Food & Function

CORRECTION

View Article Online
View Journal | View Issue

Check for updates

Cite this: *Food Funct.*, 2021, **12**, 6117

Correction: Tracking physical breakdown of rice- and wheat-based foods with varying structures during gastric digestion and its influence on gastric emptying in a growing pig model

Joanna Nadia,[a,b] Alexander G. Olenskyj,[c] Natascha Stroebinger,[b] Suzanne M. Hodgkinson,[b] Talia G. Estevez,[c] Parthasarathi Subramanian,[b] Harjinder Singh,[b] R. Paul Singh[b,c] and Gail M. Bornhorst*[b,c]

DOI: 10.1039/d1fo90045e

rsc.li/food-function

Correction for 'Tracking physical breakdown of rice- and wheat-based foods with varying structures during gastric digestion and its influence on gastric emptying in a growing pig model' by Joanna Nadia *et al.*, *Food Funct.*, 2021, DOI: 10.1039/D0FO02917C.

The authors regret that there was an error in the calculation of dry matter gastric emptying affecting both Fig. 5 and Table 6. This error does not affect a significant portion of the data in the article, only a single parameter, and does not change the trends or interpretation of the data. The correct version of Fig. 5 and Table 6 are given below.

[a]School of Food and Advanced Technology, Massey University, Private Bag 11222, Palmerston North, New Zealand
[b]Riddet Institute, Massey University, Private Bag 11222, Palmerston North, New Zealand
[c]Department of Biological and Agricultural Engineering, University of California, Davis, CA 95618, USA. E-mail: gbornhorst@ucdavis.edu

