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Veterinari Medicina

Associations between claw lesions and reproductive performance of sows in three Greek herds

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Claw lesions, which are nowadays very common in sows, are associated with a high risk of early culling and compromised welfare. In this study, we investigated the associations between the severity of claw lesions and three of the most important reproductive indicators, the number of live-born and weaned piglets and the wean-to-first service interval in three Greek farrow-to-finish herds. All studied sows were individually housed during their previous gestations. Sows were examined for lesions, which were scored on a severity scale, on several anatomical sites of the claws, before farrowing. Data on the examined

reproductive indicators were retrieved from productivity databases of the herds. Because scoring of lesions on several claw sites resulted in many correlated variables for each sow examined, we employed factor analysis to create a smaller set of uncorrelated variables (factors) which contained all the information in the original variables and produced the corresponding factor scores. The number of live-born and weaned piglets was associated with the produced factor scores in two multivariable linear regression models, whereas the possible associations between the wean-to-first service interval and the factor scores was modelled with the use of zero-inflated negative binomial regression. The number of live-born piglets was negatively associated with factor scores representing lesions on heel ($P \leq 0.001$) and sole of front feet ($P = 0.019$). The number of weaned piglets was also negatively associated with factor scores representing lesions on heel ($P = 0.003$) of any foot, on sole of front feet ($P = 0.001$) and on white line, sole and wall of rear feet ($P = 0.008$), while the wean-to-first service interval was associated

with factor scores representing lesions on heel of any foot ($P = 0.02$), on sole of front feet ($P = 0.02$) and of dew claw length of front feet ($P = 0.009$). Our results indicate that combinations of lesions on the dorsal and ventral part of the claws, negatively affected the reproduction parameters considered, emphasising the importance of general improvement of feet health.

Keywords:

sows; claw lesions; reproductive performance

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