

## **Relationship between somatic cell score and daily milk yield traits of Polish HF cows**

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### **Summary**

The aim of this study was to examine relationships between test day somatic cell score (SCS) and milk traits such as milk yield and fat and protein content of Polish Holstein-Friesian cows. Data consisted of test day milk yield, content of fat and protein, and somatic cell count (SCC) of 5638 primiparous cows which were calved between 2003 and 2005 in 606 herds. The cows were assigned to one of four SCC classes created on the basis of SCC means. Within each of the SCC classes, the linear correlations between traits were calculated and the lactation curves of milk yield and SCS were fitted to the data. All calculations were carried out, using SAS procedures. The correlation between SCS and daily milk yield was negative ( $-0.14$ ) and the correlations between SCS and fat or protein content were positive ( $0.13$  and  $0.15$ , respectively). The relationships between SCS and daily milk yield decreased when the somatic cell count in milk increased ( $-0.14$  in SCC class I and  $-0.03$  in SCC class IV). The tendency was similar for the correlation between SCS and fat but not for the relationship between SCS and protein. The lactation curves for the first three SCC classes show that daily milk yield decreased with increased SCS, and vice versa. There was no such dependence in the fourth SCC class.

KEY WORDS: somatic cell count / milk yield / fat and protein content / Polish HF breed