

## The impact of genetic and non-genetic factors on somatic cell count as a monitor of udder health in Slovak Simmental dairy cows

Jozef BUJKO, Juraj CANDRÁK, Peter STRAPÁK, Július ŽITNÝ, Cyril HRNČÁR

### References

- Alhussien M.N., Dang A.K. (2018) Milk somatic cells, factors influencing their release, future prospects, and practical utility in dairy animals: An overview. *Veterinary World*, 11 (5), 562-577. DOI: <https://dx.doi.org/10.14202/vetworld.2018.562-577>
- Boro, P., Naha, B., Prakash, Ch., Madkar, A., Kumar, N., Kumari, A., Prakash Channa, G. (2016) Genetic and non-genetic factors affecting milk composition in dairy cows. *International Journal of Advanced Biological Research*, 6 (2), 170-174.
- Cerón-Muñoz, M., Tonhati, H., Duarte, J., Oliveira, J., Muñoz-Berrocal, M., Jurado-Gámez, H. (2002) Factors affecting somatic cell counts and their relations with milk and milk constituent yield in buffaloes. *Journal of dairy science*, 85 (11), 2885-2889  
[https://www.journalofdairyscience.org/article/S0022-0302\(02\)74376-2/pdf](https://www.journalofdairyscience.org/article/S0022-0302(02)74376-2/pdf)
- de Freitas, J. A., da Silva, J., FróesGarcezNeto, A., Machado dos Santos, T. (2017) Somatic cell count and milk yield on physicochemical components of milk from free-stall housed cows. *Semina: CiênciasAgrárias*, 38 (2). DOI: <https://dx.doi.org/10.5433/1679-0359.2017v38n2p909>
- Jadhav, P.V., Tarate, S.B., Bhuvana, M., Das, D.N., Shome, B.R. (2016) Somatic cell count as a monitoring system for hygienic milk production in India: A review. *Asian J. Dairy & Food Res.*, 35, 270-277.
- Japertienė, R., Anskienė, L., Japertas, S. (2016) Evaluation of the milk production and somatic cell count of Lithuanian purebred and crossbred dairy cows. *VeterinarijairZootechnika*, 73 (95) Supplement, 51-57.
- Jattawa, D., Koonawootrittriron, S., Elzo, M. A., Suwanasopee, T. (2012) Somatic cells count and its genetic association with milk yield in dairy cattle raised under Thai tropical environmental conditions. *Asian-Australasian journal of animal sciences*, 25 (9), 1216. DOI: <https://dx.doi.org/10.5713/ajas.2012.12159>
- Oudah, E. Z. M. (2009) Non-genetic factors affecting somatic cell count, milk urea content, test-day milk yield and milk protein percent in dairy cattle of the Czech Republic using individual test-day records. *Livestock Research for Rural Development*, 21.
- Rhone, J. A., Koonawootrittriron, S., Elzo M.A. (2008) Factors affecting milk yield, milk fat, bacterial score, and bulk tank somatic cell count of dairy farms in the central region of Thailand. In *Tropical animal health and production*, 40 (2), 147-153.
- Saravanan, R., Das, D. N., De, S., Panneerselvam, S. (2015) Effect of season and parity on somatic cell count across zebu and crossbred cattle population. *Indian J. Anim. Res.*, 49, 383-387. DOI: <https://dx.doi.org/10.5958/0976-0555.2015.00127.2>
- SAS User's Guide 2002-2003. Version 9.3 (TS1M3). SAS Institute. Inc., Carry. NC. USA.
- Savić, N. R., Mikulec, D. P., Radovanović, R. S. (2017) Somatic Cell Counts in Bulk Milk and their Importance for Milk Processing. In: *IOP Conference Series: Earth and Environmental Science*, 85, p012085.
- Sharif, A., Muhammad, G. (2008) Somatic cell count as an indicator of udder health status under Modern dairy production: a review. *Pakistan Vet. J.*, 28 (4), 194-200.
- Souza, G. N., Brito, José R. F., Brito, Maria A. V. P., Moreira, Élvio C., da Silva, Marcos V. G. B. (2005) Factors affecting somatic cell counts (SCC) in Brazilian dairy cows. In: *Animals and environment. Vol.1: Proceedings of the XII-th ISAH Congress on Animal Hygiene*, Warsaw, Poland, 4-8 September 2005, BEL Studio sp. zoo., 237-240.

Tančin, V., Mikláš, Š., Mačuhová, L. (2018) Possible physiological and environmental factors affecting milk production and udder health of dairy cows: a review. *Slovak J. Anim. Sci.*, 51 (1), 32–40.

The Breeding Service of the Slovak Republic. S.E., (B.S. SR, S.E.) (2014) Results of dairy herd milk recording in Slovak Republic at control years 2009 to 2013.