

Maria Bocian, Wojciech Kapelański, Salomea Grajewska,  
Hanna Jankowiak, Jolanta Kapelańska, Jan Dybała,  
Milena Biegniewska, Joanna Wiśniewska

## Effect of backfat thickness as measured at alive on reproductive performance traits in Polish Large White and Polish Landrace breed sows managed in Pomerania and Kujawy region

### Summary

The study was carried out on 1325 sows, free of RYR1<sup>T</sup> gene, including 700 Polish Large White sows (PLW) and 625 Polish Landrace sows (PL). The animals came from pedigree herd of Pomerania and Kujawy region. The sows were assigned to three groups according to backfat thickness: group A <9.5 mm, B – 9.5 to 12.0 mm and C >12.0 mm. Standardized daily gains were the highest in sows' group with the thickest backfat ( $P \leq 0.01$ ) and were significantly higher in PLW than in PL sows only in group C (682 g vs. 658 g;  $P \leq 0.05$ ). Percentage of body lean content was diminishing significantly along with the backfat thickness increasing in sows of the both breeds (from 59% in group A to 55% in group C). Selection index value was more differentiated in PL sows (111.0 to 123.8 points) than in PLW sows. More numerous litters were farrowed by sows of the both breeds from C group (11.67 and 11.8 piglets) than by the sows from B group (10.95 and 11.50 piglets;  $P \leq 0.01$ ). Also, more weaned piglets were found in C group sows (11.17 and 11.44) as compared to B group (10.53 and 11.03;  $P \leq 0.01$ ). A higher percentage of gilts in litters was born by PL than by PLW sows (about 5%). The results indicated a significant and beneficial influence of backfat thickness, as measured at alive assessment, on the number of live born and weaned piglets.