

EFFECT OF RESTRICTED MILK FEEDING ON THE GROWTH OF GOAT KIDS BEFORE WEANING

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ABSTRACT

A study was conducted to find out the effect of feed restriction before weaning on the growth of goat kids. Eight Jamunapari kids with average birth weight of 1.9 kg were selected from the college farm after deworming. The goat kids were divided in two groups. One group was reared under farm condition i.e. control group and other group as experiment group, to whom milk was restricted with normal asses of creep feeding. The study revealed that the weight gain and average daily gain were higher in experiment group than control. Therefore it can be concluded that restricted milk feeding encouraged solid feed consumption by goat kids with early adaptation for intake of solid foods.

Key words : Milk feeding, Goat kids, Weaning

The feeding management of the herd's of young goats is critical to the overall success of the farm enterprise. To make appropriate feeding management decisions, producers have to keep n mind the physiological changes that a young goat's digestive system goes through with age. These changes affect the types and amounts of feed that young goats can eat, and thereby their nutritional requirements. They also affect how management techniques should be carried out to minimize growth checks or setbacks during the adjustment periods.

The weaning may be stressful period in young goat life and is often characterized by a slowing, stoppage of growth or some time even loss of weight gain. This is referred to as weaning shock. The magnitude of the shock at weaning depends on the age and weight of the kids at weaning as well as on the diet and feeding modalities before weaning. Weight at weaning is more important than age at weaning. Intake of solid feed before weaning also affects the weaning shock. The higher the intake less marked the weaning shock. The higher the intake less marked the weaning shock. Male kids are more susceptible to weaning shock than females⁵.

Thus it seems that young goat support early weaning if he got solid feed early so he adopt for new feeding system as early as possible kids can be weaned earlier than the traditional weaning age of 3 months. Kids can be successfully weaned at 8 weeks of age or at the time when at least 30 g/day of solid feed are consumed. Weaning shock is reduced when any of the above criteria are achieved. Restricted milk feeding encouraged solid feed consumption by goat kids.

Keeping above facts in mind this study was carried out with following objectives. 1 To study effect of restricted milk feeding on the growth of goat kids before weaning.

MATERIALS AND METHODS

The study was conducted in the Department of Animal Nutrition, Apollo College of Veterinary Medicine, Agra Road, Jaipur. Eight Jamunapari kids with average birth weight of 1.9 kg were selected from the college farm after giving colostrums and proper deworming. The goat kids were further divided in two groups (four kids in each group) i.e. Control and Experiment. Both groups were maintained on similar feeding schedule and one group was kept as control i.e. reared under farm condition and other group as experiment group, to whom milk was restricted with normal asses of creep feeding.

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Table 1 Feeding schedule for kids

Age	Feed ingredients	Amount	Control	Experiment
Birth to 3 days	Colostrums	Ad libitum	Ad libitum	Ad libitum
3 day to 3 weeks	Milk	3-4 feed	3-4 feed	1-2 feed
3 weeks to 2 months	Milk	2-3 feed	2-3 feed	1 feed
2 months to 3 months	Milk	1-2 feed	1-2 feed	No milk

Note : Creep ration and good quality roughage is given free choice to both the groups from 3 days to 3 months.
Composition of creep ration : Gram – 20%, maize – 22%, Mustard Cake – 35%, Wheat Bran– 20%, Mineral Mix – 2.5%, Common Salt – 0.5%

Table 2 Weight of Kids at birth

Sl.No.	Control Group			Experiment Group		
	Kid No.	Sex	Birth Wt.(Kg)	Kid No.	Sex	Birth Wt. (Kg)
1.	101	M	2.3	103	M	2.5
2.	105	F	1.6	108	F	1.8
3.	107	F	1.8	106	F	1.6
4.	109	F	1.9	111	F	1.7
	Average birth wt (kg)		1.9 ± 0.14	Average birth wt. (Kg)		1.9 ± 0.20

Table 3 Chemical composition of feeds given to the goat kids

Description	DM	CP	EE	ASH	CF	TDN	DCP
Creep ration	90	20	03	10.99	05	70	18
Ground nut straw	90	6	1	12	39	53	3

Table 4 The chemical composition of milk given to the goat kids

Description	Total solid	Fat	SNF	Protein	Lactose	ASH
Milk	13.50	4.5	9.0	3.5	4.40	0.80

RESULTS AND DISCUSSION

The results of this study revealed that the mean average birth weight of the kids of the control and experimental feeding, the body weight of the control and experiment group were 7.75 Kg and 8.72 Kgh respectively. Above finding showed that the weight gain in control and Treatment group were 5.85 Kg and 6.82 Kg respectively.

From the above findings it is observed that weight gain was higher in experiment group to whom restricted milk feeding given then control group where adlib milk was fed. This finding is in agreement of² who observed that weight gain was higher in the goat kids who were maintained on

restricted milk feeding. Similar finding reported by⁴ who observed that solid feed intake is negatively correlated with milk intake. When milk feeding was restricted, more solid feed intake occurred resulting in more weight gains.

The average daily gain was also higher in Treatment group than Control group which confirm the finding of³. They reported that restricted milk feeding encourage solid feed intake resulting increase daily gain. Similar finding were also observe by⁵ who observed that If only a limited amount of milk is available the kids are more prepare to dry feed intake so the magnitude of daily gain was increase than compared with high milk intake group.

Table 5 Weight gain in goat kids during study periods.

Parameters	Control	Treatment	Significance
Birth weight (kg)	1.9 + 0.14	1.9 + 0.20	NS
Final BW (Kg)	7.75 + 0.14	8.72 + 0.22	NS
Weight gain (Kg)	5.85 + 0.35	6.82 + 0.52	Significant
ADG(g)	65.00 + 1.52	75.80 + 4.91	Significant

CONCLUSION

With all this short term study with small number of kids it was concluded that Restricted milk feeding encouraged solid feed consumption by goat kids with early adaptation for intake of solid foods by the kids. That will cause better growth and reduce the chances of weaning shocks. If solid feed intake can be stimulated, early weaning is possible as well as economical. Delayed weaning is costly and can be harmful to the development of a functional reticulo-rumen.

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