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Changes in the severity of claw lesions over a parity cycle in breeding sows

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Claw lesions are an important cause for lameness in pigs. Besides the welfare concerns of lameness, lame breeding stock may not attain optimum breeding efficiency and may be culled before attaining peak production. Although breeding sows with severe claw lesions (sufficient to result in pronounced lameness) may be culled, the majority of the claw lesions under farm conditions are not addressed. It has been reported that the horn tissue in pigs grows faster and claw lesions can appear and disappear quickly (Kroneman et al., 1993). Therefore, mild lesions appearing in a parity may not be carried over to subsequent parities or become more severe. The objective of the present study was to analyze the change in the severity of claw lesions among female pigs over a parity cycle. This study involving 57 sows (parity 1-8) was conducted in a commercial farm in Southern Minnesota.

The feet of the sows were individually examined for claw lesions when the sows were in farrowing stalls, between 110-114 d of gestation. Lesions comprised of erosions, cracks and overgrowths. The horny side wall and the volar / plantar surface of the claw were examined for lesions. The medial (inner) and lateral (outer) claws of each foot were examined for lesions on a severity scale of zero (nil) to four (severe) (Anil et al., 2005). For examination, areas on the claw were classified as side wall (composed of hard horn), heel (including overgrown heel), junction between heel and sole, sole, white line and toe. The final score on each area was obtained by multiplying number of lesions with corresponding severity of the lesions. Total score on each foot was obtained by adding scores for different areas of the claws in that foot. Scores on all areas on all feet were added together to obtain total claw lesion scores (TCLS). The same sows were examined again in their subsequent parity between 110-114 d of gestation. Different areas of the claws were compared for the presence or absence of lesions and the intensity of lesions in two parities. The claw lesion scores were compared using Wilcoxon Signed Rank test and McNemar's symmetry test.

The results indicated significant increase ($P<0.05$) in the intensity of lesions over a parity on the lateral claws (including both front and hind limbs). The intensity of lesions increased significantly ($P<0.05$) in the hind limb lateral claw in the subsequent parity. Within the hind limb lateral claw, the intensities of overgrown heel ($P<0.05$) and heel lesions ($P<0.05$) were higher in the subsequent parity. The median of lateral claw lesion score increased from 8 to 11. Although the TCLS were not different in the two parities, the intensity of over-grown heels increased significantly ($P<0.05$). The intensity of white line lesions ($P=0.08$) and lesions at heel-sole junction ($P=0.09$) also increased. The presence of lesions (any severity) at heel-sole junction was significantly higher ($P<0.05$) in the subsequent parity. The severity of lesions on other areas of the claw did not show significant change. The results indicate that side wall lesions and lesions on sole may heal over time, whereas white line lesions and heel lesions, especially overgrown heels and lesions at heel-sole junction may increase in intensity over time.

References

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