

## **Growth performance, carcass traits and pork quality of pigs fed dehydrated or ensiled grape pomace and omega-3 enriched diets.**

Bárbara C.Silveira-Almeida\*<sup>1</sup>, Teresinha M. Bertol<sup>2</sup>, Maria C. M. M. Ludke<sup>3</sup>, Jorge V. Ludke<sup>2</sup>, Anildo Cunha Junior<sup>2</sup>, Daniela M. Bernardi<sup>4</sup>, Priscila S. Pereira<sup>3</sup>.

<sup>1,3</sup>Universidade Federal Rural de Pernambuco, Recife, Pernambuco, Brasil;

<sup>2</sup> Embrapa Suínos e Aves, Concórdia, Santa Catarina, Brasil;

<sup>4</sup> Universidade Estadual de Campinas, Campinas-SP, Brasil.

\*barbara.zootecnia@hotmail.com

The grape pomace derived from the wine production contains more than 10% of crude protein and ether extract, being also a product rich in phenolic compounds, may represent an alternative for animal feeding. The objective of this study was to evaluate the effect of inclusion of grape pomace in diets enriched with omega-3 for finishing pigs (MS-115 x F1) on growth performance, carcass traits and meat quality. Eighteen gilts ( $94.06 \pm 1.83$ kg) and 18 barrows ( $91.59 \pm 1.60$  kg) were used in a total of six replications of each sex per treatment, allotted in a randomized complete block design. Treatments consisted of a control diet based on corn and soybean meal and two diets containing dehydrated (DGP) or ensiled grape pomace (EGP) at inclusion levels of 7.5 (0-21 days) and 15% (22-42 days). All diets contained 1.5% canola oil and 1.5% flax seed oil. The diets were isocaloric and isoproteic. The feed intake was controlled and adjusted weekly. After 42 days of experimental period the animals were slaughtered and 24 hours after slaughter the carcasses were assessed for evaluations of carcass traits and pork quality. Feed intake was adjusted to 88% dry matter. Data were submitted to analysis of variance considering the effects of treatment, sex and interaction treatment vs. sex. There was no effect ( $P > 0.05$ ) of treatment on the average daily gain (ADG) and final live weight (FLW). The adjusted feed intake (AFI) was greater ( $P < 0.05$ ) for treatments with DGP and EGP (Control:  $2.958 \pm 0.33^b$ ; DGP:  $3.160 \pm 0.08^a$  and EGP:  $3.144 \pm 0.03^a$  kg) but feed conversion ratio (FC) was better ( $P < 0.05$ ) for the control treatment (Control:  $3.10 \pm 0.05^b$ ; DGP:  $3.24 \pm 0.04^a$  and EGP:  $3.30 \pm 0.05^a$ ). The ADG and the AFI were greater ( $P < 0.05$ ) in barrows than in gilts. There was no effect of treatments ( $P > 0.05$ ) on backfat thickness (BT), lean meat percentage (LMP) and loin depth (LD). Gilts had lower BT and greater LMP ( $P < 0.05$ ). As for the meat quality, pH 45 minutes, pH 24 hours, drip loss, color and visual marbling showed no effect ( $P > 0.05$ ) of treatments. The inclusion of dehydrated or ensiled grape pomace in the diet of finishing pigs does not affect weight gain, carcass characteristics, and the quality of meat, but increases feed intake and worsens feed conversion ratio.

**Keywords:** carcass traits, grape pomace, growth performance, pigs, pork quality.