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FACTORS INFLUENCING THE PHYSICOCHEMICAL AND MINERAL COMPOSITION OF CAMEL MILK IN EASTERN ALGERIA

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ABSTRACT

This study was conducted to evaluate the impact of lactation stage, season, number of births and the milking of the day on the chemical composition of camel milk in the Tebessa region (East Algeria). A total of 44 milk samples obtained from 10 healthy Saharawi camels were collected over the course of one year, divided into four seasons. The sampling occurred at various stages of lactation (the beginning, middle and end) and at parity numbers ranging from 1 to 8. The results of this study showed that fat, lactose, Zn and I were significantly ($P<0.05$) affected by the stage of lactation where the highest levels were recorded at the beginning of lactation and then gradually decreased until the end of lactation. Moreover, the majority of milk's physicochemical and mineral parameters were significantly influenced by the season where winter and autumn showed the highest mean values, whereas summer exhibited the lowest rates. Our research revealed a difference in the composition of morning and evening milk, particularly in terms of acidity D°, Fat g/l, Ca g/l, CL g/l and P g/l where the evening milk recorded the highest levels. On the other hand, no parity number impact on milk composition was detected. Our findings suggest that the stage of lactation during the season and the milking of the day have an impact on the composition of camel milk. These results could be taken into consideration when studying the improvement of the nutritional and technological aspects of milk.

Key words: Camel milk, dromedary camel, lactation stage, mineral composition, season