

Sheep Farming

1. Introduction

Sheep with its multi-facet utility for wool, meat, milk, skins and manure, form an important component of rural economy particularly in the arid, semi-arid and mountainous areas of the country. It provides a dependable source of income to the shepherds through sale of wool and animals. The advantages of sheep farming are:



- a. Sheep do not need expensive buildings to house them and on the other hand require less labour than other kinds of livestock.
- b. The foundation stock are relatively cheap and the flock can be multiplied rapidly.
- c. Sheep are economical converter of grass into meat and wool.
- d. Sheep will eat varied kinds of plants compared to other kind of livestock. This makes them excellent weed destroyer.
- e. Unlike goats, sheep hardly damage any tree
- f. The production of wool, meat and manure provides three different sources of income to the shepherd.
- g. The structure of their lips helps them to clean grains lost at harvest time and thus convert waste feed into profitable products.
- h. Mutton is one kind of meat towards which there is no prejudice by any community in India and further development of superior breeds for mutton production will have a great scope in the developing economy of India.

2. Scope for Sheep Farming and its National Importance

The country has 71.6 million sheep as per 2012-13 annual report of Animal Husbandry Department and ranks sixth in the world. The contribution of sheep through export of meat is 8 per cent of the total export value of agricultural and processed food products. Sheep skin in the form of leather and leather products is also exported. Sheep make a valuable contribution to the livelihood of the economically weaker sections of the society. Amongst the livestock owners the shepherds are the poorest of the lot.

3. Financial assistance for sheep farming

Loan from banks with refinance facility from NABARD is available for starting sheep farming. For obtaining bank loan, the farmers should apply to the nearest branch of a Commercial, Co-operative or Regional Rural Bank in their area in the prescribed application form which is available in the branches of financing bank. The Technical officer attached to or the Manager of the bank can help / give guidance to the farmers in preparing the project report to obtain bank loan. For sheep development schemes with very large outlays, detailed reports will have to be prepared. For high value projects, the borrowers can utilise the services of NABARD Consultancy Services (NABCONS) who are having wide experience in preparation of Detailed Project Reports.

4. Scheme Formulation

A scheme can be prepared by a beneficiary after consulting local technical persons of State Animal Husbandry Department, DRDA, Sheep Development Corporation, Sheep Co-operative society / union / federation and commercial farmers. If possible, the beneficiaries should also visit progressive sheep farmers and government / agricultural university Sheep farms in the vicinity and discuss the profitability of sheep farming. A good practical training and experience in sheep farming will be highly desirable. The sheep co-operative societies established in the villages as a result of efforts by the Animal Husbandry/Sheep Development Department of State Government / Sheep Development Board would provide all supporting facilities, particularly marketing of live animals and wool.

5. Requirements of a Good Project

The project should include the following information on technical, financial and managerial aspects in detail based on type of unit and capacity.

Technical:

- a. Nearness of the selected area to veterinary centres and wool collection centre and the financing bank's branch
- b. Availability of good quality animals in nearby livestock markets
- c. Source of training facilities.
- d. Availability of good grazing ground / lands.
- e. Availability of green/dry fodder, concentrate feed, medicines etc.
- f. Availability of veterinary aid and marketing facilities near the scheme area.

Financial:

- a. Unit Cost - The average cost of Sheep unit.
- b. Input cost for feed and fodder, veterinary aid, insurance, etc.
- c. Output costs i.e. sale price of animals, penning etc.
- d. Income-expenditure statement and annual gross surplus.
- e. Cash flow analysis.
- f. Repayment schedule i.e. repayment of principal loan amount and interest.

6. Appraisal of the project

The project so formulated considering the above mentioned aspects should be submitted to the nearest branch of the bank for availing credit facility for establishment of the sheep farm. The bank will then examine the project for its technical feasibility, financial viability and bankability.

7. Sanction of Bank Loan and its Disbursement

After ensuring technical feasibility and economic viability, the scheme will be sanctioned by the bank. The loan is disbursed in stages against creation of specific assets such as construction of sheds, purchase of equipments and animals. The end use of the loan is verified and constant follow-up is done by the bank.

