

Properties and Seasonal Variation of Milk Produced by One-humped Camels (*Camelus dromedarius*) and Two-humped camels (*C. bactrianus*) in the Republic of Kazakhstan

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Abstract: This study examined the components of the milk of one-humped and two-humped camels kept in same area in Kazakhstan, in May (rainy season) and August (dry season) 2015. Milk was sampled from camels of the same age that grazed on the same pastures. The general component analyses of camel milk involved the nutrition values, protein and fat content. The milk sampled from two-humped camels was found to contain greater densities of these components than milk sampled from one-humped camels. The values of calcium, phosphorus, zinc, aspartic acid, glutamic acid, phenylalanine, and lysine were higher in the two-humped camel milk samples. The densities of general components in the milk from both one-humped and two-humped camels were lower in the August samples than in those from May. Free amino acid densities in all milk samples were, however, higher in August than in May. The observed increase in August was considered to be related to the consumption of dry grasses that require longer rumination time and hence an increased activity of rumen microorganisms, and their nutritional byproducts. It may also be necessary to consider the grass type and nutrition ingested by the camels as well as the season for milking with regard to the quality and composition of milk.

Key Words: Bactrian, Dromedary, Kazakhstan, milk component.