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Stillbirth (Co)Variance Components for a Sire-Maternal Grandsire Threshold Model and Development of a Calving Ability Index for Sire Selection. *By Cole et al., page 2489.*

Producers can obtain more replacements by genetic improvement of calf livability. Accurate (co)variance components are needed for implementation of a national genetic evaluation. Bayesian and quasi-REML procedures were used to estimate (co)variance components using six samples of Holsteins from the national calving ease database. All samples produced similar results, but the quasi-REML approach was faster. Results were comparable with literature estimates. Mean Bayesian (co)variances were selected for use in the national evaluation model. Direct and maternal heritabilities for stillbirth were 0.030 and 0.058, respectively, and the genetic correlation was -0.02 . An economic sub-index of 2 stillbirth and 2 calving ease traits was developed for inclusion in Lifetime Net Merit.