

**A COMPARATIVE STUDY OF MANAGEMENT PRACTICES OF COMMERCIAL  
AND SUBSISTENCE GOAT FARMING OF DHADING, NEPAL**

**ANJAN THAPALIYA**

**NOVEMBER, 2020**

**A COMPARATIVE STUDY OF MANAGEMENT PRACTICES OF COMMERCIAL  
AND SUBSISTENCE GOAT FARMING OF DHADING, NEPAL**

**ANJAN THAPALIYA**

**RESEARCH REPORT**

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**LAMJUNG CAMPUS, LAMJUNG, NEPAL**

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**PRACTICUM ASSESSMENT OF**

**BACHELOR OF SCIENCE IN AGRICULTURE**

**NOVEMBER, 2020**

## CERTIFICATE

This research report here to, entitled “**A COMPARATIVE STUDY OF MANAGEMENT PRACTICES OF COMMERCIAL AND SUBSISTENCE GOAT FARMING OF DHADING, NEPAL**” prepared and submitted by **ANJAN THAPALIYA (Exam roll no. 155)**, in the fulfilment of the requirements of the Undergraduate Practicum Assessment for the Bachelors of Science in Agriculture, is hereby accepted.

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Date: 2020/11/

**DEDICATED TO**  
**MY BELOVED FAMILY**

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-Anjan Thapaliya

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## ACRONYMS AND ABBREVIATIONS

GDP	Gross Domestic Product
AGDP	Agriculture Gross Domestic Product
CBS	Central Bureau of Statistics
DADO	District Agriculture Development Office
GO	Government Organizations
NGO	Non- Government Organizations
INGO	International Non-Government Organizations
NARC	National Agriculture Research Council
MOAD	Ministry of Agriculture and Livestock Development
MOAC	Ministry of Agriculture and Cooperative
NLSS	Nepal Living Standards Survey
NLTA	Nepal Livestock Traders Association
FGD	Focused Group Discussion
Fig.	Figure
%	Percentage



## ABSTRACT

Goat farming is one of the most important subsectors of Nepalese Agriculture with the involvement of 75% of total population of Nepal. Goat production is prolific and well adopted by people of all caste, ethnic groups and all climatic zones. Poor feeding and husbandry practices have hindered the overall management and production of goat in Nepal. The study was carried out to access the comparison of husbandry practices practiced during goat production under subsistence and commercial goat farms. Total of 60 farms, 30 commercial and 30 subsistence farms were surveyed by convenience sampling and snowball sampling respectively using structured questionnaire in Benighat Rorang Rural Municipality of Dhading district during May 2019. In majority of subsistence farms (70%), the major source of income was agriculture except goat farms whereas most of the commercial farms (56%) goat rearing was the major source of income followed by agriculture except goat (44%).Majority of subsistence farms (70%) followed intensive system of rearing but commercial farms (81%) followed semi- intensive system of rearing. Both types of farms were not much successively forward in good management practices. Knowledge of housing system has been lacking in almost all the farmers. Separate housing for kids, male and female was seen highly significant in commercial farms. There is significant effect of availability of pasture in commercial production of goat. Only 20% of goat farmer involved in tours and trainings whereas there was almost negligible help from GOs and NGOs to the farmers. From this study, we may conclude that both commercial and subsistence goat farmers must be provided with skills enhancing programs so that they can upgrade themselves in better management and increased goat production.

**Keywords:** Subsistence, Commercial, Husbandry, semi- intensive, intensive

# 1. INTRODUCTION

## 1.1 Background

Nepali is an agri-based country with 65.6 % of population based on agriculture that contributes 35% of GDP and comprises of crop, livestock and fodder trees. Moreover, the contribution of livestock to national GDP is significant i.e. 14 % and 32% of the AGDP. According to MOAC (2011), around 75% of household are rearing goat. This shows preference of goat over other livestock species for the farm household. According to MoAD (2012), the data showed that in total contribution of livestock the contribution of goat meat is 20 percent. Small ruminant especially goat has a significant role in the total livestock contribution. According to MoAC (2004, Goat constitutes a considerable proportion of total ruminants in hills (49.66 % of total ruminants in hills) and terai (36.47% of total ruminant population) of Nepal, however in case of mountain sheep is more dominated. Thus the sector of goat provides a robust support in the livelihood of Nepalese farmers of hills and terai which constitute the higher proportion of land area and population of the country.

Goat farming in Nepal is popular among rural farmers because of low investment requirements. About 49.8 % of households (2.79 million of the 5.6 million) rear goats, with average holdings of 3.3/household (CBS, 2012). According to Heifer International Nepal (2012), Nepal has goat population of around 9.19 million with an annual growth of just above 2%.

