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A Study on the effect of postpartum period on various physico-chemical, compositional and microbiological characteristics of bovine colostrum

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The composition of colostrum differs markedly from the mature milk produced later, reflecting a difference in the biological function of the two materials. Bovine colostrum rebuilds the immune system, destroys viruses, bacteria and fungi, accelerates healing of all body tissue, helps lose weight, burn fat, increase bone and lean muscle mass and slows down and even reverses aging. Bovine colostrum has many purported health benefits, if harvested as soon as possible after calving to maintain colostrum quality. Thus, the current investigation was undertaken with the aim of characterizing the physico-chemical, compositional and microbiological characteristics of bovine colostrum, the samples were collected for three consecutive days post parturition. The specific gravity, fat, total protein, whey proteins, total solids, solids not fat, ash and electrical conductivity were seen to show a decreasing trend from day1 post partum through day 3 post partum with values at day 1 being significantly higher ($p \leq 0.05$) than values at day 2 and day 3 post partum and between the latter two samples, the day 2 samples had significantly ($p \leq 0.05$) higher value compared to day 3 samples thereby displaying a clear cut trend of transition from a higher value towards normally lower value as the transition period passes on. Lactose, pH and total plate count contrarily went on increasing with each passing day post partum having lowest value at day 1 and highest at day 3 postpartum; all the three values were significantly different from each other ($p \leq 0.05$). Casein protein first showed a significant ($p \leq 0.05$) increase from day 1 to day 2 and then declined significantly ($p \leq 0.05$) from day 2 to day 3. Hence, a clear difference for different quality parameters of colostrum samples obtained on different post partum days was observed, indicating the relative importance of timing of collecting the colostrum post partum.

Biography

Tahir Nazir has his expertise in Diary Technology. He is a Ph.D. Scholar at Division of Livestock Products Technology, Faculty of Veterinary Sciences and Animal Husbandry, SKUAST-Kashmir.

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