

Corrigendum

Subclinical zinc deficiency impairs pancreatic digestive enzyme activity and digestive capacity of weaned piglets – CORRIGENDUM

Daniel Brugger and Wilhelm Windisch

(First published online 4 July 2016)

DOI: 10.1017/S0007114516002105. Published by Cambridge University Press 27 May 2016.

The authors have identified the following errors in the published article:

Tables 3 and 5: The broken line models of pancreatic chymotrypsin, carboxypeptidase a, carboxypeptidase b, and elastase activity (Table 3) as well as apparent faecal digestibility of dry matter, crude protein, total lipids and crude ash (Table 5) were based upon the linear equation: $Y = A_{XB}$ for $X \geq X_B$. The variable A_{XB} refers to the Y-Intercept of the respective break-point in response. However, A_{XB} should be indicated as Y_B .

Therefore, the correct linear equation is $Y = Y_B$ for $X \geq X_B$.

Table 5: The linear equations for the zinc dose range below or equal to the respective break-point in response are stated in the published article as:

$$\begin{aligned} \text{Dry matter} \quad Y &= 484 + bX \text{ for } X \leq X_B \\ \text{Crude protein} \quad Y &= -35.4 + bX \text{ for } X \leq X_B \\ \text{Total lipids} \quad Y &= 4.22 + bX \text{ for } X \leq X_B \\ \text{Crude ash} \quad Y &= 212 + bX \text{ for } X \leq X_B \end{aligned}$$

The values used in these equations should have been stated as:

$$\begin{aligned} \text{Dry matter} \quad Y &= 83.0 + bX \text{ for } X \leq X_B \\ \text{Crude protein} \quad Y &= 77.2 + bX \text{ for } X \leq X_B \\ \text{Total lipids} \quad Y &= 50.2 + bX \text{ for } X \leq X_B \\ \text{Crude ash} \quad Y &= 41.0 + bX \text{ for } X \leq X_B \end{aligned}$$

The correct values were used to calculate the parameter estimates and the incorrect values reported in the published articles are typographical errors only that do not affect the parameter estimates reported, or the findings and interpretation of the study.

The authors apologise for these errors.

Reference

1. Brugger D & Windisch W (2016). Subclinical zinc deficiency impairs pancreatic digestive enzyme activity and digestive capacity of weaned piglets. *Br J Nutr* **116**, 425–433. doi:10.1017/S0007114516002105.

The corrected tables are:

Table 3. Broken-line regression analysis of analysed pancreatic zinc and pancreatic enzyme activity relative to dietary zinc supply (Parameter estimates with their standard errors)

	Models	Parameter estimates	SE	P	R ²	
Pancreatic Zn (mg/kg DM)	$Y = 87.2 + b_1X$ for $X \leq X_B$	X_B	39.0	5.09	<0.0001	0.92
		Y_B	72.6	1.39	<0.0001	
	$Y = 56.5 + b_2X$ for $X \geq X_B$	b_1	-0.38	0.41	0.39	
		b_2	0.41	0.06	<0.0001	
Trypsin (U/mg per min)*	$Y = 142 + b_1X$ for $X \leq X_B$	X_B	58.0	8.62	0.0001	0.90
		Y_B	172	10.2	<0.0001	
	$Y = 39.9 + b_2X$ for $X \geq X_B$	b_1	0.52	0.38	0.21	
		b_2	2.29	0.60	0.005	
Chymotrypsin (U/mg per min)	$Y = 484 + b_1X$ for $X \leq X_B$	X_B	58.0	17.7	0.01	0.35
		Y_B	756	49.8	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	4.69	3.28	0.19	
		b_2	2.74	2.74	<0.0001	
Carboxypeptidase A (mU/mg per min)	$Y = -35.4 + b_1X$ for $X \leq X_B$	X_B	41.2	2.74	<0.0001	0.82
		Y_B	233	6.33	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	6.50	1.87	0.008	
		b_2	0.04	0.01	0.006	
Carboxypeptidase B (U/mg per min)	$Y = 4.22 + b_1X$ for $X \leq X_B$	X_B	47.5	0.009	<0.0001	0.63
		Y_B	6.20	0.10	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	0.04	0.01	0.006	
		b_2	0.002	0.002	0.002	
Elastase (U/mg per min)	$Y = 212 + b_1X$ for $X \leq X_B$	X_B	57.7	12.9	0.002	0.61
		Y_B	326	9.93	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	1.97	1.13	0.12	
		b_2	0.03	0.03	0.03	
α -Amylase (mU/mg per min)	$Y = 87.1 + b_1X$ for $X \leq X_B$	X_B	58.0	0.03	<0.0001	0.77
		Y_B	176	12.3	<0.0001	
	$Y = 64.2 + b_2X$ for $X \geq X_B$	b_1	1.53	0.67	0.05	
		b_2	1.92	0.73	0.03	

R², coefficient of determination of the respective broken-line regression model; X_B, X intercept of the respective break point in parameter response; Y_B, Y intercept of the respective break point in parameter response; b₁, slope of the respective broken-line regression curve over dietary Zn doses lesser than or equal to the respective break point in parameter response; b₂, slope of the respective broken-line regression curve over dietary Zn doses greater than or equal to the respective break point in parameter response.

* Pancreatic enzyme activity is expressed as units of activity change/min reaction time normalised to the total protein content within the sample; P values ≤ 0.05 were considered as indicators of statistical significance.

Table 5. Broken-line regression analysis of apparent faecal DM and crude nutrient digestibility relative to dietary zinc supply (Parameter estimates with their standard errors)

	Models	Parameter estimates	SE	P	R ²	
DM (%)*	$Y = 83.0 + bX$ for $X \leq X_B$	X_B	54.7	4.66	<0.0001	0.88
		Y_B	86.6	0.13	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	0.07	0.02	0.003	
Crude protein (%)	$Y = 77.2 + bX$ for $X \leq X_B$	X_B	45.0	3.28	<0.0001	0.80
		Y_B	85.6	0.28	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	0.18	0.05	0.006	
Total lipids (%)	$Y = 50.2 + bX$ for $X \leq X_B$	X_B	46.9	2.79	<0.0001	0.90
		Y_B	75.7	0.62	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	0.54	0.11	0.001	
Crude ash (%)	$Y = 41.0 + bX$ for $X \leq X_B$	X_B	58.2	0.03	<0.0001	0.74
		Y_B	48.2	0.44	<0.0001	
	$Y = Y_B$ for $X \geq X_B$	b_1	0.12	0.03	0.002	

R², coefficient of determination of the respective broken-line regression model; X_B, X intercept of the respective break point in parameter response; Y_B, Y intercept of the respective break point in parameter response; b, slope of the respective broken-line regression curve over dietary Zn doses lesser than or equal to the respective break point in parameter response.

* Coefficients of apparent faecal digestibility are expressed as percentage of feed intake; P values ≤ 0.05 were considered as indicators of statistical significance.