Based on the data obtained from Government of Nepal, 2017 there is increasing trend of major livestock; however, goat population is increasing much rapidly as compared to other livestock. With the consumption all over the country among all the cultural, social and ethnic groups, goat meat is the second most consumed meat in Nepal after buffalo meat, and constitutes for a quarter of all meat consumed despite the highest cost per unit weight. Goat

meat industry has a good market potential for the budding entrepreneurs and investors if they could capitalize on the growing market demand.

Goat farming is a major part of livestock sector and is mainly adopted by the small as well as marginal farmers whose primary and stable source of income is agriculture (Neupane et al., 2018). Nepal has long been based on subsistence farming, where the farmers secure their livelihood from fragmented plots of land cultivated in difficult conditions mostly rainfed where only 28% of the total agricultural land (4.21 million ha) is irrigated.

Commercial goat farming is a process of rearing goats in a large scale for commercial production of meat, milk and skins (leather). Commercial goat production is increasing day by day in Nepal as the demand for meat is growing. Goat farming business is one of the emerging business as this has huge scope of getting profits. This has lot of economic importance as it provides excellent income for marginal and landless farmers. In order to be successful in commercial goat farming, one should have proper goat farming business plan before rearing the goat on large scale. The goat business plan should include goat breed type, basic infrastructure (house/shed), number of animals, feed management, insurance, vaccinations (disease control) and other medical information and marketing. Pregnant female goats and newly born kids needs more care in terms of nutrition/feed and medical attention (World Bank, 2018). These farmers are characterized by socio-economic vulnerability due to their inability to withstand adverse economic as well as social risk. Goat rearing provides insurance for them in case of failure of crop under this insecure situation. Goat is a significant source of capital storage, income and employment generation for such households.

## **1.2 Statement of the problem**

There is a wide and distinct gap between demand and supply of goats. Though Nepalese people are fond of many varieties of goat meat dishes like sekuwa (meat roasted in natural wood/log fire), sukuti (dry meat dish), taas (fried goat meat dish), bhutan (dish made from goat's gut) and many more. However, Nepal hasn't yet been self-sufficient in the production of Goat meat to support the demand. On the one hand, Nepal seriously lacks proper technology in rearing, housing and processing. Whereas, on the other hand, there is not enough storage facilities, clean slaughterhouses, and proper distribution systems. Adding to that, there is inadequate scientific research on breeding, feeding, management, and disease control. And, all these scenarios are hindering large scale commercial production in Nepal. To meet the demand, there is high import of live goats from India. According to NLTA (Nepal Livestock Traders Association), two-lakhs live goats enter Nepal every year through checkpoint at Nepalgunj, Krishnanagar and Bhairahawa. Similarly, lower income of the farmers is due to prevalent traditional methods and technologies of goat production. Healthy and appropriate feeding practice is lacking (Tiwari et al., 2003). So, looking at the present context, there is a serious urgency of upgrade in technology to gear up the commercial production process.

## **1.3 Rationale of the study:**

The Nepalese agriculture system comprises of crop, livestock and fodder trees where livestock provides milk, meat, manure, draught power, fertilizer, household fuel and fiber (Kattel, 2016). Small ruminant especially goat has a significant role in the total livestock contribution. According to MoAC (2004), Goat constitutes a considerable proportion of total ruminants in hills (49.66 % of total ruminants in hills) and terai (36.47% of total ruminant population) of Nepal, however in case of mountain sheep is more dominated. Thus the sector

of goat provides a robust support in the livelihood of Nepalese farmers of hills and terai which constitute the higher proportion of land area and population of the country. According to Herrera et al., 2011, the goats reared in semi intensive system shows better performance than in intensive system. A study by Maharjan, Bauer, & Knerr (2013), suggested that trend of national and international migration of youth male in search of employment has resulted to agriculture and livestock rearing to be handled by the females and children. The goats being small ruminants can be easily handled and taken care by the women as well as children. Goat provides milk, meat, fiber, skins and manure along with the livelihood option to the subsistence of small holders and landless rural poor. In this regard, the study aimed to document the present situation of goat farming in context of Nepalese scenario, its importance and other allied aspect in socio economic sector of Nepal.

