

# GOAT-FARMING

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LIVESTOCK, FISHERIES  
&  
GOVERNMENT OF SIKKIM  
VETERINARY SERVICES



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## **GOAT FARMING**

The goat is a versatile animal. It is known as a poor man's cow. Goats can be kept with little expense in the marginal and undulating lands unsuitable for all types of livestock. It makes use of low quality roughages and because of small size, simple requirement of housing, more resistance to diseases, easily disposal of its products it is considered like gold which can be encashed by the farmers at any time of the year and also at farmer's critical hour of need. In Sikkim goat is mostly reared for "Chevon" (Goat Meat) consumed by almost all non- vegetarians. Furthermore in Sikkim's condition, dressing percentage of meat is comparatively more than other places as people prefer unskinned meat.

### **Advantages:**

Goat keeping has now become a key portion in the rural development programme in the developing countries. Goat milk and meat are rich in protein. To the poor, rearing of goat serves as insurance during economic times during economic crisis , goats provide manure, of high NPK value for agricultural farming.

Goat is claimed as an useful animal for poor people and is responsible for

clearing bushes and making land worth cultivation. Looking at the present declination trend of land holdings, the goat husbandry emerges as one of the viable livelihood options among the rural masses.



## **BREEDS**

### **1. SINGHAREY:**

Native breed of Sikkim and also seen in adjoining Himalayan region of West Bengal and Nepal. Used mainly for meat purpose. This breed is generally brown in colour with two long black patches running parallel from the eye region to nostrils.

They usually give multiple births once or twice in a year.

Body weight roughly 26-30 kgs.



## II. BLACK BENGAL:

Found in West Bengal, Bihar, Orissa, Assam and the North Eastern States. Animals are small, predominant colour is black, brown, grey and white are also found.

Shoulder and hip are of equal height, chest is wide, ears are upright and pointed, short hair. Multiple births are common. Skin is of superior quality and is in demand both in India and abroad in the footwear industry.



## III. JAMUNAPARI:

Found in Etawah district in U.P. Used for dual purpose. They are large sized, tall and leggy, large pendulous ears and Roman nose, long thick hair on their hind quarters and possess a glossy coat.

### **Body weight of bucks:**

65-86 Kgs and does: 45 kgs.

**Milk yield:** 2.25 2.7 kgs.

**Lactation period:** 250 days.

**Kidling:** once a year to single or twins.



## IV. BEETAL:

Found in Punjab. Colour is red and tan, heavily spotted on white. Bucks generally have beard.

**Body weight of buck:** 65-85 kgs and does: 45-61 kgs.

**Milk yield:** 1-2kgs.



## HOUSING

For housing goats, low cost shed can be made from locally available resources like bamboo, bakkal, thatch etc.

The shed should have sufficient floor space, well ventilated, preferably elevated platform (Machan type) with facilities for free fall of urine and faeces.

It is advisable to house different groups of animals separately.



**Recommended floor space for different age groups are as follows:**

AGE GROUP	FLOOR SPACE
0-3 months	0.5 - 1.0 sq ft
3-6 months	1.0 - 2.5 sq ft
6-12 months	2.5 - 3.5 sq ft
Buck:	5 sq ft
Doe:	6.5 sq ft

## Feeding characteristics of goats:

1. Goat is a hardy, sure-footed small ruminant. They prefer to browse different kind of fodder.
2. They can be fed with kitchen wastes like vegetable tops and spent grains of kitchen which can save 30-40 % of feeding cost.
3. They don't prefer to eat stale food.
4. They prefer nibbling so feed and fodder should be provided at small quantities and at least 3-4 times in a day.
5. To avoid fodder wastage, keep the fodder on a fodder rack (tatna) or tied and hung in a small bunch.
6. Rotational grazing is advisable for farmers who have enough land to spare for grazing.



### **GENERAL MANAGEMENT TIPS:**

1. Healthy goat of a good breed is of prime importance for a profitable goat farming.
2. Good quality green fodder and balanced feed will enhance the productivity.
3. Keep the breeding buck separately from doe and kids.
4. Buck can be kept @ 1:9 ratio in a farm and to avoid inbreeding the buck should be replaced after every eighteen months.
5. Castrate all the male goats which are not selected for breeding at the age of 2-4 weeks.



