

**Animal Welfare** 

**Housing of Pigs** 

# Prevalence of tail lesions and tail biting in Swiss finishing pigs

Ulrike Gerster<sup>1</sup>, Beat Wechsler<sup>2</sup>, Xaver Sidler<sup>3</sup>, Heiko Nathues<sup>1</sup>

<sup>1</sup>*Clinic for Swine, Vetsuisse Faculty, University of Bern, CH-3012 Bern, Switzerland, <sup>2</sup>Division of Swine Medicine, Department of Farm Animals, Vetsuisse-Faculty, University of Zurich, CH-8057 Zürich, Switzerland, <sup>3</sup>Federal Food Safety and Veterinary Office, Centre for Proper Housing of Ruminants and Pigs, Tänikon, CH-8356 Ettenhausen, Switzerland)* 

## Key words

Tail lesion, Tail biting, Abattoir, Risk factors, Season, Finishing pigs

#### Aim of the study

Tail biting and tail lesions in fattening pigs pose animal welfare, animal health and food hygiene problems worldwide. In Switzerland, approximately 2.6 million pigs with undocked tails are raised and slaughtered per year. The percentage of pigs with tail lesions reported in previous Swiss studies (from 2000-2012) ranges between 0.7 and 21.9 %. In an on-farm study from 2016, however, a prevalence of 41.3 % pigs with non-intact tails was found in a sample of Swiss fattening pigs. This result is in line with observations made by official veterinarians at the abattoirs mentioning an increase in the prevalence of tail lesions in fattening pigs over the last years.

#### Material and methods

In order to determine the current prevalence of tail lesions in Swiss finishing pigs, the tails of 195'704 pigs were examined by the first author at four large abattoirs located in different parts of the country from 29<sup>th</sup> of July 2019 to 26<sup>th</sup> of June 2020. In every season of the year and at each abattoir, data collection was conducted during two consecutive weeks, accounting for seasonal impacts and potential repeated origin of pigs; i.e. batches from the same herd delivered in different weeks and different seasons. Date and time of the slaughter, origin of the animal, length of the tail (Tail Length Score, TLS), condition of the tail tip (Tail Tip Conditions Score, TTCS), indication of a broken tail and swellings were recorded immediately after CO2 stunning and bleeding of the animals. These post-mortem results were compared with data from the pig health service, who is examining tail lesions *intra vitam* during at least one routinely performed annual herd visit.

#### **Results and significance**

Overall, 181'850 complete data sets were available for further analysis, whereas 13'854 data sets had to be excluded due to missing values. Concerning the tail's length, 63.2 % of the examined pigs were slaughtered with a complete tail, whereas 36.8% had a partial or total loss of the tail. The condition of the tail tip was evaluated as intact in 63.0 %, as healed in 23.7 %, as acute in 1.3 % and as chronic lesions in 12.0 % of all pigs. Male pigs had significantly higher values in regard to Tail Length Score and Tail Tip Condition Score than female pigs (P=0.05). The Tail Length Scores were highest in winter and were significantly higher in this season compared to spring and summer (P<0.001). The Tail Tip Condition Scores were highest in autumn and significantly higher than in spring and summer. Significant differences (P<0.001) were found between the values of the Tail Length Score and the Tail Tip Condition Score of the four abattoirs, which were both highest in the same abattoir. There were no significant associations of the Tail Length Score and the Tail Tip Condition Score with any of the potential risk factors retrieved from the database provided by the pig health service. This study provides important information about the current situation regarding tail lesions and tail biting in undocked pigs in Switzerland. Recording tail lesions at abattoirs is an accurate but labour-intensive method to investigate the prevalence of tail lesions. It is excellent for monitoring animal welfare on herd level and can also

be utilized as an alert system in order to identify herds that need in-depth on-farm examination. However, the abattoir data collection cannot replace on-farm visits aiming at identifying risk factors and made in prevention programs. Considering the high prevalence of tail lesions found in the present investigation, further studies should focus on the efficacy of intervention strategies and the necessity of more veterinary care on farms with repetitively high lesion scores.

## Publications, posters and presentations

Gerster U, (2021) PRÄVALENZ VON SCHWANZLÄSIONEN BEI SCHWEIZER MASTSCHWEINEN, Oral Presentation, Vetsuisse Nutztierabend, 09.03.2021, online

Gerster U, Wechsler B, Sidler X, Nathues H, (2021) PREVALENCE OF TAIL LESIONS AND TAIL BITING IN SWISS FINISHING PIGS, Flash Talk & Poster Presentation, 12<sup>th</sup> European Symposium of Porcine Health Management, FTP-OP-03, 14.-16.04.2021, online

Gerster U, Wechsler B, Sidler X, Nathues H, (2021) PREVALENCE OF TAIL LESIONS IN SWISS FINISHING PIGS, Schweizer Archiv für Tierheilkunde, manuscript in preparation

## Project 2.18.06

Project duration 01. Mai 2019 bis 30. April 2021