## **1.4 Objectives**

### **1.4.1 Broad objectives**

- To study status and compare different husbandry practices of commercial and subsistence goat farming

### **1.4.2 Specific objectives**

- To assess the socio-economic characteristics of commercial and subsistence goat farmers
- To compare different management practices followed by goat farmers

## 2. REVIEW OF LITERATURE

The review of literature in any research is necessary as it provides a new dimension for reviewing the stock of knowledge and information relevant to the proposed research. This knowledge gives a guideline in furnishing the future problem and validating the existing findings. Although a very few researches related to present study have been carried out in our country, but numerous researches have been carried out in different parts of the world.

Nepal hasn't yet been self-sufficient in the production of Goat meat to support the demand. The productivity of goats under the prevailing traditional extensive production system is low (Singh and Kumar, 2007) mainly because of feed scarcity and lack of adoption of improved technologies and management practices. Goats are reported to be more economical than cattle and sheep under natural grazing browsing (*Sharma and Jindal, 2008*). The farmers receive inputs like salt, veterinary medicines and seed of fodder and forages from private firms and agrovet suppliers whereas the district level government offices provide technical services along with necessary inputs (Poudel, 2016). Farmers have perceived that optimum age for meat production for both khari and Boer is 18 months but weight gained by Boer goat was 45kg whereas the weights gain of Khari goat ranges from 26 to 28kg. PPR and coccidiosis were the major diseases of Khari goat in the selected district. (S. Sapkota, M. Kolakshyapati, S. Gairhe, N. Upadhyay and Y. Acharya, 2016)

Boer goats are improved breeds which could perform far better than the locally available goats. It is reported that the Khari goat can reach up to 25kg only after one year of its birth where as Boer goat gets the same weight when it is around four months (Sapkota, Kolakshyapati, Gaire, Upadhyay, & Acharya, 2016). But this breed required intensive care and management along with technical availability so a cross with local goat Khari gives off springs with an average weight of 65 Kg which is even profitable for the farmers as compared

to previous practice. However this growth needs proper care and management along with balanced diet. (N. Neupane, H. Neupane and B. Dhital, 2018).

A study made by Heifer International reveals lack of organized goat market in Nepal except some weekly scheduled markets in the Narayani-east sector. Mostly the farmers are selling the products mostly on the basis of individual contact. A typical smallholder farmer earns NPR 15,000 – 20,000 annually from selling their goats (NLSS, 2012). Nepali *et al.*, (2007), stated that in western hills of Nepal farmers are dependent on middlemen to sell their products or have to search for interested people who are ready to slaughter the goat and sell in the village.

### 3. MATERIALS AND METHODS

#### 3.1. Study Area

Dhading District, a part of Bagmati Pradesh, is one of the seventy-seven districts of Nepal. The district, with Dhading Besi as its district headquarters, covers an area of 1,926km<sup>2</sup> and has a population of 336,067. Here, the research was conducted mainly in Benighat Rorang Rural Municipality covering an area of 207.71 km<sup>2</sup> and population of about 31,475.

