BULK TANK MILK QUALITY AMONG DAIRY INDUSTRIES IN NORTHEAST BRAZIL

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The study objective was to evaluate seasonal influence on the chemical composition, somatic cell count (SCC) and total bacterial count (TBC) of refrigerated raw milk supplied to industries situated in Northeast Brazil. Data were obtained from milk samples collected monthly from tanks in 41 industries registered in the federal inspection service (S.I.F.), distributed across nine states in northeastern Brazil. A total of 76,230 samples were collected regarding fat, protein, somatic cell count (SCC) and total bacterial count (TBC) over a period of 36 months. Data transformations to logarithmic scale were performed for SCC and TBC data. An analysis of variance and the Tukey test were performed to verify whether there was interference of the month factor in the variables. The months of the year had a significant influence (p<0.05) on the means of chemical composition, SCC and TBC. For chemical composition, the highest averages were recorded between May and July. The average fat content varied from 3.51 to 3.69% and the protein content ranged from 3.07 to 3.17%. The averages for somatic cell score ranged from 4.66 to 4.90 cells/mL, in which the highest was registered in the month of July, while the transformed bacterial count ranged from 2.34 to 2.53 cfu/mL, with the highest in March. 44.25% of the samples for SCC did not comply with the limit of 400,000 cells/mL, and 71.63% of the samples were in non-compliance for TBC with a limit of 100,000 cfu/mL. On a scale of priorities, the TBC is an indicator that deserves stronger action in corrective measures, since the means found for the milk from the cooling tanks in the states of the Northeast Brazilian region are far above that recommended for good quality milk.

Keywords: Cow’s milk, milk composition, somatic cell count, total bacterial count