

RAPID WEIGHT GAIN OF PRE AND POST WEANED MALE THELLASSERY KIDS WITH METHOSAKTHI AND POWER MILK

Dr. Balakrishna Rao Dabbir

Small animal Practitioner, 2/393-1, upstairs Nagarajupet, Kadapa-516001.

ABSTRACT

Birth weight, weaning weight, growth rate and Average daily gain (ADG) are economically important traits. These traits are controlled by poly genes and are also affected by feeding practices, climatic factors and management under farm conditions. The effect of energy and methionine in pre and post weaning periods of Thellassery male kids, were studied. One to three ml of Methosakthi, a product of ABT Corporation, Bangalore and 1 to 3 ml of Power Milk, a product of Green Planet, Ludhiana were supplemented to 16 male kids from day 5 to 30 days and their weight were taken, on 9-7-2016, at the Venkateswar goat farm (Thellassery) Gangavathi of Bellary Dist under group 1 and in group 2, 30 days old 17 male kids were provided with concentrates, greens, 5 ml Metho Sakthi and 5 ml of Power Milk. Final weights were recorded on 16-7-2016. The weight of 30 and 60 days old Thellassery male kids recorded in the present study, were 5.57 ± 1.46 kgs and 15.65 ± 3.75 kgs respectively. The weight Gain recorded in the present study was best when compared to weights observed by Thiruvankadam et al, at Mecheri Sheep Research station, Pottaneri, from 2002 to 2005. They recorded in Thellassery 30 and 60 days old 17 male kids as 5.0 ± 0.30 and 6.2 ± 0.30 respectively. The average daily gain (ADG) of 202 ± 0.065 grams during the pre and post weaning period were 202 ± 0.065 and 251 ± 0.086 grams were recorded. and were better than those of Meenkshi Sundaram et al who reported ADG as 156 ± 0.03 and 175 ± 0.05 grams in 30 and 60 days old Thellassery male kids respectively in an organized form. The spectacular growth rates for a 60 day period of present study equals to 8 month weight. This marvelous weight gain may be due to additional energy and nutrition, provided in the form of Methosakthi and Power milk. Methosakthi and Power milk boosted the pre and post weaning growth rates and weight gain. Adoption of present extension will help rural poor to send the male kids early to market for quick returns.

Key words-pre-weaning period ,post weaning period ,male Thellassery kids, Methosakthi, Power Milk. Weight gain

Introduction

Goats are a drought-tolerant animal, eating mainly wild grasses, tree buds and leaves. They require less care, and reproduce quickly as they start to bear kids from the age of one year old. Goats are widely distributed around the world with high demand to their meat, in many developing and subtropical countries and arid regions (1). In most of the countries, the productivity of goats is below their potential with inefficiency at primary production and post production system (2). The major advantage of goat's meat (chevon) is the lower mutton meats which make it attractive and healthier for human consumption (3). Goats tend to deposit most of their fat in the visceral rather than carcass depot and produce leaner carcasses (4).

Birth weight, weaning weight, growth rate and ADG are economically important traits. These traits are controlled by polygenes and are also affected by feeding practices, climatic factors and management under farm conditions. (5) Growth traits are important factors influencing profitability for any goat meat producing enterprise.

Rapid growth during early life, can minimize the cost of rearing and thus provide more profit to the farmers [6]. The pre-weaning performance of kids provides a stage upon which post-weaning performance is built [7]. . Since milk production in goat's peaks within 2-3 weeks after parturition and then declines rapidly to a low level by 8-10 weeks after parturition [8], higher growth performance of kids cannot be sustained by mere milk supply from their dams. Thus, additional energy and amino

acids supplementation is therefore, imperative to maintain and enhance the pre-weaning growth performance of kids. The National Research Council indicated that 7.25 kcal ME and 0.284 g CP were required per gram of gain by goats (9). During pre-weaning period, the milk suckled by the fastest growing kids with high genetic potential, is inadequate. The situation is further accentuated when the doe gives birth to either twins or triplets. Providing energy, easily digestible proteins, extra macro and micro minerals to make kids aren't only paving a way for rapid growth, chevron qualities, but also cross over the weaning stress smoothly and much earlier.

