

# Comparative digestibility and productive performances between Landrace and Iberian pigs fed on a corn- or a sorghum-acorn-based diet

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## INTRODUCTION

Although digestible energy (DE) values for most commonly used feeds in pig industry are mainly predicted by their chemical composition, other likely effects could affect digestibility. The present paper try to explore the effects likely caused by animal breed (lean v. fat line) and dietary ingredients used.

## MATERIALS AND METHODS

### Animals

24 LANDRACE (Initial BW  $89.8 \pm 5.6$  kg)  
24 IBERIAN (Initial BW  $86.9 \pm 6.9$  kg).

• Slaughter weight 107-108 kg BW.

### Diets

- **CORN-BASED** (corn, 75.0%);  
CP, 16.2%; FND, 14.2%; CF, 5.2%  
DE: 3307 Kcal/Kg (Noblet and Pérez, 1993)

- **SORGHUM-ACORN BASED** (corn, 37.2%;  
sorghum, 27.5%; acorn, 12.5%);  
CP, 17.2; FND, 16.8%; CF, 5.3%  
DE: 3167 Kcal/kg (Noblet and Pérez, 1993)

• Cr<sub>2</sub>O<sub>3</sub> as digestibility marker.

## RESULTS

- Voluntary intake and feed:gain ratios were significantly higher in Iberian than Landrace pigs.

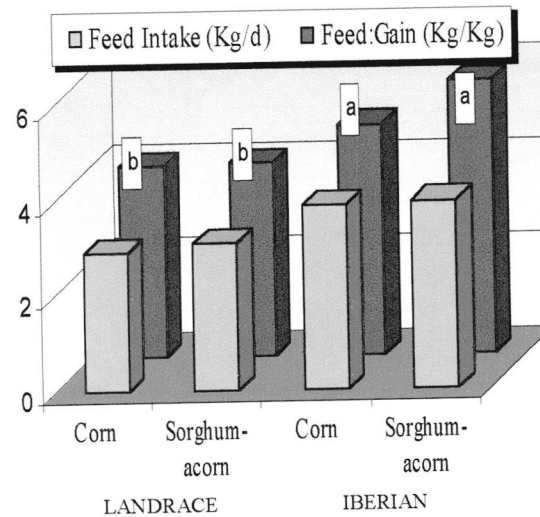


Figure 1. Voluntary intake (Kg/d) and Feed:gain (Kg/Kg)

- Calculated digestible energy values for both diets were lower than Noblet and Pérez (1993) estimations, and dependent on breed:  
**Corn:** 3140 - 3157 kcal/kg (Landrace-Iberian)  
**Sorghum-acorn:** 3109 - 2902 kcal/kg (Landrace-Iberian)

- Ileum and whole-tract digestibilities were higher ( $P < 0.05$ ) in Landrace and for corn based diet.
- Hindgut fermentation in Iberian failed to compensate ileum digestibility decreases of sorghum-acorn based diet.

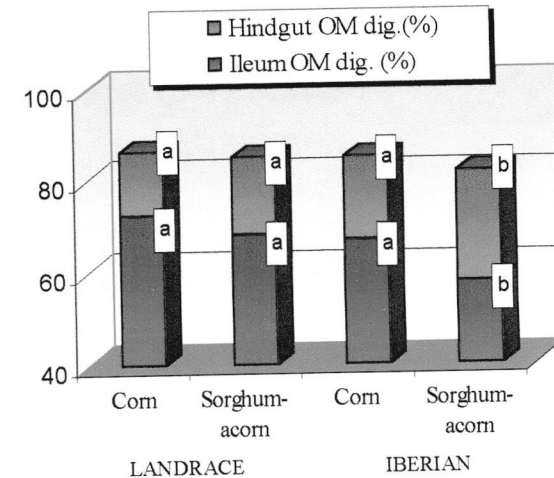


Figure 2. Ileum and Hindgut digestibility

## CONCLUSION

Present results suggest main differences between Iberian and Landrace on the whole-tract digestibility and strategies used to digest diets of different carbohydrate source