

### MEAT INSPECTION AND TECHNICAL SLAUGHTER SOLUTIONS

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#### Prevalence of gastric ulceration in Italian heavy pigs

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#### Introduction

Gastric ulcerations in pigs are a pathology linked with nutritional, genetic and management factors. The stomach condition is generally scored using the classification proposed by Robertson et al. in 2002 which implies a 4 classes classification (0=no lesions, 1=parakeratosis, 2=mild ulceration, 3=severe and haemorrhagic lesions).

#### Materials and Methods

The sample size was estimated on the basis of previous studies (Gottardo et al., 2017), reporting a percentage of serious injuries (score 2-3) in pigs equal to 21%. Assuming a 95% confidence level, a power of 80% and 140 as the maximum number of animals slaughtered per batch, 91 is the number of pigs per batch that were to be taken. Since the aim of the study was also to compare the percentage of pigs with injuries between batches, assuming an average percentage of serious injuries of 21%, a standard deviation of 5%, an error of 1% and a confidence level of 95%, the animals from at least 96 batches had to be selected.

Sampling was performed in two large slaughterhouses placed in Lombardy region in a three months period from November 2018 to January 2019. Stomachs were analyzed by two trained veterinarians after stomach washing, around 45' after the stunning and bleeding of the animals.

#### Results and Discussion

103 batches (from 77 different farms) of 91 animals each were assessed for a total of 9371 animals. Class 0 to 3 were reported in 20.3%, 30.7%, 42.2% and 6.8% of the cases respectively. The prevalence of severe gastric injuries (score 2-3) was 47%, significantly higher than the 21% found by Gottardo et al. in 2017. Nevertheless, also the percentage (20.3%) of totally unaffected (score 0) animals was higher than the previous study (16.8%), globally showing a different distribution of the lesions within the animals.

#### Conclusions

The environmental and management factors leading to these findings have to be studied and further investigated together with the use of non-steroidal anti-inflammatory drugs that can be a further factor worsening the stomach mucosa conditions.

#### References

Robertson ID, Accioly JM, Moore KM, Driesen SJ, Pethick DW, Hampson DJ. (2002) Risk factors for gastric ulcers in Australian pigs at slaughter. *Prev Vet Med.* 15;53, 293-303.

Gottardo F, Scollo A, Contiero B, Bottacini M, Mazzoni C, Edwards SA. (2017) Prevalence and risk factors for gastric ulceration in pigs slaughtered at 170 kg. *Animal*, 11:11, 2010-2018.