Risk factors and genetic evaluation of stillbirth trait in buffalo

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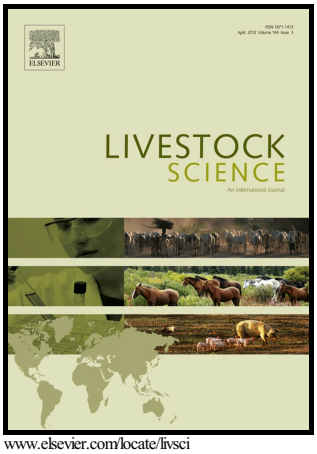

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Risk factors and genetic evaluation of stillbirth trait in buffalo

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Abstract

Stillbirth is a trait with negative effects on farm profitability and animal welfare. The objectives were to investigate risk factors for stillbirth in Egyptian buffaloes, and to estimate variance components using Bayesian threshold model. The data consisted of 7 985 records for 1 764 multiparous and 1 752 records for 896 primiparous buffaloes born between 1980 and 2013. Risk factors were studied using GENMOD procedure of SAS, and genetic parameters were estimated using Bayesian threshold model. Year of calving, herd, parity, birth weight and gestation length effected significantly on stillbirth rate, but season of calving and age at first calving had no significant effect on stillbirth rate. The direct heritability for primiparous and multiparous were 0.03 and 0.02, respectively, the maternal heritability was 0.06 for primiparous and multiparous, and the repeatability was 0.114. The low heritability of stillbirth indicated that genetic improvement would not be effective tool of improving stillbirth trait in Egyptian buffaloes.

Keywords: Bayesian**;** Egyptian buffalo; Environmental factors; Heritability; Repeatability