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## VIII

### LIST OF ABBREVIATIONS

AIA	:	Acid insoluble ash
ADG	:	Average daily gain
ALB	:	Albumin
CP	:	Crude protein
CF	:	Crude fiber
CFM	:	Concentrate feed mixture
Cm	:	Centimeter
DM	:	Dry matter
DCP	:	Digestible crude Protein
DP	:	Digestible Protein
EE	:	Ether extract
Hrs	:	Hours
Kg	:	Kilo gram
LBW	:	Live body weight
ME	:	Metabolizable energy
Min	:	Minute
MJ	:	Mega Joule
MY	:	Milk yield
NFE	:	Nitrogen free extract
OM	:	Organic matter
Sec	:	Second
TDN	:	Total Digestible Nutrients
$W^{0.75}$	:	Metabolic body weight



## ABSTRACT

**Amal Abdel-Kareem Othman: Effect of Plan of Nutrition for Dromedary Female Camel and Camel Calves on Maternal Behavior and Productive and Reproductive Performance. Unpublished Ph. D Thesis, Department of Animal Production, Faculty of Agriculture, Ain Shams University, 2018.**

This experimental work conducted in the Camel Studies and Production Development Center belongs to Animal Production Research Institute in Marsa Matrouh Governorate. The present study aimed to justify the effects of restricted feeding periods during last month of pregnancy and initiation of lactation on maternal behavior and productive, reproductive performance of she-camels and growth rate of Maghrebi she-camels and their offsprings. Sixteen pregnant she-camels with an average body weight 512.74 kg, were divided randomly into three groups. The first group (G1) was fed 100% of their daily requirements of concentrates; the second group (G2), was offered 75% daily feeding requirements of concentrates after delivery for one month. While, the third group (G3) was fed 75% of their daily requirements of concentrate for (one month pre and another one post-partum). New born calves were divided after one month of lactation to four groups; calves born to G1 dams were divided randomly into two subgroups. The first one (G1-1) suckled their dams naturally, while the other group (G1-2) was artificially reared on a milk mixture (50% natural milk and 50% cattle milk replacer). Calves born to G2 and G3 dams were artificially reared on a mixture 50% camel natural milk and 50% cattle milk replacer.

Results obtained showed that there were insignificant differences in digestion of nutrients of dry matter, crude protein, and crude fiber, although there were significant differences ( $P < 0.05$ ) in digestion coefficient of organic matter and nitrogen free extract.

She-camels of G1 gained insignificantly more live body weight than that of G3 during the pre-calving period (49.09 vs. 42.05 kg, respectively).

During lactation period, she-camels of G1 produced insignificantly more daily milk in compare with she-camels of G2 and G3 (3.78 liter vs. 3.32 and 3.4 liter/ animal), respectively. She-camels of G3 lost significantly ( $P<0.05$ ) more LBW from the beginning of the experiment to the end of the study in compare with that of G1 and G2 she-camels.

There were insignificant differences among different groups in calves birth weight (30.44, 32.8 and 29.73 kg, respectively). Calves of one month of age and born to G1 dams indicated faster ( $P<0.05$ ) daily gain (0.326 kg / h/ day) than those born to both of G2 and G3 dams. Calves three months old age calves in different groups, indicated nearly similar growth, regardless of their dams feed restriction and type of calves rearing (natural vs. artificial). Data obtained showed also that neither she-camels feed restriction practice nor type of calves rearing have any significant effect on either calves daily gain or dams final LBW after 3 months of treatments.

There was no negative effect of feed restriction on all maternal and calvesbehaviour parameters. Gestation length ranged was 373.8 to 377.5 days.

There was insignificant effect of feed restriction neither on udder depth, height nor teat measurements.

As a general result, it was shown that restricted feeding of she-camel for two months decreased ( $P<0.05$ ) dams live body weight more than the other groups but there were insignificant effect of restricted feeding pre and post-partum on dam final live body weight, maternal behaviour, total milk yield, time required to first heat and final weight of camel calves. On the light of the present study results, It could be concluded that, dromedary she-camel could be adapted to shortage in

nutrition (25% concentrate feed restriction), even at more critical physiological stages (late pregnancy) without any fetal adverse effects neither in their productive nor reproductive performance.

**Keywords:** Dromedary camel, Restricted feeding, Maternal behavior, Milk yield, Milk composition, Blood parameters.