

## EFFECT OF DIFFERENT FACTORS ON WEANING-TO-FIRST-SERVICE INTERVAL IN LITHUANIAN PIG HERDS

Birutė Karvelienė, Loreta Šernienė, Vita Riškevičienė

*Department of Infections Disease, Lithuanian Veterinary Academy, Tilžės st. 18, LT-47181 Kaunas, Lithuania:*

*phone +37037 36 33 18, e-mail: birutek@lva.lt, vitarisk@lva.lt*

*Department of Food Safety and Animal Hygiene, Lithuanian Veterinary Academy, Tilžės st 18, LT-47181 Kaunas: phone +37037 362695; e-mail: loretaser@lva.lt*

**Summary.** The aim of this study was to investigate and describe the factors influencing weaning-to-first-service interval (WSI) duration in Lithuanian pig herds and WSI effect on reproductive traits. The present study was based on data from 399 crossbred between native Lithuanian White and Danish Landrace (LWxDL) and 239 purebred Danish Landrace (DL) sows from different herds.

The 1<sup>st</sup> model factors influencing WSI interval were analysed. WSI was regarded as dependent variable. The factors first mating after weaning (FM), parity number (PN), weaning month (WM), influencing WSI were classified and included in the model as independent variable. The effect of WSI on litter size was analysed in the 2<sup>nd</sup> statistical model. Effect of herd and breed interaction on sow reproductive performance was analysed in the 3<sup>d</sup> model.

Results in Lithuanian pig herds indicate that WSI was  $9.34 \pm 1.12$  days, and it was about 2 days longer compared with other countries commercial herds. Our analysis of WSI revealed that the FM, PN, WM, sow herd-breed all had significant influence ( $0.05 \geq p \leq 0.001$ ). Total litter size decreased for about 0.71 piglet when WSI duration was longer than 4 days ( $p < 0.05$ ). There was a difference between purebred DL and crossbred LWxDL in respect of several reproductive traits, including WSI, age at first mating (AFM), gestation length (GL), lactation length (LL), sow's age at culling (SAC) and litter size ( $p \leq 0.001$ ). In Lithuanian pig herds the average of AFM was 10 days shorter for LWxDL than for DL gilts ( $p \leq 0.001$ ).

**Key words:** sow, weaning-to-first-service interval, reproductive performance.