The purpose of this study was to investigate the different levels of Leucaena forage supplementation for metabolism adaptation in pre and postpartum dairy cows. This experiment was studied in twelve multiparous cows. Three groups of ≥75% Holstein Friesian dairy cows were imposed by Repeated measurement in Completely Randomized Designs: (1) Concentrate supplement 4 kgs (2) Concentrate : Leucaena supplement 2 : 4 kgs (as fed) and (3) Leucaena supplement 8 kgs. Blood samples were collected from the jugular vein at 30 and 14 days before parturition and 7, 14, 21, 28, 60 and 90 days after parturition. The results revealed that plasma glucose concentration at 30 and 14 days before parturition and 28 days after parturition of group(3) were higher than group(2) and group(1) (P<0.05). Serum urea nitrogen concentration at 30 days before parturition of group(1) and group(3) were higher than group(2) (P<0.01) and 7 14 21 days after parturition of group(1) were higher than group(2) and group(3) (P<0.01). NEFA concentration at 7 days after parturition of group(2) and group(3) were higher than group(1) (P<0.05).

Key words: Leucaena forage, Metabolism, adaptation, pre-postpartum, dairy cow

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