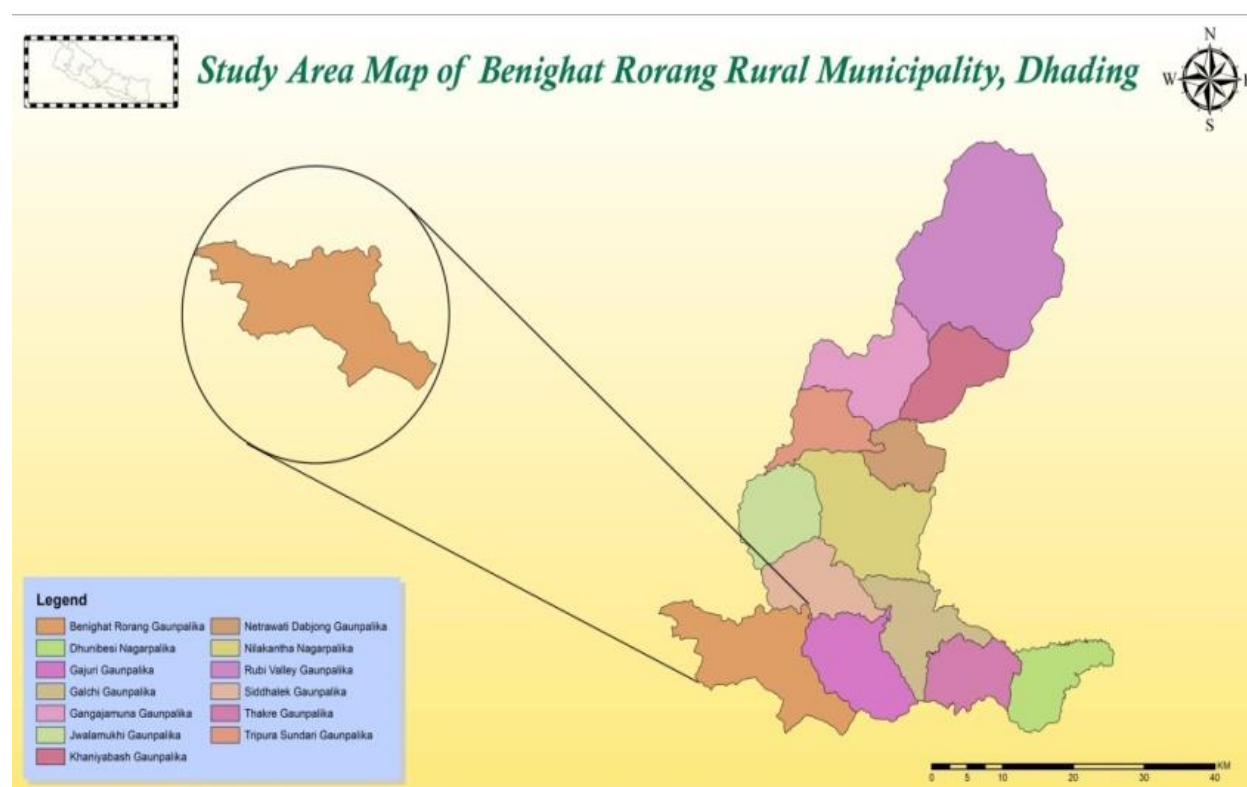


Figure 1: Map of study area

#### 3.2. Study design

A total of 60 goat farmers (both from subsistence and commercial) belonging to Dhading district of Nepal in which convenience sampling was done for subsistence farms and snowball sampling was done for commercial farms. The field survey was conducted during January to March 2020 and the data was collected from the sample. Then key informant interview, FGD was carried out to find the current status of goat farming. Similarly, farming



type was categorised in two types; subsistence and commercial farms. Farms consisting of less than 25 goats were subsistence goat farms whereas farms consisting more than 25 goats were commercial goat farms.

### **3.3.Sources of Data**

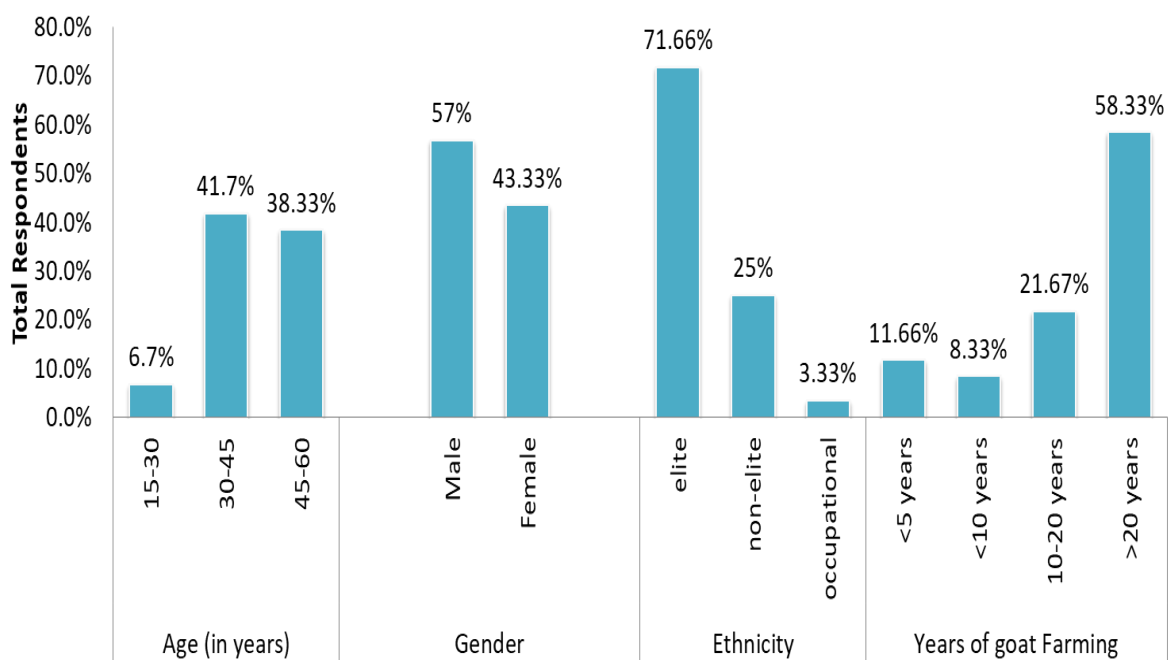
The local communities and subsistence farmers who are long experienced in traditional as well as commercial goat farming were the primary source of information. Field Survey was conducted through structured and semi structured questionnaire, focus group discussion, direct observation and key informant interview. Secondary information was collected from the various published materials like journals, research articles, proceedings of various NGOs and INGOs, facts issued by Bandipur Goat Research Centre. The local political leaders, working agencies, and local government were also the source of secondary information.