### **Points to be remembered for breeding:**

1. Good breed.
2. Healthy and breed able stock.
3. Controlled and monitored breeding.

### **Selection of breeding stock:**

1. Healthy, physically well developed and sexually matured.
2. For selecting breeding buck, testicles should be fully developed, well descended and of equal size.
3. For selecting doe, the udder and teats should be well developed and symmetrical with sufficient milk to nourish her kids.
4. The udder should be soft well spread with long and soft teats and pointed towards front.
5. Age of sexual maturity- 10-15 months or at least 25 kg body weight.
6. To get the desirable kidding size, the buck should be bred once in three days.
7. The doe giving kids after every 8-9 months with twins / triplet kids should be selected.
8. Does with abnormal physical characteristics and irregular oestrus cycle should be timely culled from herd.



### Management of pregnant Doe:

1. The regular oestrus cycle is of 18-20 days.
2. The sign of oestrus will be noticeable from few hours to 2-3 days.
3. For effective breeding, the doe should be bred within 6-12 hrs of oestrus.
4. Gestation period-  $150 \pm 5$  days.
5. No additional feed supplement is required till 3 months of pregnancy.
6. From fourth month of pregnancy, additional feed for growing foetus and nourishing mother is essential which will help for proper growth of developing foetus in the womb and increase milk production after kidding.
7. Timely weaning and flushing with good quality green fodder, balanced feed (400 gms per day), clean drinking water, mineral mixture supplements and proper housing will shorten the inter-kidding period.



### Care and management of new born kids:

1. Special care should be given to the kids for the first 90 days of their age because there is a high mortality rate during this age.
2. The doe and kids should be kept in a healthy, well-ventilated, spacious and dry shed.
3. The kids should be protected from extreme weather.



4. Do not forget to feed colostrum (first milk) within 72 hrs of birth which has high nutritive value and antibodies to keep the kids healthy and ensure fast growth.
5. Feed the milk to kids up to 90 days after which, the kids should be weaned.

**FEEDING:**



Age & Stage of Production	Feed Ingredients	Daily Amount
Birth - 3 days	Colostrum	Adlibitum
3 days - 3 weeks	Whole milk or replacer Water, salt	450 c.c. Adlibitum
3 weeks- 4 months	Whole milk creep feed leguminous fodder water, salt	450c.c.(Upto 8 wks) 450 gm daily Adlibitum Adlibitum
4 months- freshening Pregnant	Concentrated mixture Concentrated mixture Fodder (Napier) Water and salt	450 gms 450-500 gms Adlibitum Adlibitum
Milking doe	Conc. Mixture Trace minerals (Ca & P) Molasses	350 gm / litre of milk 1% 5-7% of conc mixture
Buck	Only pasture (Non-breeding season) Conc Mixture	@ 400 gm daily (at breeding season)

E.M. Bokashi can be fed @ 10-20 gms per kg of feed at growing phase.



## **DISEASES:**

### **1) Mastitis:**

**Symptoms:** Enlarged hot, painful udder, fever, milk watery with flakes of blood

**Prevention and treatment:** Improve hygiene, application of antibiotics

### **2) Foot rot:**

**Symptoms:** Lameness, hoof will look as if it is rotten and smell bad. Sign of pain if pressed

#### **Prevention & Treatment:**

Hoof Trimming, soaking in bath of water with CuSo<sub>4</sub>.

### **3) Brucellosis:**

**Symptoms:** Abortion in late pregnancy, Retention of placenta and metritis. In bucks- Infertility, orchitis and swollen joints.

