

The analysis of factors affecting the calving difficulty in Slovak Spotted cattle

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References

- SLOVAK SIMMENTAL BREEDERS ASSOCIATION (2018) *The history of the breed*. [Online]. Retrieved 2017-06-10 from <http://www.simmental.sk/o-plemene/historia-vzniku-plemena.html>
- BOGDÁNYI I. et al. (1996) *Breeding target and breed standard of Slovak spotted cattle*. Trebišov: Slovak Simmental Breeders Association.
- CORTES-LACRUZ, X. et al. (2017) Genetic evaluation of calving ease in Parda de Montana beef breed based on linear and threshold models. *Web of Science*. vol. 113, no. 2, pp. 158–175. doi: <https://doi.org/10.12706/itea.2017.010>
- EAGLEN, S. A. E. and BIJMA, P. (2009) Genetic parameters of direct and maternal effects for calving ease in Dutch Holstein-Friesian cattle. *Journal of Dairy Science*, vol. 92, no. 5, pp. 2229–2237. doi: <https://doi.org/10.3168/jds.2008-1654>
- GAAFAR, H. M. A. et al. (2011) Dystocia in Friesian cows and its effects on postpartum reproductive performance and milk production. *Tropical animal health and production*, vol. 43, no. 1, pp. 229–234. doi: <https://dx.doi.org/10.1007/s11250-010-9682-3>
- GRÆSBØLL, K. et al. (2015) Danish Holsteins favor bull offspring: biased milk production as a function of fetal sex, and calving difficulty. *Plos One*. doi: <https://doi.org/10.1371/journal.pone.0124051>
- HINRICHES, D. and THALLER, G. (2011) Pedigree analysis and inbreeding effects on calving traits in large dairy herds in Germany. *Journal of Animal Science*, vol. 94, no. 9, pp. 4726–4733. doi: <https://doi.org/10.3168/jds.2010-4100>
- INOUE, K. et al. (2017) Inferring causal structures and comparing the causal effects among calving difficulty, gestation length and calf size in Japanese Black cattle. *Animal*, vol. 11, no. 12, pp. 2120–2128. doi: <https://doi.org/10.1017/S1751731117000957>
- JOHANSON, J. M. and BERGER, P. J. (2003) Birth weight as a predictor of calving ease and perinatal mortality in Holstein cattle. *Journal of Dairy Science*, vol. 86, no. 11, pp. 3745–3755. doi: [https://doi.org/10.3168/jds.S0022-0302\(03\)73981-2](https://doi.org/10.3168/jds.S0022-0302(03)73981-2)
- JUOZAITIENE, V. et al. (2017) Relationship between dystocia and the lactation number, stillbirth and mastitis prevalence in dairy cows. *Acta Veterinaria Brno*. vol. 86, no. 4, pp. 345–352. doi: <https://doi.org/10.2754/avb20178604034>
- KADLEČÍK, O. et al. (2013) Diversity of cattle breeds in Slovakia. *Slovak Journal of Animal Science*, vol. 46, no. 4, pp. 145–150.
- KOTÁSEK, M. S. (2012) *Evaluation calving difficulty of heifers and cows in the Slovak Republic*: Ph.D. Thesis. Nitra: Slovak university of agriculture (in Slovak).
- OLSON, K.M. et al. (2009) Dystocia, stillbirth, gestation length, and birth weight in Holstein, Jersey, and reciprocal crosses from a planned experiment. *Journal of Dairy Science*, vol. 92, no. 12, pp. 6167–6175. doi: <https://doi.org/10.3168/jds.2009-2260>
- RYBA, Š. (2010) *Evaluation calving difficulty cows of individual breeds in the Slovak Republic*: Ph.D. Thesis. Nitra: Slovak university of agriculture (in Slovak).
- SAS Institute Inc. (2011) *SAS 9.3 Statements: Reference*. Cary, NC: SAS Institute Inc.
- SCHAEFFER, L. R. (2003) Application of random regression models in animal breeding, *Livestock production Science*, vol. 86, no. 1–3, pp. 35–45. doi: [https://doi.org/10.1016/S0301-6226\(03\)00151-9](https://doi.org/10.1016/S0301-6226(03)00151-9)

- SHAVHUZHEV, A. and BELIK N. (2017) Milk productivity of Simmental cows Austrian selection. In: *16th International Scientific Conference Engineering for Rural Development: Proceedings*, 24-26.05.2017 Jelgava, LATVIA, pp. 1354–1358. doi: <http://dx.doi.org/10.22616/ERDev2017.16.N304>
- SILVESTRE, A. Et al. (2018) Genetic parameters of calving ease in dairy cattle using threshold and linear models. *Italian Journal of Animal Science*. doi: <https://doi.org/10.1080/1828051X.2018.1482801>
- SOLTNER, D. (1978) *La production de viande bovine*. 2. ed. H. Siraudeau et cie Angers.
- STRAPÁK, P. et al. (2011) *Evaluation calving difficulty in the Slovak Republic*. Nitra: Slovak university of agriculture (in Slovak).
- STRAPÁK P. et al. (2013) *Breeding cattle*. Nitra: Slovak university of agriculture (in Slovak).
- VAVRIŠÍNOVÁ, K. et al. (2007) Calving analysis in cows of Charolais breed at selected farm. *Journal of Central European Agriculture*, vol. 8, no. 2, pp. 183–190.
- ZAHRÁDKOVÁ, R. (2009) *Beef cattle: from A to Z*. Praha: The Czech Beef Breeders Association (in Czech).