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## The Impact of Management System on Sudanese Camel Calves Growth Rate

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### Abstract

This study aimed to investigate the effect of management system on the growth rate of Sudanese camel calves. Twenty (20) camel calves (10 males and 10 females) at the first day of birth were selected, from the Sudanese Arabi (Kababish) bred. The camel-calves with their dams were maintained under semi-intensive and traditional management systems for 18 successive months. Calves in the semi-intensive system, in addition of suckling their respective dams, received supplementation diets (one kg of concentrate/head/day), *ad libitum* watering, health care and spraying weekly against ticks and external parasites. The body weight of calves was obtained through direct weighing at birth, 6 months, 12 months and 18 months of age.

The results indicated that there was no significant difference ( $p > 0.05$ ) in birth weight of calves raised under semi-intensive and traditional system. In both systems the males ( $39 \pm 0.31$  kg) were significantly ( $p < 0.05$ ) heavier than the females ( $36 \pm 0.34$  kg). The body weight of the calves under semi-intensive system at six, 12 and 18 months of age was  $123 \pm 2.2$ ,  $221 \pm 2.2$  and  $326 \pm 2.4$  kg respectively, the respective body weight of camel calves under traditional system was  $96 \pm 1.6$ ,  $159 \pm 2.4$  and  $208 \pm 2.5$  kg. With significant differences ( $p < 0.01$ ) between systems. The overall mean daily gain of camel calves under semi-intensive and traditional system were  $535 \pm 9.8$  g and  $317 \pm 5.4$  g, respectively. The average daily body gain from birth to 6 months, 6 – 12 month and 12–18 months of age in semi-intensive system was  $477 \pm 10.9$ ,  $542 \pm 8.3$  and  $585 \pm 8.4$  g d<sup>-1</sup>, while corresponding values for calves managed under the traditional system were  $352 \pm 10.6$ ,  $272 \pm 16.0$  and  $317 \pm 5.5$  g d<sup>-1</sup>.

**Keywords:** Daily gain, management system, Sudan, supplementary feeding