### **3.4.Methods and Techniques of Data Analysis**

The information collected from both primary and secondary sources was analysed by using Statistical Packages for Social Science (SPSS version 25) and Microsoft Excel 2010. These applications were used for qualitative and quantitative data. Descriptive statistics was done in the form of pie charts and bar diagrams. Inferential statistics was done in the form of chi-square test.

## 4. RESULTS AND DISCUSSION

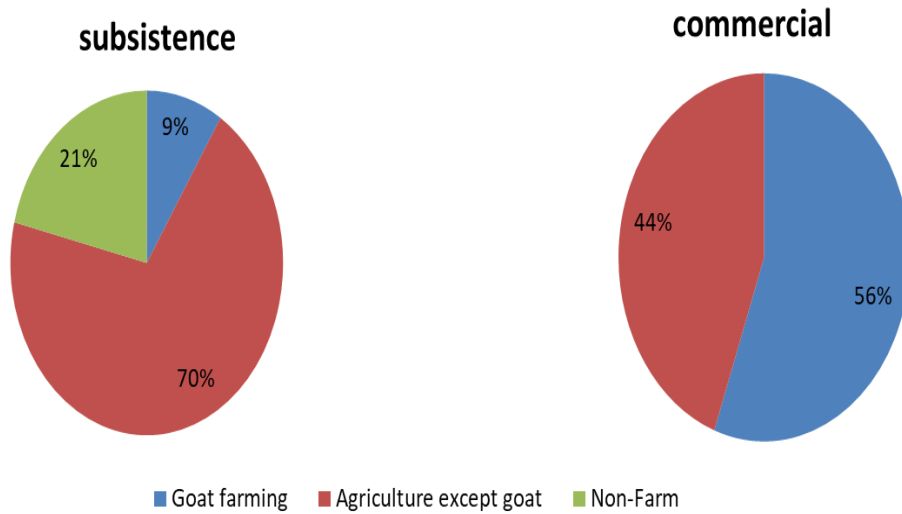
### 4.1 Demographic Information



**Figure 2: Demographic information of commercial and subsistence goat farmers**

Majority of people (41.7%) of age group (30-45) years were involved in goat farming followed by (38.33%) people of age group (45-60) years among which majority (57%) of the respondents were male. Similarly, majority (71.66%) of people of elite groups was observed to be practicing goat farming followed by non- elite group (25%) and most (58.33%) of the respondents has experience of more than 20 years.

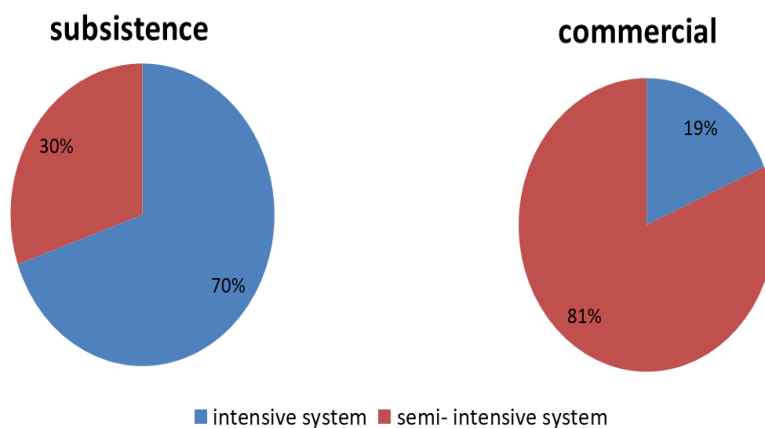
## 4.2 Primary source of Income



**Figure 3: Primary source of income of commercial and subsistence farms**

Primary source of income of subsistence farms was agriculture except goat (70%) followed by non-farm activities (21%) . Similarly, primary source of income of commercial farms was goat farming (56%) followed by agricultural activities except goat farming (44%).