8. Lending Terms - General**8.1 Outlay:**

Outlay of the project depends on the local conditions, unit size and the investment components included in the project. Prevailing market prices / cost may be considered to arrive at the outlay.

8.2 Margin Money:

Margin depends on the category of the borrowers and may range from 10% to 25%.

8.3 Interest Rate:

Banks are free to decide the interest rates within overall RBI guidelines. However, for working out financial viability and bankability of model project, the rate of interest is assumed at 12.00% p.a.

8.4 Security:

Security will be as per RBI / NABARD guidelines issued from time to time.

8.5 Repayment of loan:

The loan repayment is determined, on the basis of gross surplus generated in the project. Usually the repayment period of loan for sheep farming is 6 to 8 years.

8.6 Insurance:

The animals and other assets (shed, equipment) may be insured.

9. Economics of Sheep Farming

A model economics for sheep farming with a unit size of 100 sheep is given below. This is indicative and the applicable input and output costs and the parameters observed at the field level may be incorporated.

A. Project Cost

		Amount in Rs.
I	Land and Building	Cost
1	Land fencing and partitioning	
a	Fencing for compound 850 R Ft @ Rs. 15 per R Ft. in 5 rows	12750
b	Gates	5000
	Total	17750
2	Civil structures	
	Shed @ 10 sq.ft for ewe,20 sq.ft for ram and 4 Sq.ft for kid 100 ewes,4 rams and assuming 120 lambs maximum (10*100)+(20*4)+(4*110)= 1520 Sqft @ Rs. 100 per sq.ft	152000
	Total	152000
3	Equipment	
a	First aid equipments	1000
	Feeders and waterers	10400
	Total	11400
II	Animals	
a	Ewes 100 @ Rs 4500 per animal- 9-12 months age	450000
b	Rams 4 @ Rs. 5500 per animal - 12-15 months age	22000
	Total	472000
III	Working Capital	
a	Feed	
	Adult female	77315
	Adult male	3093
	Kids	12600
	Medicines	6800
	Insurance	18720
	Total of III	118528
	TFO	771678
	Bank Loan	578758.2
	Margin Money	192919

B. Techno-economic Parameters

SL.No.	Parameters	
1	Cost of one year Ram (in Rs.)	5500
2	Cost of one year Ewe (in Rs.)	4500
3	Cost of male lamb (in Rs.)	4500
4	Cost of female lamb (in Rs.)	4000
5	Adult mortality	5%
6	Lamb mortality	15%
7	Culling rate among ewes	20%
8	Cost of concentrate feed (in Rs.)	12.00/kg
9	Insurance	4%
10	Sale price of adult ewe (in Rs.)	4500
11	Sale price of adult ram (in Rs.)	5000
12	Lambing	80%
13	Rate of interest	12%
14	Interlambing period in months	9
15	Medicine cost/year (in Rs.)	
		Doe/ewe/buck 50
		Kid 20
16	Cost of skin of dead animal (in Rs.)	
		Adult 150
		Kid 100
17	Income from manure (in Rs.)	
		Adult 75
		Kid 25

Feed consumption in Kg	Green	Dry	Concentrate	Cost per animal
Ewe	547.5	365	11.2	773.15
Ram	547.5	365	8.4	739.55
Male lamb	54	22.5	9	157.5
Female lamb	54	22.5	9	157.5
Cost of feed	0.5	1	12	

Year	Batch	No of animals in beginning of the year				No of lambs born		No of Deaths				No of animals culled		No of lambs sold		Total disposed				No of animals retained at the end of the year			
		Adults		Lambs				Adults		Lambs						Adults		Lambs		Adults		Lambs	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
I		4	100	0	0	40	40	0	5	6	6	0	0	0	0	0	5	6	6	4	95	34	34
II		4	95	34	34	43	43	0	5	6	6	0	0	33	20	0	5	39	26	5	104	37	37
III	A	5	104	37	37	47	47	1	5	7	7	0	0	36	25	1	5	43	32	6	111	40	40
	B	6	111	40	40	50	50	0	0	7	7	2	10	39	20	2	10	46	27	5	121	43	43
IV		5	121	43	43	54	54	0	6	8	8	1	20	42	23	1	26	50	31	5	115	46	46
V		5	115	46	46	52	52	1	6	8	8	0	20	45	25	1	26	53	33	5	110	44	44
VI	C	5	110	44	44	50	50	0	6	7	7	0	0	44	34	0	6	51	41	5	114	43	43
	D	5	114	43	43	51	51	0	0	8	8	2	20	42	30	2	20	50	38	4	107	43	43
VII		4	107	43	43	48	48	0	5	7	7	1	0	42	40	1	5	49	47	5	105	41	41

