0.09
	Local	F	731.05±33.07[d]	41.48±0.08	215.39±1.98	64.79±3.86	1.00±0.04
	Exotic	M	1388.25±37.25[a]	41.06±0.09	211.38±2.23	67.15±4.35	1.05±0.08
	Exotic	F	1031.16±32.11[b]	41.11±0.08	211.54±1.92	59.14±3.75	0.93±0.03
10	Local	M	1125.77±50.32[c]	41.08±0.07	204.79±4.90	68.71±3.49	1.12±0.06
	Local	F	920.64±46.35[d]	41.11±0.07	196.99±4.52	66.73±3.21	1.43±0.34
	Exotic	M	1809.98±52.22[a]	41.04±0.07	214.54±5.09	47.23±3.62	0.73±0.04
	Exotic	F	1326.42±45.01[b]	41.23±0.06	202.46±4.39	43.06±3.16	0.70±0.03

[ab]means in the same column in the same age group with different superscripts are significantly different ($p < 0.05$)

Exotic: Nicholas white turkey genotype; Local: Nigerian indigenous turkey genotype; M: Male; F: Female.

Table S2: *(cont.) Effect of genotype and sex interaction on body weight, rectal temperature, pulse rate and respiratory rate of challenged turkeys (from week 12 to 20) (LSM ± SE)*

Age (weeks)	Genotype	Sex	Bodyweight (g)	Rectal temperature (°C)	Pulse rate (beats/min)	Resp. rate (breath/min)	Heat stress index (HSI)
12	Local	M	1135.41±56.36^{c}	41.38±0.08	199.00±27.18	72.71±5.13	1.29±0.16
	Local	F	902.16±51.92^{d}	41.32±0.07	249.33±25.04	64.85±4.73	1.04±0.08
	Exotic	M	2236.54±58.49^{a}	41.61±0.08	191.31±28.20	72.31±5.33	1.27±0.10
	Exotic	F	1751.06±50.47^{b}	41.60±0.07	198.51±24.31	61.71±4.59	1.04±0.07
14	Local	M	1628.18±77.63^{c}	41.19±0.07	202.43±2.66	49.54±4.14	0.82±0.05
	Local	F	1213.70±71.51^{d}	41.15±0.07	201.39±2.45	47.94±3.81	0.79±0.03
	Exotic	M	3211.07±80.56^{a}	41.37±0.07	198.00±2.76	78.62±4.30	1.35±0.12
	Exotic	F	2418.32±69.44^{b}	41.48±0.06	199.71±2.38	63.83±3.70	1.07±0.08
	Exotic	F	4441.37±86.13^{b}	41.45±0.08	207.89±2.51	60.11±2.42	0.96±0.02
16	Local	M	2119.91±88.92^{c}	41.49±0.07	196.43±2.66	63.21±4.21	1.09±0.07
	Local	F	1587.44±81.90^{d}	41.54±0.07	196.06±2.45	61.43±3.88	1.05±0.08
	Exotic	M	4386.35±92.27^{a}	41.47±0.08	202.62±2.76	69.85±4.37	1.15±0.10
	Exotic	F	3369.17±19.53^{b}	41.43±0.06	203.89±2.38	61.66±3.76	1.01±0.04
18	Local	M	2701.89±96.29^{c}	41.31±0.08^{b}	199.07±2.81	58.29±2.70	0.99±0.05
	Local	F	2033.76±88.70^{d}	41.05±0.08^{d}	191.33±2.58	57.91±2.49	1.02±0.06
	Exotic	M	5835.19±99.93^{a}	41.27±0.09^{c}	207.85±2.91	64.31±2.81	1.03±0.07
	Exotic	F	4441.37±86.13^{b}	41.45±0.08^{a}	207.89±2.51	60.11±2.42	0.96±0.02
20	Local	M	3466.93±94.25^{c}	41.43±0.09	202.79±1.51	64.25±1.99^{c}	1.06±0.03^{b}
	Local	F	2568.58±86.81^{d}	41.47±0.08	200.21±1.39	68.27±1.83^{a}	1.13±0.03^{a}
	Exotic	M	7434.00±97.80^{a}	41.42±0.09	209.31±1.56	66.62±2.06^{b}	1.06±0.04^{b}
	Exotic	F	5696.40±84.30^{b}	41.39±0.08	207.43±1.35	62.34±1.78^{d}	1.00±0.03^{c}

^{ab}means in the same column in the same age group with different superscripts are significantly different ($p < 0.05$)

Exotic: Nicholas white turkey genotype; Local: Nigerian indigenous turkey genotype; M: Male; F: Female.

Table S3: *Effect of genotype by sex interaction on antibody titres of turkey before and after the inoculated with Salmonella disease vaccine*

GENOTYPE	SEX	1	2	3	4	5
Local	Male	0.38±0.04	0.40±0.04	0.43±0.03	0.45±0.04[a]	0.43±0.04
	Female	0.34±0.02	0.37±0.03	0.47±0.04	0.38±0.03[b]	0.43±0.04
Exotic	Male	0.25±0.01	0.26±0.02	0.25±0.01	0.26±0.01[d]	0.27±0.02
	Female	0.24±0.01	0.26±0.01	0.26±0.02	0.29±0.01[c]	0.30±0.01

Note: means in the same column with different superscripts (a,b) are significantly different ($p < 0.05$)

1: Antibody titres of turkeys before inoculation; 2: Antibody titres of turkeys 2nd day after the first inoculation; 3: Antibody titres of turkeys 7th day after the first inoculation; 4: Antibody titres of turkeys 2nd day after second inoculation and 5: Antibody titres of turkeys 7th day after the second inoculation