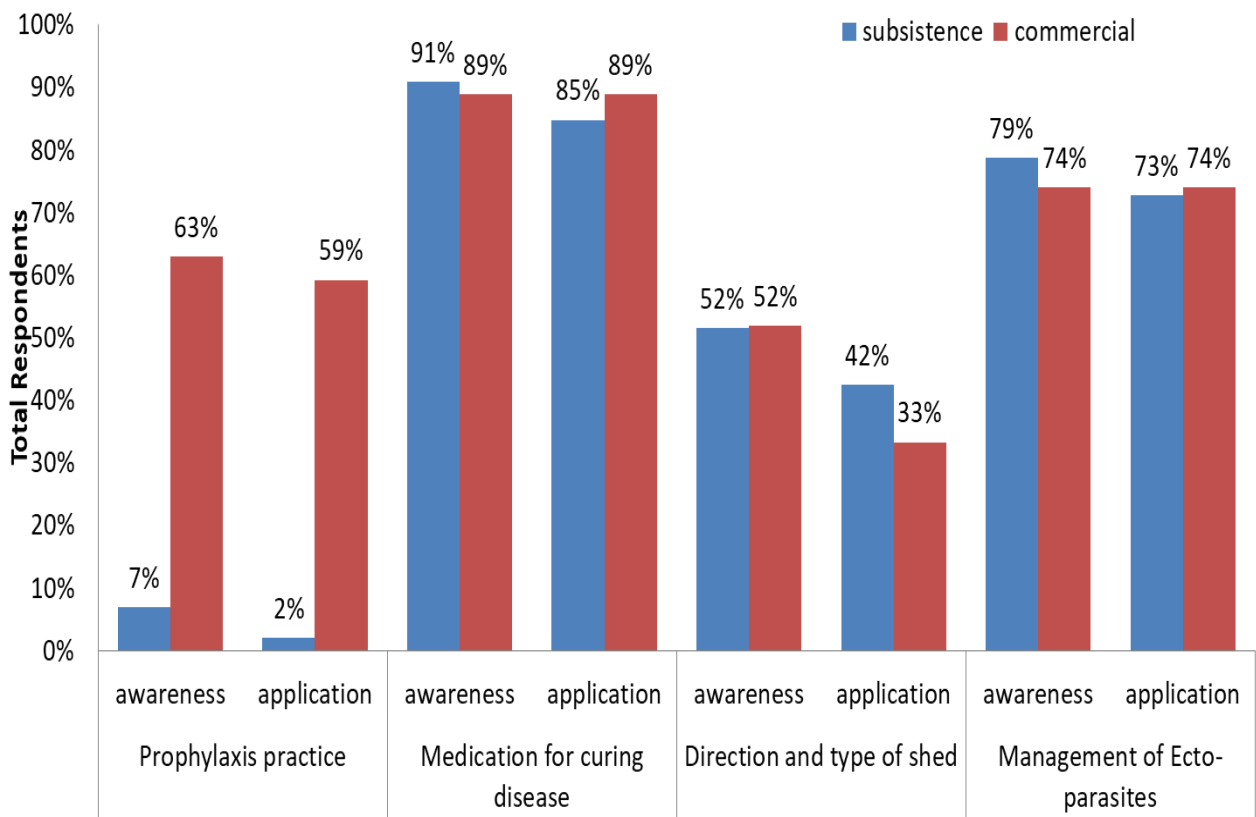
## 4.3 Rearing system



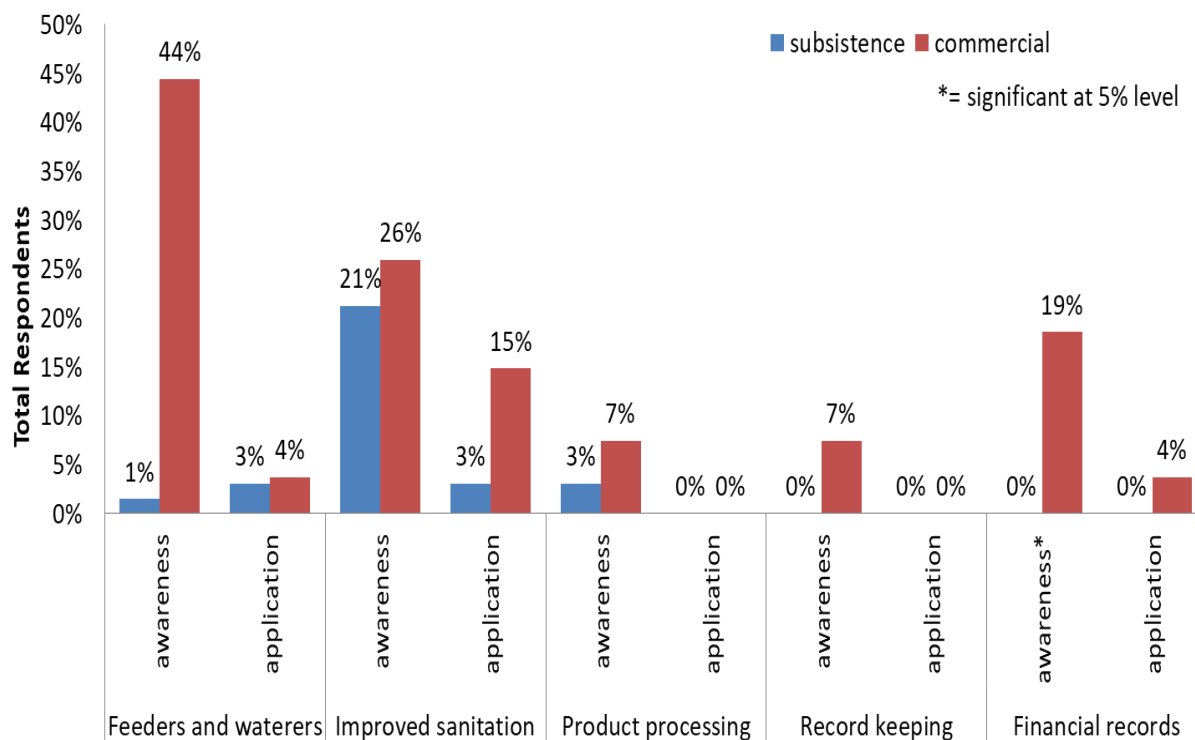
**Figure 4: System of rearing in commercial and subsistence farms**

Most (70%) of the subsistence farmers adopted intensive system of rearing. Animals were tied all the time and stall fed. However, majority (81%) of commercial farms adopted semi-intensive system of rearing.

#### 4.4 Management Practices



**Figure 5: Level of awareness and application in different management practices (a)**



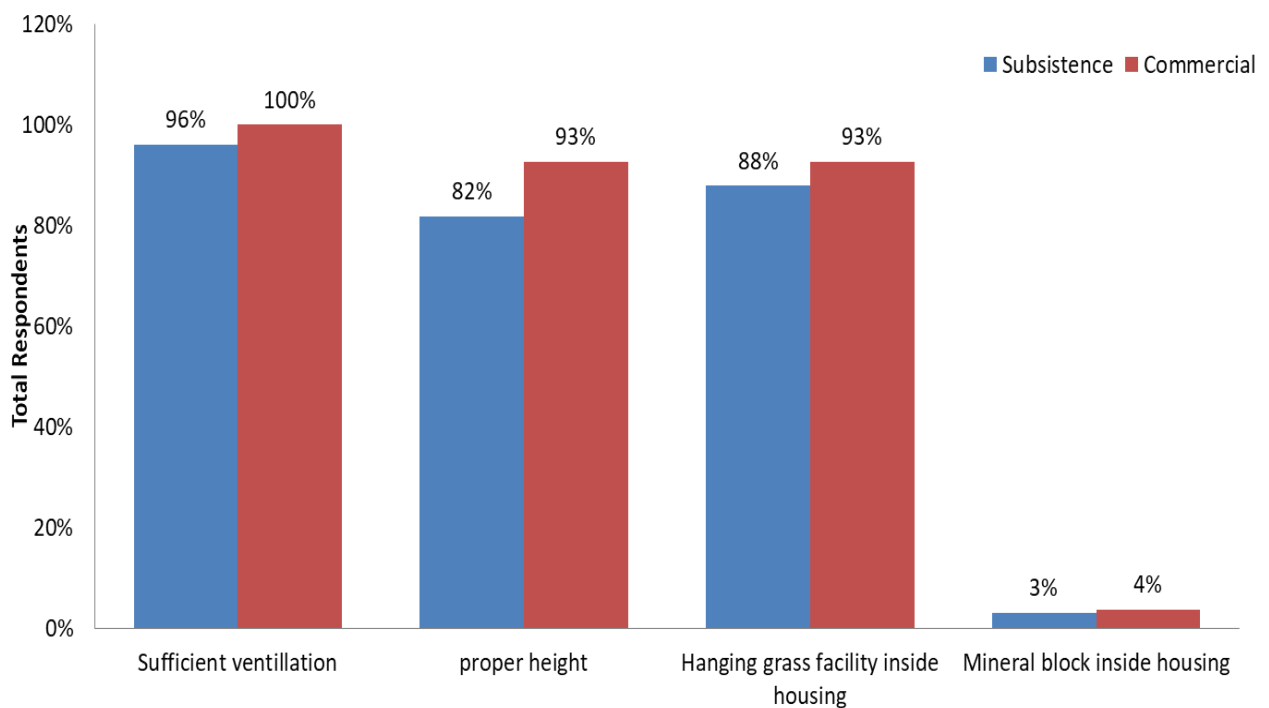
**Figure 6: Level of awareness and application in different management practices (b)**