C. Cash flow statement

		Years						
		1	2	3	4	5	6	7
Expenditure								
Cost of feed in Rs.								
Sheep								
Female adult		77315	73449.25	166227.25	93551.15	88912.25	173185.6	82727.05
Male adult		3092.6	3092.6	8504.65	3865.75	3865.75	7731.5	3092.6
Lambs		12600	13466.25	30476.25	17151.75	16301.25	31752	15167.25
Cost of medicines for adults		5200	4950	11300	6300	6000	11700	5550
Cost of medicines for kids		1600	1710	3870	2178	2070	4032	1926
Wages and salaries			0	0	0	0	0	0
Insurance		18720	17820	19620	22680	21600	20700	19980
Interest on Cash credit		0	0	0	0	0	0	0
Capitalised Cost		118527.6						
Total		0	114488.1	239998.15	145726.65	138749.25	249101.1	128442.9
Income								
Sale of kids in Rs.								
Male lamb		0	148500	337500	189000	202500	387000	189000
Female lamb		0	80000	180000	92000	100000	256000	160000
Sale of culls								
Male		0	0	10000	5000	0	10000	5000
Female		0	0	45000	90000	90000	90000	0
Sale of skins		1950	1995	3832.5	2541	2565	3849	2247
Sale of manure		7800	9125	10025	11600	11300	10825	10475
Insurance claims		0	0	0	0	0	0	0
Total		9750	239620	586357.5	390141	406365	757674	366722

Gross profit		9750	125131.9	346359.35	244414.35	267615.75	508572.9	238279.1
Capital Expenditure		771677.6						
Salvage value								719000
Net profit		-761927.6	125131.9	346359.35	244414.35	267615.75	508572.9	957279.1
DF		0.869	0.756	0.658	0.571	0.497	0.432	0.375
PW of Benefits 15 % DF		8472.75	181152.72	385823.24	222770.51	201963.41	327315.17	407145.75
PW of Costs at 15 %DF		670587.8344	86553.004	157918.78	83209.917	68958.377	107611.68	48166.088
BCR at 15 %		1.418344633						
IRR		0.336055467	NPW at 15 %	511637.86				
		Int rate on TL	0.12					
Cash accrual		9750	125131.9	346359.35	244414.35	267615.75	508572.9	238279.1
Loan amount		578758.2	578758.2	578758.2	428758.2	328758.2	228758.2	0
Interest		34725.492	69450.984	69450.984	51450.984	39450.984	27450.984	0
Repayment								
Interest		0	104176.48	69450.984	51450.984	39450.984	27450.984	0
Principal		0	0	150000	100000	100000	228758.2	0
Total		0	104176.48	219450.98	151450.98	139450.98	256209.18	0
Cash after repayment		9750	20955.424	126908.37	92963.366	128164.77	252363.72	238279.1
DSCR			1.2011531	1.5782994	1.6138182	1.9190668	1.9849909	
Avg DSCR		1.65946567						
Sensitivity analysis								
Total costs		0	114488.1	239998.15	145726.65	138749.25	249101.1	128442.9
Total Benefits		8775	215658	527721.75	351126.9	365728.5	681906.6	330049.8

Capital cost		771677.6						
Salvage value								719000
Net profit		-762902.6	101169.9	287723.6	205400.25	226979.25	1151805.5	201606.9
IRR		0.304711445						

DISCLAIMER

The views expressed in this model project are advisory in nature. NABARD assume no financial liability to anyone using the report for any purpose. The actual cost and returns of projects will have to be taken on a case by case basis considering the specific requirement of projects