Only severe gastric ulcers reduce performance in growing-finishing pigs

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Ulceration in the pars oesophageal region of the stomach of pigs is frequently registered at slaughter. Pigs with gastric lesions are reported to have lowered productivity (Ayles *et al.*, 1996), but other studies have found no significant effects on performance (Guise *et al.*, 1997). The objective of this study was to quantify the correlation between ulcer severity and growth performance in growing-finishing pigs.

Individual daily gain was compared with the degree of gastric ulceration at slaughter in two feeding experiments. In Exp. 1, the outcome of dietary inclusion of 10% alfalfa hay meal in a pelleted diet (2 mm pellets) was examined while in Exp. 2 the effect of coarser grinding in pelleted diets (3.5 mm pellets) on performance and gastric ulceration was studied. The pigs were in the experiments from about 30 kg until slaughter at around 100 kg. The stomachs from 188 pigs in Exp. 1 and 906 pigs in Exp. 2 were collected at the abattoir and lesions in the pars oesophagea were scored on a scale from zero to 10: zero being normal and 10 having severe gastric ulceration (Christensen, 1998). Influence of stomach score on average daily gain (ADG) was analyzed univariately in a normal linear model using the GLM procedure in SAS (SAS Inc v.9.13).

In Exp. 1, no significant (P=0.18) effect of gastric ulceration on growth performance was detected, due to one of three pigs given a gastric score of 10 that grew at 1042 g/day (Figure 1). In Exp. 2, the number of animals was increased and a highly significant (P<0.001) correlation between gastric ulceration score and growth was detected.

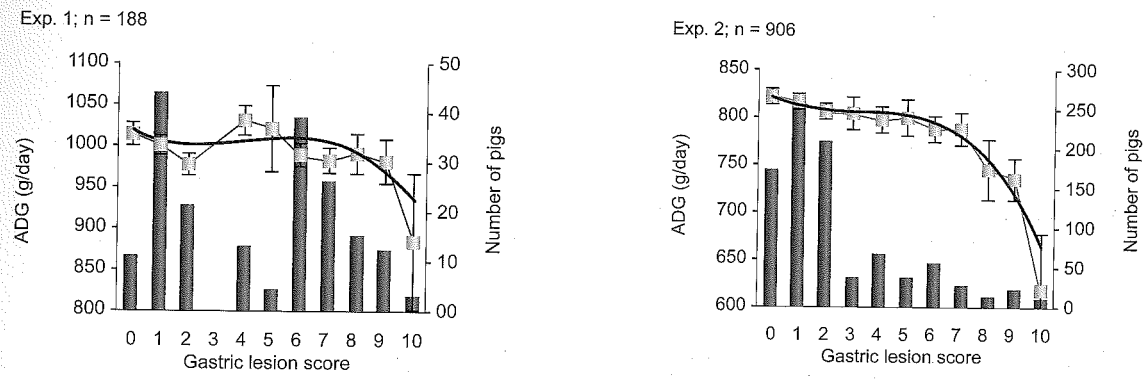

Figure 1. *Influence of gastric lesions on average daily gain (■ mean±SEM) in growing-finishing pigs and number of pigs with a given score in two different experiments*

Daily gain was only moderately affected until a gastric score of 6-7 equivalent to lesions and/or scars of above 0.5 cm^2. Daily gain did not drop significantly until a score of 8-10 corresponding to lesions/scares above 5 cm^2 and contraction of the oesophageal opening. It is concluded that only severe gastric ulcers have a negative impact on growth rate in growing-finishing pigs.

This work was sponsored by Danish Pig Production.

References

AYLES, H.L., FRIENDSHIP, R.M. and BALL, R.O. (1996). *Swine Health and Production* 4:211-216.

CHRISTENSEN, G. (1998). *Dansk Veterinaertidsskrift* 81:930-935.

GUISE, H.J., CARLYNE, W.W.H., PENNY, R.H.C., ABBOTT, T.A., RICHES, H.L. and HUNTER, H.J. (1997). *Veterinary Record* 141:563-566.