



Somatic cells in milk and reproductive parameters of Red-Motley breed cows

Lyubov Efimova, Tatyana Zaznobina, Olga Ivanova and Evgenij Ivanov

INTRODUCTION

According to studies from around the world, there is a positive correlation between the somatic cell count (SCC) in cow's milk and fertility parameters such as service period (SP) and number of inseminations (NI). The aim of our research was to determine the association between the SCC in milk and the SP in cows in Russia.

MATERIALS AND METHODS

Studies were performed in AC Berezovskoe in the Krasnoyarsk region on Red-Motley cows of second lactation and older (n=147). The cows were divided into classes based on their SCC (x1000 cells/ml) ≤ 400 (n=95) and >400 (n=52), and their SP (days) ≤ 90 (n=55) and >90 (n=92). Analysis of variance and correlation analysis were done to analyze the data.



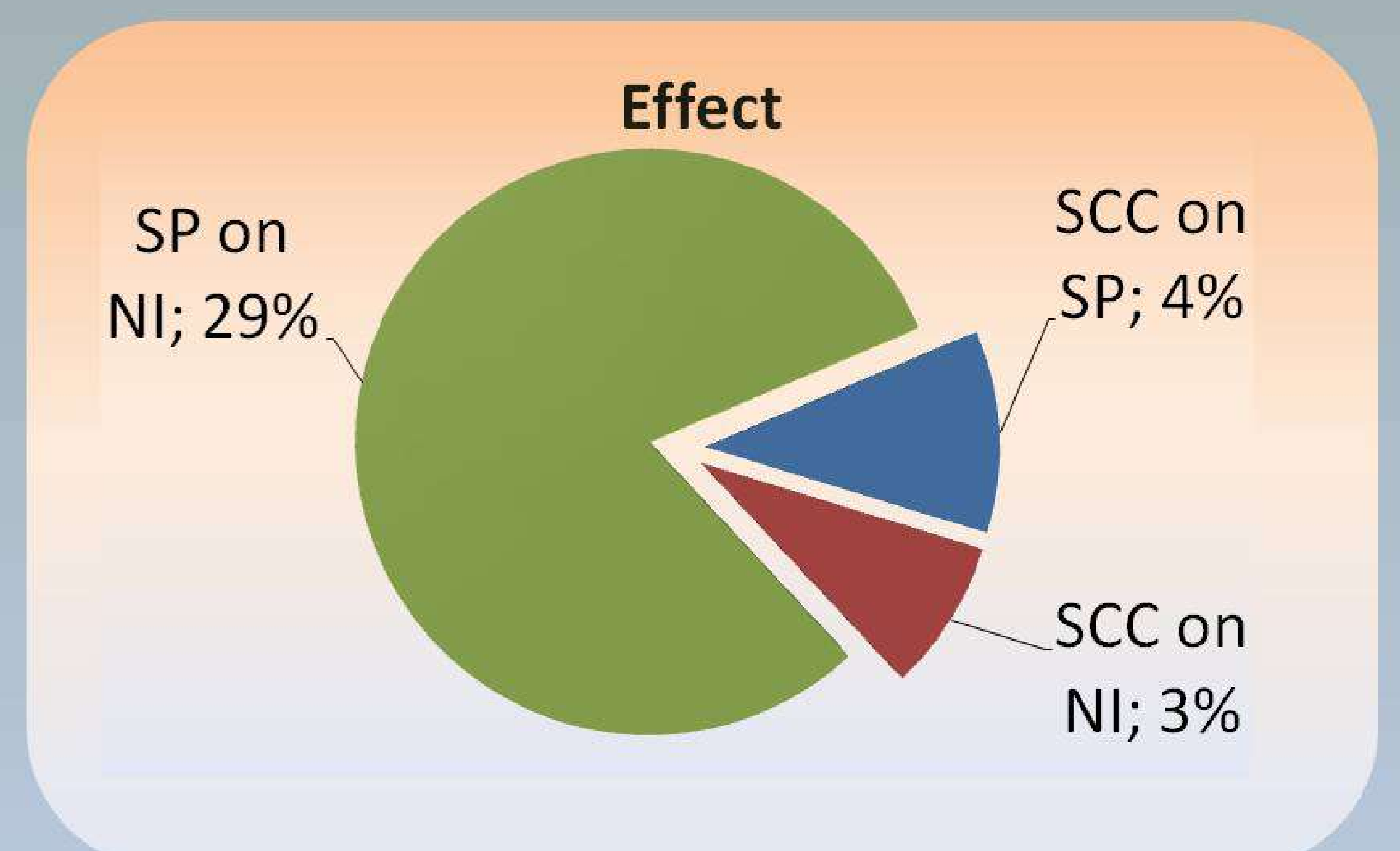
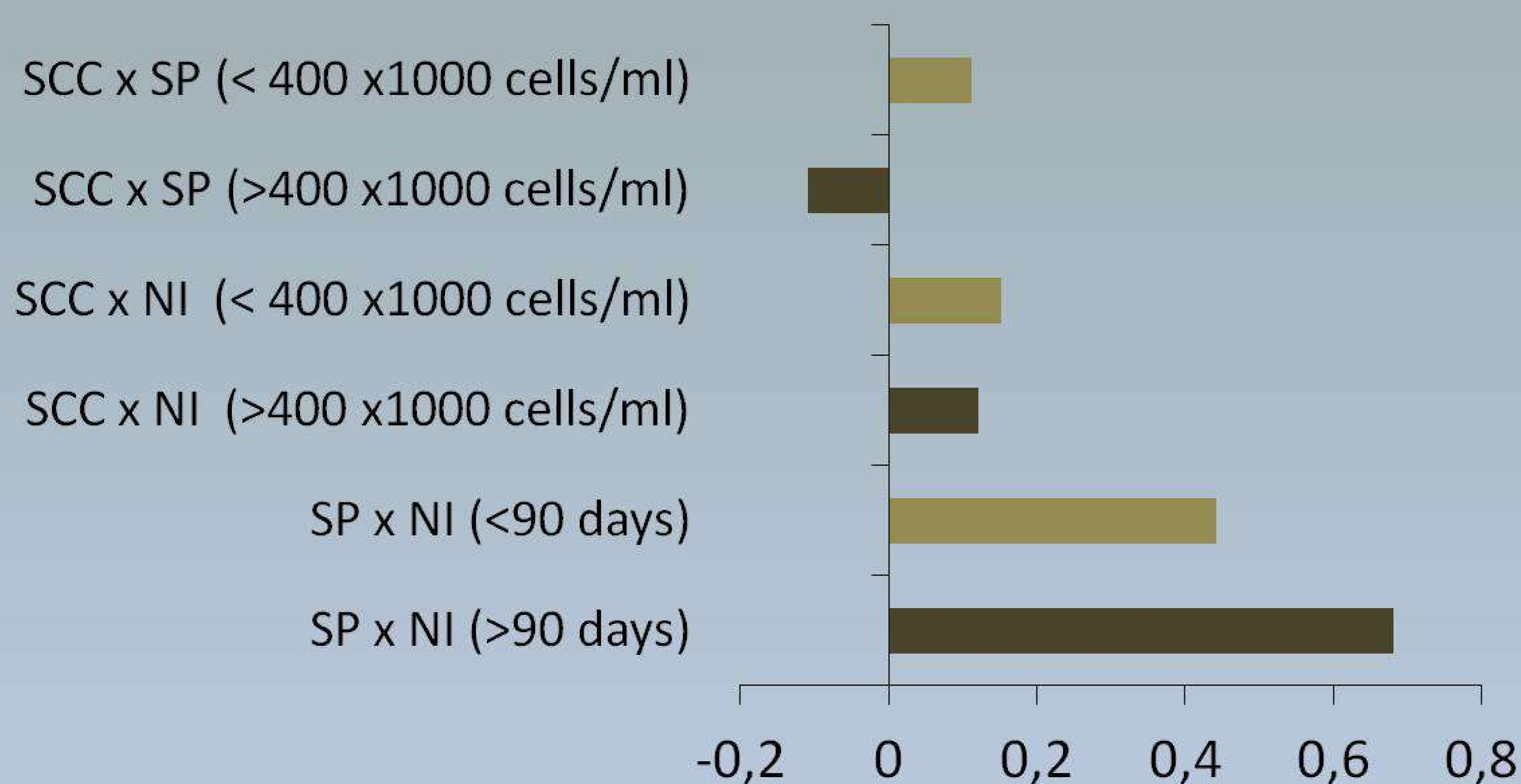
RESULTS

Correlation analysis

A not significant positive correlation ($p > 0.05$) was established between SCC and SP ($r = 0.11$), SCC and NI ($r = 0.15$) in the class of $\leq 400'000$ SCC/ml, as well as a weak negative correlation (-0.11 and -0.12 respectively) in the class $>400'000$ SCC/ml. Statistically significant positive correlations ($p < 0.001$) in the classes formed by the service period (≤ 90 and >90 days) were found between SP and NI ($r = 0.44$ and $r = 0.68$).

Dispersion analysis

As a result of the dispersion analysis, a rather weak influence of SCC on SP (4%; $F = 6.5$; $p < 0.05$) and NI (3%; $F = 4.5$; $p < 0.05$) was found, while a significant effect of SP on NI (29%; $p < 0.001$) was established.



CONCLUSION

Conclusively, we detected no significant influence of the somatic cell count in milk on the reproductive ability of cows, while a significant association between the length of the service period and the number of inseminations was found.