



Scire Science Newsletter

Scire Science Newsletter 2(1), 2018

*An Open Access, Online Newsletter Available at <http://www.scire.co.in/newsletter.php>
2018, Manjari, Ranjith*

DOI: <https://doi.org/10.25129/SSNL2018.157>

Economic benefits and rearing practices of osmanabadi goats for small scale farmers

Dr.P. Manjari* and Dr. Ranjith Kumar

Scientist, Krishi Vigyan Kendra, Periyavaram-524132, Nellore Dist., Andhra Pradesh

**Corresponding author: manjari409@gmail.com*

Introduction

Goat is regarded as "Poor Man's Cow" and is being viewed as "animal of future". The total goat population in India is about 135.17 million (26.40 percent of total livestock population) which gives livelihood to 33 million households (19th Livestock census). Out of this, 1/3rd goat population is contributed by Desi and un-recognized breeds which have low potential for meat, milk and hair production. Among the various important breeds, Osmanabadi goats have been recognized as an excellent dual purpose goat i.e. meat and milk. This is an Indian breed with its native tract in Osmanabad, Ahmednagar, Latur, Parbhani, Sholapur and areas surrounding Maharashtra state.

Breed Features

In general, these goats are large in size and predominantly have black coat color. Isolated white colored spots are noticed only on ears and some on neck and forehead. Some animals are reddish in color. Their horns are straight/curved and small in size (about 13 cm) running backward, upward and downward. About 85 percent of males are horned whereas females are either horned or polled in approximately equal proportions.

*Future Economic benefits and rearing practices of osmanabadi goats for small scale farmers
2018, Manjari, Ranjith*



Osmanabadi goat flock



Osmanabadi kids nibbling tender leaves

Osmanabadi goat height/weight chart

S. No.	Parameters	Adult Male (Buck)	Adult Female (Doe)
1	Body weight (kg)	33.66	32.52
2	Body height (cm at withers)	77.87	74.79
3	Body length (cm)	69.12	67.51
4	Chest girth (cm)	72.06	72.04

Breed Qualities

1. They can easily adapt to varying climatic conditions of India.
2. They are fit for stall-feeding, semi-stall feeding and open field grazing.
3. Adapts easily to locally available feed and fodder.
4. The twinning rate is 80-90% and can also give triplets and quadruplets. Because of its excellent reproductive ability, this breed is on top of all breeds in India.
5. The dressing percentage of this breed is 40-50%.
6. Milking quality- 1-2 liters per day
7. High resistance to seasonal diseases
8. The Age at Puberty is 6-10 months.
9. Age at First calving is 12.69 months.
10. Parturition interval is about 7.1 months.
11. Gestation length is 148-152 days.
12. Lactation length is 7-8 months.
13. Peak lactation reached in 4-6th week.
14. Average milk yield per lactation is 40-75 kgs.
15. Milk Fat % is 8.34.
16. Life Expectancy is about 15-18 years.

Housing Facility

Housing should be in accordance to the environmental conditions. Each age group should be provided appropriate housing. For 10 adult goats, an area of 120 feet is sufficient. Goats do not prefer to get wet and prefer dry area. Hence, housing should be in an elevated area. Building a platform (1.5-2 feet high) ensures good health and productivity of the goats.

*Future Economic benefits and rearing practices of osmanabadi goats for small scale farmers
2018, Manjari, Ranjith*



Platform for goats



Low cost housing systems for small scale farmers

Nutritional requirements

Like other goats, Osmanabadi goats also prefer browsing over grazing i.e. they stand on their hind limbs and pluck tender leafy twigs of herbs, shrubs and small trees. Unlike other domestic animals, goats have particular choices among shrubs and trees. The amount of feed intake depends on body weight of the goats. 3-4 kg of green fodder and 1-2 kg of dry fodder daily.