**Prevention & Treatment:** Isolation of infected animals, culling of animals.

### **4) F.M.D.**

**Symptoms:** Fever, lesions on gums, tongue and inner digital spheres stringy salivation.

**Prevention & Treatment:** Vaccination and hygiene , Isolation of sick animals.

### **5) Contagious:**

#### **Caprine pleuropneumonia**

**Symptoms:**Diarrhoea, Vesicles on the mouth,Nasal discharge, Ocular discharge, Fever, highly infectious and fatal

### **6) Internal Parasites:**

**Symptoms:** Loss of weight, reduction in milk yield, diarrhoea, anaemia

**Prevention and control:** Good quality food and clean water, medication

### Vaccination Schedule

<b>Month</b>	<b>Vaccine</b>	<b>Adult Goat</b>	<b>Kids</b>
January	Contagious pleuro pneumonia	0.2 ml i/dermal	0.2 ml i/dermal
March	H.S. / B.Q	5 ml s/c	2.5 ml s/c
March/ April	F.M.D.	5 ml s/c	0.5 ml s/c

### ECONOMICS OF GOAT FARMING (dual purpose) - (4 Female and 1 male)

<b>A. Capital Expenditure</b>	<b>Amount</b>
1. Cost of breedable parent stock (Body weight – 25 kg. av.) 5 nos. @ Rs 4,500/- goat	Rs. 22,500.00
2. Cost of shed construction with the use of local materials i.e. bamboo, thatch roof, wooden pillars etc.	<u>Rs. 5,000.00</u> <b>Rs.27,500.00</b>
<b>B. Recurring cost</b>	
1. Feeding of 5 nos. of goats for 12 months @ 300gm/day/goat @ Rs.15/- kg of conc. Feed	Rs. 8,100.00
2. Cost of insurance of parent stock @ 5% for one year	Rs. 1,500.00
3. Cost of medicines and vaccines if any	Rs. 800.00
4. Cost of feeding equipments and ropes etc.	Rs. 1,000.00
<b>Total:</b>	<b><u>Rs.11,400.00</u></b>
5. Feeding of the parent stock at the same rate as above during 2 <sup>nd</sup> year.	Rs. 8,100.00 Rs. 4,320.00
6. Feeding of kids (16 nos.) for four months @ 150 gm on average/day i.e. 2.4 kg/day	<u>Rs. 9,720.00</u>
7. Feeding of remaining 8 nos. of male kids for the remaining period i.e. 8-9 months (mutton purpose) @ 300 gm/day	<b><u>Rs 22,140.00</u></b>
<b>TOTAL</b>	<b>Rs 33,540.00</b>

### RETURNS

1. Sale of 8 Nos of 3-4 months kids expecting twin kidding after 8-9 months of farming and sale starts from 13-14 months. Average price of young kids expected to be Rs.2500/-	Rs.20,000.00
2. Sale of 8 nos. of male goats reared for mutton @ Rs.6000/- goats	Rs.48,000.00
3. Sale of manure approximately 20 bags of 50 kgs. Each @ Rs.200/bag	<u>Rs. 2,000.00</u> <b>Rs.70,000.00</b>
Net income from first generation	Rs.70,000.00 (-) 33,540.00 <b>Rs.36,460.00</b>

**Total Project Cost for one unit for first year = Rs. 72,440.00**

*The Income is directly proportionate to the No. of sales of Progeny from second generation onwards.*

**(Parent stock and infrastructures comes under capital investment which is generally placed under asset in profit and loss statement).**

**ECONOMICS OF GOAT FARMING (DUAL PURPOSE)  
- 8 Females and 2 males**

<b>A. Capital Expenditure</b>	<b>Amount</b>
1. Cost of breedable parent stock goats (average body weight – 25 kg.) 10 nos. @ Rs 4,500/- per goat	Rs.45,000.00
2. Cost of shed construction with the use of local materials i.e. bamboo, thatch roof, wooden pillars etc.	Rs.10,000.00 <b>Rs.55,000.00</b>
<b>B. Recurring cost</b>	
1. Feeding of 10 nos. of goats for 12 months @ 300gm/day/goat @ Rs.15/- kg of conc. Feed	Rs.16,200.00
2. Cost of insurance of parent stock @ 5% for one year	Rs. 3,000.00
3. Cost of medicines and vaccines if any	Rs. 1,600.00
4. Cost of feeding equipments and ropes etc	Rs. 2,000.00
<b>Total:</b>	<b>Rs.22,800.00</b>
5. Feeding of the parent stock at the same rate as above during 2 <sup>nd</sup> year	Rs.16,200.00 Rs. 8,640.00
6. Feeding of kids (32 nos.) for four months @ 150 gm on average/day i.e. 2.4 kg/day	Rs.19,440.00
7. Feeding of remaining 8 nos. of male kids for the remaining period i.e. 8-9 months (mutton purpose) @ 300 gm/day.	<b>Rs 44,280.00</b>
<b>TOTAL</b>	<b>Rs 67,080.00</b>

