

## Supplementary data

**Table S1.** Composition of experimental diets used in the study.

Ingredient (g/kg)	Experimental Diet										
	CS	PF	Wheat R	Wheat CL	Wheat PG	Millet R	Millet CL	Millet PG	Corn R	Corn CL	Corn PG
Casein	100	0	–	–	–	–	–	–	–	–	–
Bread powder*	–	–	646.9	646.9	646.9	699.4	699.4	699.4	740.2	740.2	740.2
Corn Starch	730.9	832.5	226.7	226.7	226.7	226.7	226.7	226.7	177.8	177.8	177.8
Corn oil	70	70	44.8	44.8	44.8	26.4	26.4	26.4	34.5	34.5	34.5
Cellulose	50	50	34.1	34.1	34.1	0	0	0	0	0	0
Vitamins Mix ‡	10	10	10	10	10	10	10	10	10	10	10
Minerals Mix ‡	35	35	35	35	35	35	35	35	35	35	35
Choline bitrate	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Cystine	1.5	0	0	0	0	0	0	0	0	0	0
TBHQ	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
<b>Total (g)</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
<b>Energy (kcal)</b>	<b>3953.9</b>	<b>3959.9</b>	<b>3943.2</b>	<b>3943.2</b>	<b>3943.2</b>	<b>3882.4</b>	<b>3882.4</b>	<b>3882.4</b>	<b>3875.7</b>	<b>3875.7</b>	<b>3875.7</b>

\*Bread powder amount was adjusted to provide 100 g of protein per kg diet, based on protein content of each flour type.

‡Vitamin and mineral mix composition based on AIN-93G formula.

R: Regular flour; CL :Cross-linked flour; PG: Pre-gelatinized flour; CS: Casein; PF: Protein-free diet.

**Table S2.** Accumulative food intake, protein intake, and nitrogen intake for rats fed control and experimental diets for 28 days<sup>1,2</sup>

	<b>Control</b>		<b>Wheat</b>			<b>Millet</b>			<b>Corn</b>		
	<b>CS</b>	<b>PF</b>	<b>R</b>	<b>CL</b>	<b>PG</b>	<b>R</b>	<b>CL</b>	<b>PG</b>	<b>R</b>	<b>CL</b>	<b>PG</b>
Accumulative food intake (g)	252.50 ±8.69 <sup>a</sup>	114.37 ±7.37 <sup>d</sup>	234.00 ±7.78 <sup>ab</sup>	200.37 ±8.69 <sup>b</sup>	188.87 ±7.67 <sup>bc</sup>	212.37 ±11.30 <sup>b</sup>	210.12 ±8.30 <sup>b</sup>	205.50 ±7.63 <sup>b</sup>	200.12 ±7.81 <sup>b</sup>	211.12 ±9.58 <sup>b</sup>	216.37 ±3.80 <sup>abc</sup>
Accumulative protein intake (g)	25.25 ±0.87 <sup>a</sup>	0.00 <sup>d</sup>	23.40 ±0.78 <sup>ab</sup>	20.03 ±0.87 <sup>b</sup>	18.88 ±0.77 <sup>bc</sup>	21.23 ±1.13 <sup>b</sup>	21.01 ±0.83 <sup>b</sup>	20.55 ±0.76 <sup>b</sup>	20.01 ±0.78 <sup>b</sup>	21.11 ±0.96 <sup>b</sup>	21.63 ±0.38 <sup>abc</sup>
Accumulative Nitrogen intake(g)	4.04 ±0.14 <sup>a</sup>	0.00 <sup>d</sup>	3.74 ±0.12 <sup>ab</sup>	3.20 ±0.14 <sup>b</sup>	3.02 ±0.12 <sup>bc</sup>	3.39 ±0.18 <sup>b</sup>	3.36 ±0.13 <sup>b</sup>	3.28 ±0.12 <sup>b</sup>	3.20 ±0.12 <sup>b</sup>	3.37 ±0.15 <sup>b</sup>	3.46 ±0.06 <sup>abc</sup>

1. Values are given as mean ± SD for each group

2 Values with different superscript within the same raw are significantly different ( $p < 0.05$ )