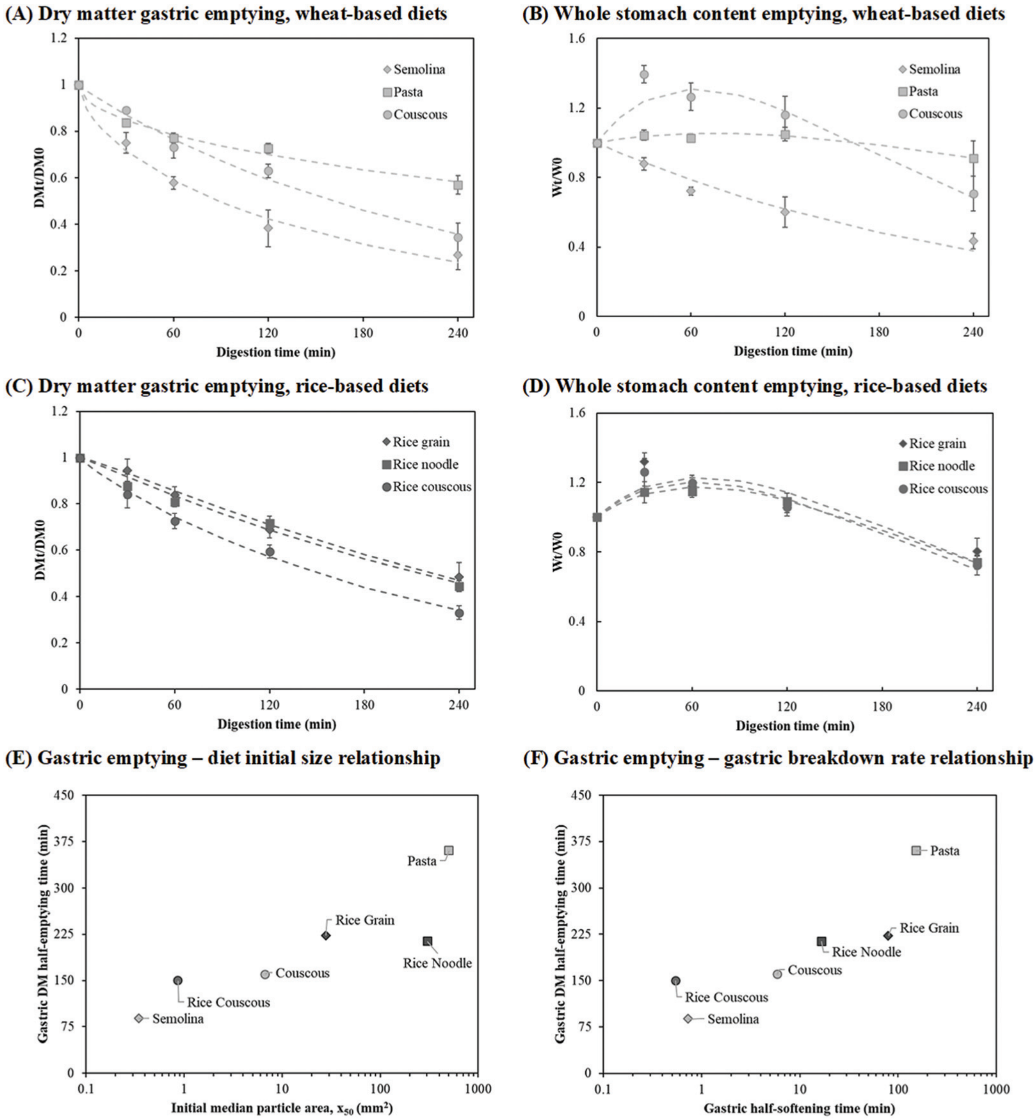

Fig. 5 Gastric emptying of dry matter (A and C) and whole stomach content (B and D) of pigs fed with wheat-based diets (A and B) or rice-based diets (C and D) during 240 min of digestion. Points represent measured values (mean $\pm$ SEM $n \geq 5$ for each diet × time, except rice grain × 60 min (n = 4)). Dashed lines represent the predicted dry matter gastric emptying profile based on modified exponential model (eqn (2)) or predicted total meal gastric emptying profile based on linear-exponential model (eqn (3)). Dry matter half-emptying times from (A) and (C) were plotted against initial median particle area (E) of the cooked diets or gastric softening half-time (F). Gastric softening half-time for each diet was represented by the longest softening half-time between the proximal and distal stomach regions for each diet. Note that the x-axis for (E) and (F) is shown on a log-scale due to the wide range of the values across the six diets.

Table 6 Gastric emptying parameters (expressed as predicted parameter ± 95% confidence interval) and predicted emptying half-time of dry matter and whole stomach content. Note that the confidence interval for k_{whole} and β_{whole} of semolina was very wide due to the lack of initial increase in its W_t/W_0 profile (Fig. 5B) that was supposed to be predicted by the linear-exponential model. Despite the wide confidence interval, the linear-exponential model still fit well to the data

Dry matter gastric emptying (predicted with modified-exponential model, eqn (2))

	Gastric emptying parameter			
Diet	$k_{DM} \times 10^3$ (min^{-1})	β_{DM} (dimensionless)	R^2	Emptying half-time, $t_{1/2,DM\ GE}$ (min)
Semolina	4.14 ± 3.12	0.59 ± 0.32	0.75	88
Couscous	4.16 ± 2.18	0.96 ± 0.42	0.82	160
Pasta	0.81 ± 0.73	0.50 ± 0.18	0.79	360
Rice grain	3.72 ± 2.20	1.21 ± 0.62	0.80	223
Rice couscous	4.13 ± 1.75	0.90 ± 0.32	0.87	150
Rice noodle	3.51 ± 1.34	1.09 ± 0.35	0.89	213

Whole stomach content gastric emptying (predicted with linear-exponential model, eqn (3))

	Gastric emptying parameter			
Diet	k_{whole} (dimensionless)	β_{whole} ($\times 10^3$ min^{-1})	R^2	Emptying half-time, $t_{1/2,whole\ GE}$ (min)
Semolina	0.009 ± 204.09	4.04 ± 832.98	0.65	173
Couscous	2.38 ± 0.39	9.38 ± 2.04	0.61	288
Pasta	1.40 ± 0.35	3.81 ± 2.10	0.18	536
Rice grain	2.06 ± 0.33	7.88 ± 1.72	0.54	319
Rice couscous	2.01 ± 0.29	8.21 ± 1.49	0.70	302
Rice noodle	1.84 ± 0.21	7.21 ± 1.08	0.78	329

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.