There is another great advantage that again the doe, can be prepared for another breeding program, by providing necessary energy, nutrition and micro minerals. It is also hypothesized that supplementing liquid energy, methionine, macro and micro minerals for another 60 days for male kids, from day 5 to 60 makes the growth of kids very rapid and reach the target of early slaughter able weight and fetch good returns to the rural poor.

Materials and methods

Ethical approval

Not required for this study.

The study was conducted at Venkateswar goat farm, near Gangavathi of Bellary district during 2016. Methosakthi is a feed supplement containing rumen undegradable methionine with glycerin, choline, herbal extracts, developed by ABT Corporation,

Bangalore The energy value of methosakthi is 1.55 Mega calories per kg and Power Milk containing mainly calcium 3500 mg, Phosphorus 1750mg and 40,000 mg of carbohydrates per 100 ml, developed by Green Planet, Ludiana. The energy value of Power Milk is 1.55 kilo calories per kg.

Kids and Diets:

This study was conducted on 33 Thellassery male kids during pre-weaning (5 to 30 days) and post-weaning (30 days) periods using a completely-randomized design. All animals were treated for internal and external parasites and vaccinated for common infectious diseases before the experiment started.

Following colostrums consumption, 33 young male Thellassery kids of 3 days age and an average initial BW of 2.60 ± 0.3 kg were randomly allocated into two groups each consisting of 16 and 17 kids. During the suckling period, the kids were with the goats under the same conditions. In addition to free suckling, the kids, were offered *ad libitum* concentrate mixture, greens, roughage, and water.

Group-1=Pre-weaning period-During the pre-weaning phase, on the day 5, initial weight were taken, one- ml of Methosakthi and one ml of liquid Power milk were given orally to 16 male kids, once in a day simultaneously and on day 10 the supplementation was doubled and on the day 20, three mille-liters of each, were given for 30 days. Final

weights were obtained on 9-7-2016. (Table1).

Group 2=Post-weaning period - During the period, after taking initial weights, 5 mile liters of Methosakthi and Power Milk were given, orally, once a day to 17 weaned kids for 30 days. Final weight was recorded on 16-7-2016. Weight gain and average daily gain (ADG) was calculated (Table2).

Results are presented as least squares means standard error of the mean.

Results:

During the pre-weaning period of 30 days, the Thellassery male kids attained $5.57 + /_ 1.46$ kgs of weight and registered the average daily gain (ADG) of $202 + /_ 0.065$ grams and during the post weaning period (30) $15.65 + /_ 3.75$ kgs of weight gain and $251 + /_ 0.086$ grams (ADG).

Discussion

The good growth rate may be due to the supplementation of extra energy, methionine, calcium and Phosphorus in the pre-weaning period. All 16 male kids were successfully weaned without any stress. The ADG for 30 and 60 days old, Thellassery male kids, recorded, in the present study, were better than those reported by Meenakshi Sundaram et al (5), as $156 + /_ 0.03$ and $175 + /_ 0.05$ grams in 30 and 60 days old, Thellassery male kids respectively, in an organized farm.

The weight Gain recorded in the present study, was the best when compared to weights observed by Thiruvankadam et al (10), at Mecheri

Sheep Research station, Pottaneri, from 2002 to 2005. They recorded in Thellassery 30 and 60 days old, 17 male kids as 5.0 +0.30 and 6.2+/-0.30 respectively. The spectacular growth rates for a 60 day

period of present study equals to 8 months of their recorded weight. This marvelous weight gain may be due to additional energy and nutrition provided in the form of Methosakthi and Power milk

