

Anna Sawa, Mariusz Bogucki, Małgorzata Jankowska

Effect of some factors on the relationships between milk somatic cell count and cow fertility

Summary

The effect of selected factors on the relationships between milk somatic cell count (35 964 test-day yields up to 30 days before first insemination) and cow fertility was analysed. The experiment showed a statistically significant correlation, weak on the Guilford scale, between log-transformed values of milk SCC and cow fertility. The increase in LNSCC lengthened the calving interval ($r=0.06^{**}$) and the reproductive rest period ($r=0.11^{**}$) while increasing the number of services per conception ($r=0.01^{**}$). For this reason, it might be advisable for dairy cattle breeders to monitor udder health based on milk somatic cell count, which could help improve cow fertility. LNSCC showed a stronger relationship with calving interval and reproductive rest period in older cows and when the season of first insemination was in autumn-winter. LNSCC showed a stronger correlation with service period and insemination index in first-calf heifers before 60 days of lactation and when cows were first inseminated between spring and summer. The differences in the coefficients of correlation between LNSCC and cow fertility indices within cow age and stage of lactation suggest that these factors could be used when making efforts to improve cow fertility.

KEY WORDS: cows / fertility / somatic cells