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Prediction of the digestibility and energy contents of non-conventional by-products for pigs from their chemical composition and in vitro digestibility

Running head: Prediction of digestibility and energy content of by-products in swine diets

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Highlights:

1) NDF and ADF are the most useful chemical fractions to predict *in vivo* OMd and DE content of by-products.

2) *In vitro* OMd is the best predictor for *in vivo* OMd and also for DE content of low EE by-products.

3) To better predict the DE content of high EE by-products, the *in vitro* OMd equation must include the EE content.

Abstract

The objective of the present study was to determine some prediction equations of gross energy content (GE), organic matter digestibility (OMd), gross energy digestibility (GEd) and the content of digestible (DE) and metabolizable energy (ME) of agro-industrial by-products for pigs, using the chemical composition and an *in vitro* digestibility method. Mean values of chemical composition (dry matter, DM; organic matter, OM; gross energy, GE; crude protein, CP; ether extract, EE; crude fiber, CF; neutral detergent fiber,