**RETURNS**

1. Sale of 16 Nos 3-4 months kids expecting twin kidding after 8-9 months of farming and sale starts from 13-14 months. Average price of young kids expected to be Rs.2,500/-	Rs. 40,000.00 Rs. 96,000.00
2. Sale of 16 nos. of male goats reared for mutton @ Rs.6000/- goats	Rs. 8,000.00 <b>Rs.1,41,000.00</b>
3. Sale of manure approximately 20 bags of 50 kgs. each @ Rs.200/bag	
Net income from first generation	Rs.1,44,000.00 (-) 67,080.00 <b>Rs. 73,920.00</b>

**Total Project Cost for one unit for first year = Rs.1,22,080.00**

*The Income is directly proportionate to the No. of sales of Progeny from second generation onwards.*

**(Parent stock and infrastructures comes under capital investment which is generally placed under asset in profit and loss statement.)**

**ECONOMICS OF GOAT FARMING (DUAL PURPOSE)**  
**– ( 16 Female and 4 Male)**

<b>A. Capital Expenditure</b>	<b>Amount (in Rs)</b>
1. Cost of breedable parent stock goats- 20 nos. @ Rs 4,500/ goat.	90,000.00
2. Cost of shed construction with the use of local materials i.e. bamboo, thatch floor, wooden pillars etc.	20,000.00 <b>1,10,000.00</b>
<b>B. Recurring cost</b>	
1. Feeding of 20 nos . of goats for 12 months @ 300 gms/day/goat @ Rs. 15/- kg of conc feed.	32,400.00
2. Cost of insurance of parent stock @ 5%.	6,000.00
3. Cost of medicines and vaccines if any.	3,200.00
4. Cost of feeding equipments and ropes etc.	4,000.00
<b>TOTAL</b>	<b>Rs 45,600.00</b>
5. Feeding of parent stock at the same rate as above during 2 <sup>nd</sup> year.	32,400.00 17,280.00
6. Feeding of kids (64 nos) for four months @ 150 gm on average/day i.e. 2.4 kg/day.	38,880.00 <b>Rs 88,560.00</b>
<b>TOTAL</b>	<b>Rs 1,34,160.00</b>

**RETURNS**

1. Sale of 32 Nos of 3-4 months kids expecting twin kidding after 8-9 months of farming and sale starts from 13-14 months. Average price of young kids expected to be Rs 2,500/-.	80,000.00
2. Sale of 32 nos. of castrated male goats weighing 25 kgs carcass weight @ Rs 240/kg of mutton @ 6,000/ goat.	1,92,000.00
3. Sale of manure approximately 100 bags of 50 Kgs each @ Rs 100/ bag.	10,000.00
<b>TOTAL</b>	<b>Rs 2,82,000.00</b>
Net income from first generation	2,82,000.00 <u>(-) 1,34,160.00</u> <b>Rs 1,47,840.00</b>

**Total Project cost for one unit for first year= Rs 2,44,160.00**

*The Income is directly proportionate to the No. of sales of Progeny from second generation onwards.*

**(Parent stock and infrastructures comes under capital investment which is generally placed under asset in profit and loss statement).**

**COMPARITIVE INCOME STATEMENT BETWEEN  
A GOVERNMENT SERVANT AND A GOAT FARMER**

Sl. No	Employed Group -D Official Income per Annum	Self Employed Farmer Income per Annum
1.	Rs, 1,50,960/-	<u>10 Goat unit</u> <u>20 Goat unit</u> Rs, 73,920/-      Rs 1,47,840/-
2.	Age limit on for 58 yrs.	No Age limit.
3.	Single Employment and Time constraint (10 Am- 4 Pm).	Other members of the family can also be engaged/provide employment to others.
4.	Sikkim Government Service Conduct rule is applicable.	Conduct rule not applicable.
5.	Earning Limited.	Earning not limited.
6.	No other activities like entrepreneurship for income generation.	Can pick up other activities simultaneously for added income.

