



## Assessment of heritability coefficient variation for various breeds of cattle

Jolanta Różańska-Zawieja\*<sup>1</sup>, Alicja Szabelska-Beręsewicz <sup>2</sup>, Zbigniew Sobek<sup>1</sup>,  
Joanna Zyprych-Walczak<sup>2</sup>, Idzi Siatkowski<sup>2</sup>

<sup>1</sup>Department of Genetics and Animal Breeding, Poznan University of Life Sciences,  
Wolynska 33, 60-637 Poznań, Poland,

<sup>2</sup>Department of Mathematical and Statistical Methods, Poznan University of Life Sciences, Wojska Polskiego 28, 60-637 Poznań, Poland

\*corresponding author: [jolek@up.poznan.pl](mailto:jolek@up.poznan.pl)

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### 1 RESUME

For over 2.5 million dairy cows (Jersey, Montbéliard, Polish Red, Polish Red-and-White Holstein-Friesian, Simmental, Polish Black-and-White, Polish Red-and-White and Polish Black-and-White HF) under assessment in Poland in 2005-2010, gestation length was analysed. This trait had a normal distribution. Linear mixed model with two random effects (herd and sire) was used for the analysis. Then the coefficient of heritability was calculated from components of variances. Obtained values of this coefficient were in the range of 0.047 to 0.243. Within the accessed values of heritability, coefficient Jersey breed could distinguished, which resulted with the highest value of 0.243. In the most numerous breed Polish Black-and-White Holstein-Friesian coefficient of heritability within the group after different breeds of sires was evaluated. Average gestation length was between 279.83 and 284.28. For the analyzed sire's breeds, the coefficient of heritability was in the range from 0.08 to 0.117. Calculations showed that the estimates of heritability coefficient characteristics of the gestation length, when considering the different breeds of cattle and different breeds of sires, have an impact on the size of the obtained assessment.

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