

## Cows Milk Quality on Different Sized Dairy Farms

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**Abstract :** Somatic cell count and bacteria count are the main indicators of cow milk quality. The aim of this study was to analyze and compare parameters of milk quality in different-sized cows herds. Milk quality of ten dairy cows farms during one year period was analyzed. Dairy farms were divided into five groups according to number of cows in the farm (under 50 cows, 51-100 cows, 101-200 cows, 201-400 cows and more than 400 cows). The averages of somatic cells bacteria count in milk and milk freezing temperature were analyzed. Also, these parameters of milk quality were compared during outdoor (from May to September) and indoor (from October to April) periods. The largest number of SCC was established in the smallest farms, i.e., in farms under 50 cows and 51-100 cows (respectively  $264 \pm 9,19$  and  $300 \pm 10,24$  thousand/ml). Reliable link between the smallest and largest dairy farms and farms with 101-200 and 201-400 cows and count of somatic cells in milk has not been established ( $P > 0.05$ ). Bacteria count had a low tendency to decrease when the number of cows in farms increased. The highest bacteria number was determined in the farms with 51-100 cows and the the lowest bacteria count was in milk when 201-400 and more than 401 cows were kept. With increasing the number of cows milk maximal freezing temperature decreases (significant negative trend), i. e, indicator is improving. It should be noted that in all farms milk freezing point never exceeded requirements ( $-0.515$  °C). The highest difference between SCC in milk during the indoor and outdoor periods was established in farms with 201-400 cows (respectively 218.49 thousand/ml and 268.84 thousand/ml). However, the count of SC was significantly higher ( $P < 0.05$ ) during outdoor period in large farms (201-400 and more cows). There was no significant difference between bacteria count in milk during both - outdoor and indoor - periods ( $P > 0.05$ ).

**Keywords :** bacteria, cow, farm size, somatic cell count

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