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## Lactation performance and blood metabolites in lactating dairy cows micro-supplemented with *Moringa oleifera* leaf meal

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This study intended to assess the effects of micro-supplementing *Moringa Oleifera* leaf powder on dairy milk quality and blood metabolites. Thirty, second lactating ( $\pm 40$  DIM) Jersey cows weighing  $280 \pm 40$  were randomly allocated to three treatment of increasing level of *Moringa Oleifera* leaf powder (MOLM) at 0, 30 and 60 g/cow/day as M0, M30 and M60 treatments groups. The cows were adapted for 14 days, thereafter fed experiment diets for a period of 54 days. Animals were weighed in the beginning and the end of the trial to determine body weight changes (BWC). Milk yield was recorded daily and composite milk samples were collected once per week for determination of fat, protein, lactose and milk urea nitrogen (MUN), total solids (TS), non-solid fat (NSF) and the milk total antioxidant capacity (MTAC). Blood samples were collected

from the coccygeal vein on day (54, 68 and 90 days in milk: DIM) of the trial for determination of total antioxidant capacity (TAC), total serum protein (TSP), albumin (Alb), total immunoglobulin (TG), and immunoglobulin G (IgG). Body weight change and milk yield were not affected ( $P > 0.05$ ) by the diet. Supplementation with M60 increased ( $P < 0.05$ ) milk fat, TAC and reduced SCC in jersey cows. Increased ( $P < 0.05$ ) TSP and IgG, reduced ( $P < 0.05$ ) glucose, NEFA were observed in M60. Increased ( $P < 0.05$ ) and serum TAC was noted *Moringa* supplemented groups. Dietary supplementation with *Moringa oleifera* mitigated against oxidative stress which resulting in an improved milk quality and immunity of lactating cows.

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