Table No: 1 Pre - weaning period (male kids) n=16

Name	Breed	Date of Birth	Weight on 9.07.16	Average Daily Weight Gain
TM0644	THALASSERY	6/7/2016	4.20	0.15
TM065	THALASSERY	6/9/2016	7.50	0.29
TM066	THALASSERY	6/9/2016	5.00	0.19
TM067	THALASSERY	6/9/2016	5.20	0.20
TM068	THALASSERY	6/9/2016	3.70	0.14
TM070	THALASSERY	6/12/2016	3.40	0.13
TM071	THALASSERY	6/14/2016	8.20	0.27
TM072	THALASSERY	6/17/2016	4.30	0.13
TM073	THALASSERY	6/18/2016	5.70	0.18
TM074	THALASSERY	6/18/2016	6.40	0.21
TM075	THALASSERY	6/19/2016	4.80	0.16
TM076	THALASSERY	6/19/2016	6.25	0.20
TM077	THALASSERY	6/21/2016	4.85	0.16
TM078	THALASSERY	6/21/2016	6.25	0.22
TM079	THALASSERY	6/27/2016	5.35	0.24
TM080	THALASSERY	6/27/2016	8.10	0.37
TOTAL			89.45	2.88
MEAN			5.57	0.202
S D			1.46	0.065

Table No: 2 Post weaning period (male kids) n=17

Tag no	Breed	Date of Birth	Weights on 16-7-2016	Average Daily Weight Gain
TM003	THALASSERY	13/05/2016	14.70	0.24
TM004	THALASSERY	13/05/2016	9.70	0.16
TM012	THALASSERY	13/05/2016	8.95	0.15
TM014	THALASSERY	13/05/2016	16.20	0.27
TM005	THALASSERY	13/05/2016	18.35	0.31
TM006	THALASSERY	13/05/2016	19.00	0.32
TM007	THALA-SSERY	13/05/2016	19.50	0.33
TM008	THALASSERY	13/05/2016	14.00	0.23
TM010	THALASSERY	13/05/2016	14.10	0.23
TM011	THALASSERY	13/05/2016	13.30	0.23
TM013	THALASSERY	13/05/2016	19.30	0.32
TM015	THALASSERY	13/05/2016	20.95	0.36
TM018	THALASSERY	13/05/2016	20.20	0.34
TM023	THALASSERY	13/05/2016	19.10	0.32
TM055	THALASSERY	14/05/2016	10.85	0.19
TM056	THALASSERY	14/05/2016	14.45	0.25
TM057	THALASSERY	14/05/2016	13.90	0.24
TOTAL			266.55	4.48
MEAN			15.68	0.251
S D			3.75	0.086

Wiese et al. (11) found that increasing the dietary level of methionine by using Smartamine to Merino lambs did not lead to any increase in growth rate, daily feed intake, feed conversion or final body weight which completely disagreed with the findings of the present work. Khinizy et al, (12) found that feeding high levels of energy to weaned lambs increased the average daily gain and improved feed efficiency, but no effect of high protein intake on their general performance. Haddad (13) reported an increase in average body gain, feed efficiency and carcass characteristics of Jordanian Baladi kids with increasing the dietary energy up to 2.9 Mcal ME/kg DM which also agree with the present findings. The same trend was also reported by Kioumarsis et al. (14) who found an improvement in performance of Taleshi lambs fed high energy. Since the male kids of 60 day attained 15 kgs, they can now be slaughtered. Goats of different ages can be used for human consumption (4) and the younger animals were slaughtered in 8-12 week or with 6-8 kg and the adult at 2 and 6 years of age weighing 20-30 kg). This program appears to be highly useful for rural poor farmers who can market their male kids at an early age

Conclusion:

It is concluded that supplementation of Methosakthi and Power Milk, in the pre weaning period of 30 days and post weaning period of 60 days, in Thellassery male kids, caused rapid gain as 5.57 +/- 1.46 kgs and 15.65 +/- 3.75 kgs and ADG a 202 +/- 0.065 grams and 25 +/- 0.086 grams respectively. This extension

can be practiced by rural poor for augmentation of rural economy.

Competing Interests

Author declares that they have no competing interests.

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