Ileum and whole-tract digestibility of carbohydrates contained in a corn- or a sorghum-acorn-based diets fed on finishing Landrace and Iberian pigs

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INTRODUCTION

Starch is the storage polysaccharide of higher plants and a major source for animals. However, despite is its simple composition the digestion of starch may be dependent of feed ingredients and animal characteristics.

MATERIAL AND METHODS

- Animals
  12 LANDRACE (Initial BW 89.8 ± 5.6 kg)
  12 IBERIAN (Initial BW 86.9 ± 6.9 kg).
- Slaughter weight 107-108 kg BW.
- Diets
  - **CORN -BASED** (corn, 75.0%);
    CP, 16.2%; FND, 14.2%; CF, 5.2%; Starchy glucose, 56.1%
  - **SORGHUM-ACORN BASED** (corn, 37.2%; sorghum, 27.5%; acorn, 12.5%);
    CP, 17.2; FND, 16.8%; CF, 5.3%; Starchy glucose, 51.3%
- Cr_2O_3 as digestibility marker.

RESULTS

- Voluntary intake was significantly higher in Iberian than Landrace pigs.

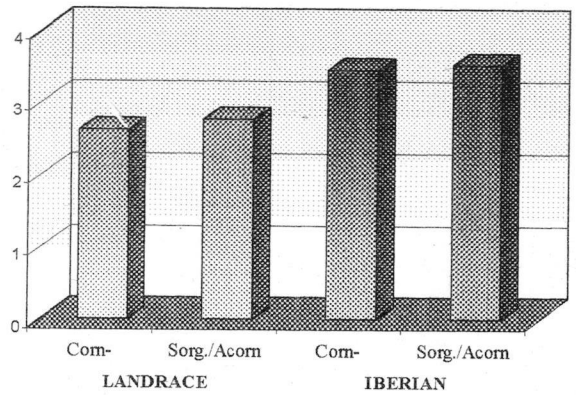

Figure 1 – Voluntary intake (kg/d)

- Ileum and Whole tract OM digestibility were significantly higher in Landrace than Iberian, and for corn- than sorghum-acorn.

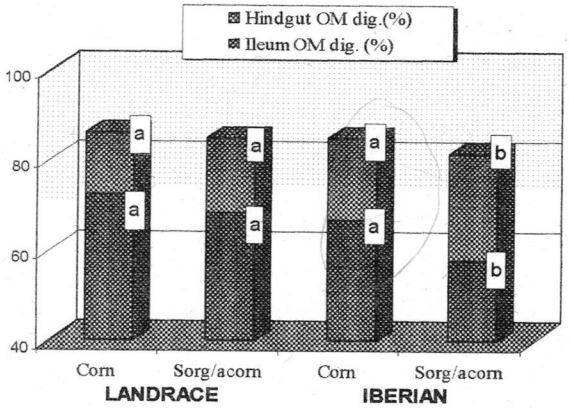

Figure 2 – Ileum and Hindgut OM digestibilities

- Differences on the OM digestibility were mainly associated with differences on glucose digestibility.

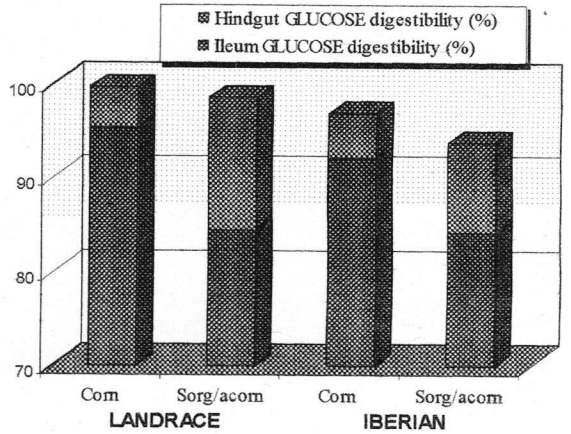

Figure 3 – Ileum and Hindgut Glucose digestibilities

- Iberian hindgut fermentation failed to compensate ileum digestibility decreases

CONCLUSION

The increase on the voluntary intake in Iberian was associated with significant decreases on the fore- and hindgut digestibility of OM and GLUCOSE