Among various factors which influence nutrient requirement in goats are age, body weight, stage of lactation and pregnancy, season, micro-environment, breeding season, available resources, etc. However, the average nutrient requirement for goats are as discussed below:

a) Dry matter Requirement:

The dry matter intake of Osmanabadi goat is on an average 4-6% of its live body weight. Feed availability, its palatability and moisture content, etc. influence the dry matter intake of goats. On an average, an adult goat needs about 3 kg dry matter/100 kg body weight for maintenance, 3.5 to 4 kg for growth, 3-3.5 kg during pregnancy, 3.5-5.5 kg for lactation and 2.5 to 3.5 kg for meat and hair production (NRC, 2007).

b) Protein requirement:

For carrying out different physiological functions like growth, pregnancy, lactation and maintenance, proteins are required essentially. The daily average requirement of dietary proteins for maintenance is 20-30 gm digestible crude protein (DCP)/50 kg body weight and for milk production it is 60-70 gm DCP/kg of milk produced. A minimum of 6% total proteins have to be provided otherwise feed intake gets reduced which may result in reduced semen activity and lowered reproductive efficiency.

A protein deficiency in goats diet results in anorexia loss of weight, poor hair growth, decreased milk yield, impaired reproduction, anemia and edema.

c) Mineral Requirements:

Mineral deficiencies rarely occur in Osmanabadi goats as the common feeds and fodders used in feed provides adequate quantities of the important minerals. However, some major minerals like sodium, chloride, calcium, phosphorus and sulphur should be met while feeding the goats. Sodium chloride should be included in the concentrate mixture at the rate of 0.5%. Calcium requirement for maintenance is 4.7 gm/day while for milk production it is 1.3 gm/kg of milk produced. Whereas, phosphorus requirement is 3.3 gm/day for an adult goat. Provision of mineral licks/bricks in the shed is recommended to avoid occurrence of any deficiency.

Economics of rearing of Osmanabadi goats

Depends on gender, local market and goat characters.
For breeding purpose- cost is more

Expenditure		Amount (Rs.)
Non-recurring	Cost of 10 adult goat (9 females and 1 male) Rs.5000/- per goat	50,000/-
	Shed construction	20,000/-
	Utensils	1,000/-
	Miscellaneous	1,000/-
	Total	72,000/-
Recurring	Concentrate feed for 32 kids for 180 days (150 gm/day/kid; feed cost Rs.19 per kg)	16,420/-
	Concentrate feed for buck for 90 days twice a year (250 gm/day/buck; feed cost Rs.19/- per kg)	900/-
	Concentrate feed for does for 90 days twice a year (200 gm/day/buck; feed cost Rs.19/- per kg)	6,200/-
	Medicines, vaccine, etc	3,000/-
	Total	26,520
	Total expenditure	98,520
Income (Considering in one year, 18 male and 18 female kids born in one year and 10% mortality)		Amount (Rs.)
	Sale of 32 goats (Rs.5000/- per goat)	1,60,000/-
	Sale of FYM (Rs.5/- per kg)	5,000/-
	Total income	1,65,000/-
Profit		Amount (Rs.)
Net profit	Rs.(1,65,000-98,520)	66,480/-
Net profit per goat	Rs.66,520/10	6,648/-
B/C ratio	1,65,000/98,520	1.67

Note: In this calculation, non-recurring cost is included (which is considered for first year only) and its depreciation cost is not included. The prices may have temporal and spatial fluctuations.

Apart from reproductive and economical superiority, Osmanabadi goats are also very hardy and resistant to many communicable diseases. Thus, rearing of this breed is beneficial not only to small-scale farmer but also on commercial scale.

*Future Economic beneficts and rearing practices of osmanabadi goats for small scale farmers
2018, Manjari, Ranjith*

References

19th Livestock census-2012. All India Report. Department of Animal Husbandry, Dairying and Fisheries. Ministry of Agriculture.

NRC, 2007. Nutrient requirement of small ruminants: Sheep, goats, cervids and new world camelids. National Academy Press.