

Supplementary data

Supplemental table 2. Digestion coefficients calculated with the single marker method (DC_{chrome}), of starch in digesta recovered from four consecutive parts of the small intestine of pigs fed diets containing barley, maize, or high amylose maize starch, included as isolated powder, ground cereal, or extruded cereal.^{1,2,3}

| DC _{chrome} | Experimental diets ⁴ | | | | | | | | | S | p – value ⁵ | | | Effect ⁶ | |
|-----------------------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|------|------------------------|---------|---------|---------------------|--------|
| | Barley | | | Maize | | | High amylose maize | | | | Form | Source | F*S | Form | Source |
| | I | G | E | I | G | E | I | G | E | | | | | | |
| Max obs ⁷ | 10 | 10 | 9 | 10 | 10 | 9 | 7 | 7 | 10 | | | | | | |
| SI1 | 0.39 | 0.34 | 0.53 | 0.34 ^f | 0.21 ^g | 0.53 ^f | 0.21 ^l | 0.18 ^l | 0.65 ^k | 0.21 | <0.0001 | 0.441 | <0.0001 | E>I=G | |
| SI2 | 0.65 | 0.54 | 0.64 | 0.56 ^g | 0.60 ^g | 0.78 ^f | 0.27 ^l | 0.32 ^l | 0.60 ^k | 0.17 | <0.0001 | <0.0001 | <0.0001 | E>I=G | B=M>A |
| SI3 | 0.95 ^a | 0.86 ^b | 0.94 ^a | 0.91 ^f | 0.80 ^g | 0.94 ^f | 0.47 ^m | 0.54 ^l | 0.71 ^k | 0.06 | <0.0001 | <0.0001 | <0.0001 | E>I>G | B>M>A |
| SI4 | 0.99 | 0.94 | 0.98 | 0.98 ^f | 0.84 ^g | 0.98 ^f | 0.54 ^l | 0.57 ^l | 0.79 ^k | 0.06 | <0.0001 | <0.0001 | <0.0001 | E>I>G | B>M>A |
| p-value source⁸ | <0.0001 | | | <0.0001 | | | <0.0001 | | | | | | | | |
| Effect⁹ | SI1<SI2<SI3<SI4 | | | SI1<SI2<SI3<SI4 | | | SI1=SI2<SI3<SI4 | | | | | | | | |
| form | Isolated | | | Ground | | | Extruded | | | | | | | | |
| p-value form | <0.0001 | | | <0.0001 | | | <0.0001 | | | | | | | | |
| Effect | SI1<SI2<SI3<SI4 | | | SI1<SI2<SI3<SI4 | | | SI1<SI2<SI3<SI4 | | | | | | | | |

¹ Presented values are estimated means and standard deviation (S).

² DC values are calculated using the dual-marker method(26).

³ SI4 is the terminal 1.5 m of the small intestine, whereas the rest of the small intestine is divided in three parts with equal length (SI1, SI2 and SI3, from proximal to distal SI, respectively).

⁴ Starch forms are abbreviated as follows: isolated (I), ground (G), and extruded (E) form.

⁵ Model established p-values for fixed effects of starch form (isolated, ground, or extruded), source (barley, maize, or high amylose maize), and the interaction between form (F) and source (S), within segment. When an interaction between form and source was found, superscripts ^{a,b} indicate differences among starch forms within all diets of barley origin (p<0.05). Superscripts ^{f,g} indicate differences among starch forms within all diets of maize origin (p<0.05). Superscripts ^{k,l,m} indicate differences among starch forms within all diets of high amylose maize origin (p<0.05).

⁶ When a form or source effect is present (P<0.05), symbol > indicates which source or form has a larger DC than others, whereas symbol = indicates that the DC between sources or forms did not differ.

⁷ The maximum number of replicate observations equals the amount of animals per treatment. In some segments, not enough digesta was present to allow chemical analysis, causing one missing observation in SI1 of GB, SI1 of EA, SI4 of IB, and SI4 of GM, and two missing observations in SI1 of EM.

⁸ Model established p-values for fixed effects of segment, analyzed per source.

⁹ When a segment effect is present (P<0.05), symbol < indicates in which segment DC was smaller than in others, whereas symbol = indicates that the DC between segments did not differ.