

# Prevalence of shoulder- and pastern-lesions in Danish sow herds



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## HYPOTHESIS

The aim of this study was to determine the prevalence of shoulder- and pastern lesions in lactating sows in Danish herds.

## Prevalence of shoulder- and pastern-lesions in lactation period

### INTRODUCTION

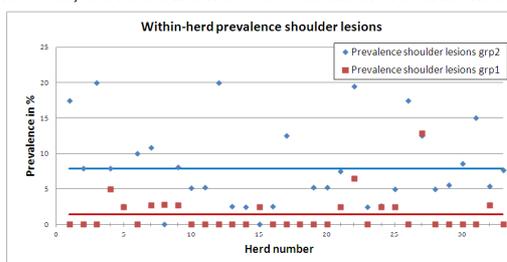
Reduction of shoulder lesions in sows is a welfare priority for Danish pig industry. However, no recent surveys has documented the prevalence of lesions at the start and termination of the lactation period. Pastern lesions are also observed during the lactating period. This is to our knowledge the first study to report this condition in Danish sows.



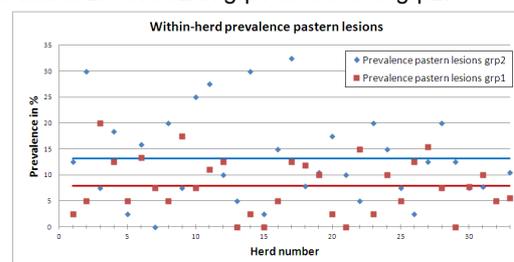
### MATERIALS AND METHODS

The study design was cross-sectional. To ensure a precision of +/-5% of the expected estimated prevalence's, 19 herds was to be included. Herds with more than 20 sows per farrowing group and reliable productivity recording were recruited from northern Denmark. Organic and outdoor herds were excluded. In each herd, 20 sows that had farrowed within the last 1 to 4 days (group1) and 20 sows close to weaning (group 2) were randomly selected and clinically examined once by the same person. Any damage of the dermis in shoulder/pastern regions was defined as "Lesions" and the location was recorded.

**RESULTS** In total, 1310 sows from 33 herds were examined from May 2011 to Marts 2013. 652 in grp1 and 658 in grp2.



	Shoulder whit lesions	Shoulder without lesions	Prevalence of lesions
Group 1 (after farrowing)	18	1223	1,5±0,7%
Group 2 (before weaning)	97	1172	7,6±1,4%



	Pastern whit lesions	Pastern without lesions	Prevalence of lesions
Group 1 (after farrowing)	103	1197	7,9±1,4%
Group 2 (before weaning)	173	1142	13,2±1,9%

The overall prevalence (between herds) of shoulder lesions was 1.5% in grp1 and 7.6% in grp2. The overall prevalence of pastern lesions was 7.9% in grp1 and 13.2% in grp2. For both types of lesions, the difference between groups was significant ( $P < 0.001$ ). The within-herd prevalence of shoulder lesions was  $1.44 \pm 2.64\%$  in grp1 and  $7.88 \pm 5.95\%$  in grp2. The within-herd prevalence of pastern lesions was  $7.88 \pm 5.37\%$  in grp1 and  $13.14 \pm 8.70\%$  in grp2.

### DICUSSION

The variation in prevalence between herds seemed to be associated with factors such as lactation time, housing system, floor design and body condition but have yet to be documented. The results showed that the prevalence of both shoulder and pastern lesions increased through the lactation period. However, as the two groups (sows at farrowing and sows at weaning) was examined on the same day, i.e. they were not the same animals, the results are on the herd level only. To further describe lesions development and changes in prevalence over time, additional studies of single sows throughout the lactation period is necessary.

### CONCLUSION

In spite of variation between-herd, the overall prevalence of lesions in grp2 was significantly higher than in grp1 ( $p < 0.001$  for both shoulder and pastern lesions), suggesting that the prevalence of lesions increased during the lactation period.

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