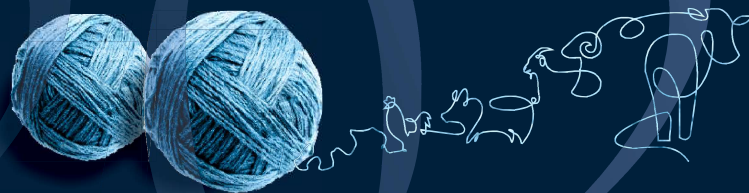


14th
INTERNATIONAL
SYMPOSIUM

MODERN
TRENDS
IN LIVESTOCK
PRODUCTION



BOOK OF ABSTRACTS


4 - 6 October 2023, Belgrade, Serbia

Institute for Animal Husbandry
Belgrade - Zemun, SERBIA

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PHENOTYPIC AND GENOTYPIC VARIABILITY OF TRAITS OBSERVED IN THE PERFORMANCE TEST OF GILTS**Nenad Stojiljković¹, Dragan Radojković², Čedomir Radović¹, Marija Gogić¹, Vladimir Živković¹, Aleksandra Petrović¹, Nikola Delić¹**¹Institute for Animal Husbandry, Autoput 16, 11080 Belgrade, Serbia²Faculty of Agriculture, University of Belgrade, Nemanjina 6, 11080 Belgrade, Serbia

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Abstract: The aim of this research was to determine the phenotypic and genotypic variability of the observed traits in the performance test of gilts: age at the end of the test - final age (FA), back fat thickness 1 and 2 (BFT1 and BFT2) and back muscle depth (MLD). Production performance of gilts was examined in two pig pens in three consecutive years. The research included 3610 gilts, 3 genotypes, originating from 84 sires. At the end of the test, the body weight and back fat thickness (BFT1 and BFT2) and MLD depth were measured using a MLD-ultrasound device. There were 1228 gilts in the first pen, and 2382 tested gilts in the second pen. In the first year, 885 gilts were tested, in the second 1145, and in the third 1580 gilts. Based on the obtained results, it was determined that the genotype of gilts had a statistically significant effect ($P < 0.001$) on BFT1, BFT2 and MLD, while it had no effect on the FA trait ($P > 0.05$). Taking into consideration the farm as a source of variation of gilts' traits, it was concluded that it had a very high statistically significant influence on the investigated traits ($P < 0.001$). The year of testing of gilts as a source of variation of their traits showed a high statistical effect ($P < 0.001$) on all tested traits. The observed properties of back fat thickness 1, 2 and MLD depth were highly statistically dependent ($P < 0.001$) on the weight at the end of the test. Medium heritabilities were determined for production traits in the performance test of gilts, for age at the end of the test 26%, back fat thickness 1 - 37%, back fat thickness 2 - 35%, and for depth of MLD 23%.

Key words: gilts, performance test, heritability, age, back fat thickness, MLD

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