Awareness and application status was checked among the respondents regarding management practices of goat. Both application and awareness status of prophylaxis practice was high in case of commercial farms. Both subsistence and commercial farms had almost same status in awareness and application of medication for diseases. Subsistence farmers was comparatively forward (42%) in application of direction and type of shed than the commercial farmers (33%) whereas the awareness level was same. Subsistence farmers were slightly forward in awareness of management of ecto -parasites than the commercial farmers but in case of application subsistence farms were behind the commercial farms. (fig. a)

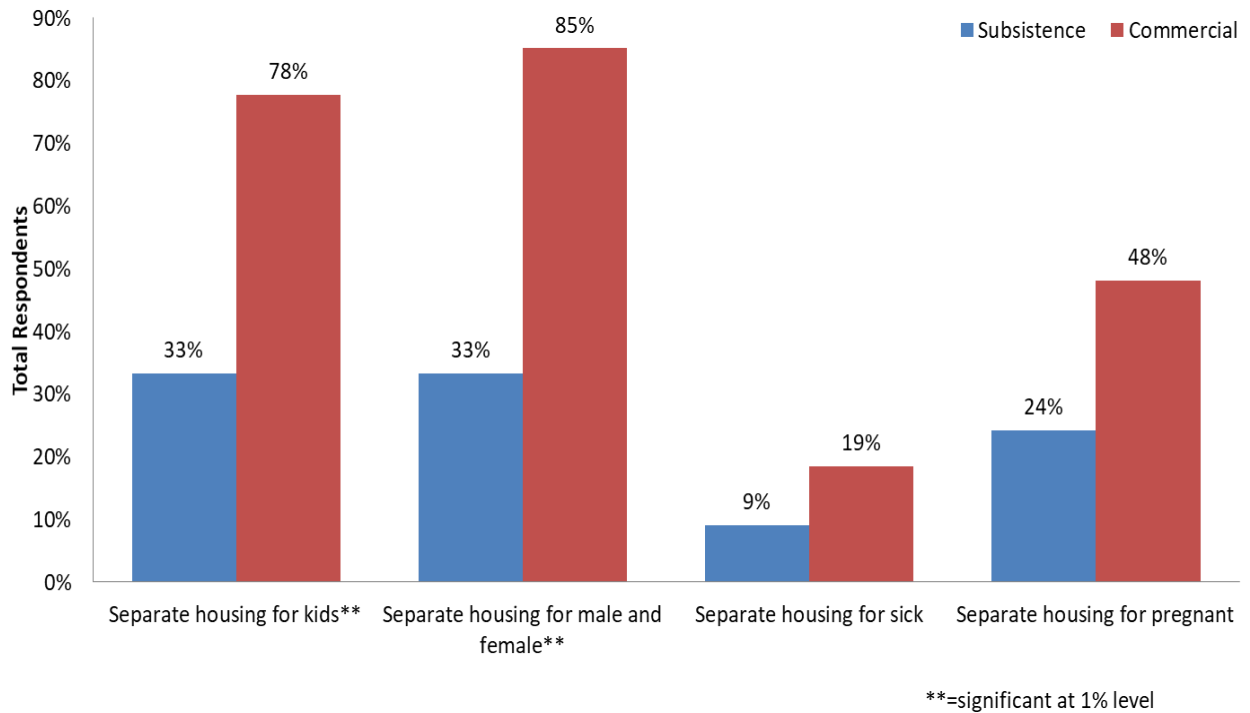
Similarly, there was high difference in awareness and application level of use of feeders and waterers in which commercial farms were in the lead. Commercial farms were forward in

both awareness and application of improved sanitation condition than the subsistence farms. Comparing the awareness of product processing, commercial farms were more aware about product processing than subsistence farms but the application status was negligible. Only a few (7%) of commercial farmers were aware about record keeping but the application was negligible in case of both farms. Awareness level of financial records keeping was more but application was less in case of commercial farms where as both awareness and application of financial record keeping was negligible in case of subsistence farms. (fig. b)

#### 4.5 System of housing



**Figure 7: System of housing in commercial and subsistence farms (a)**

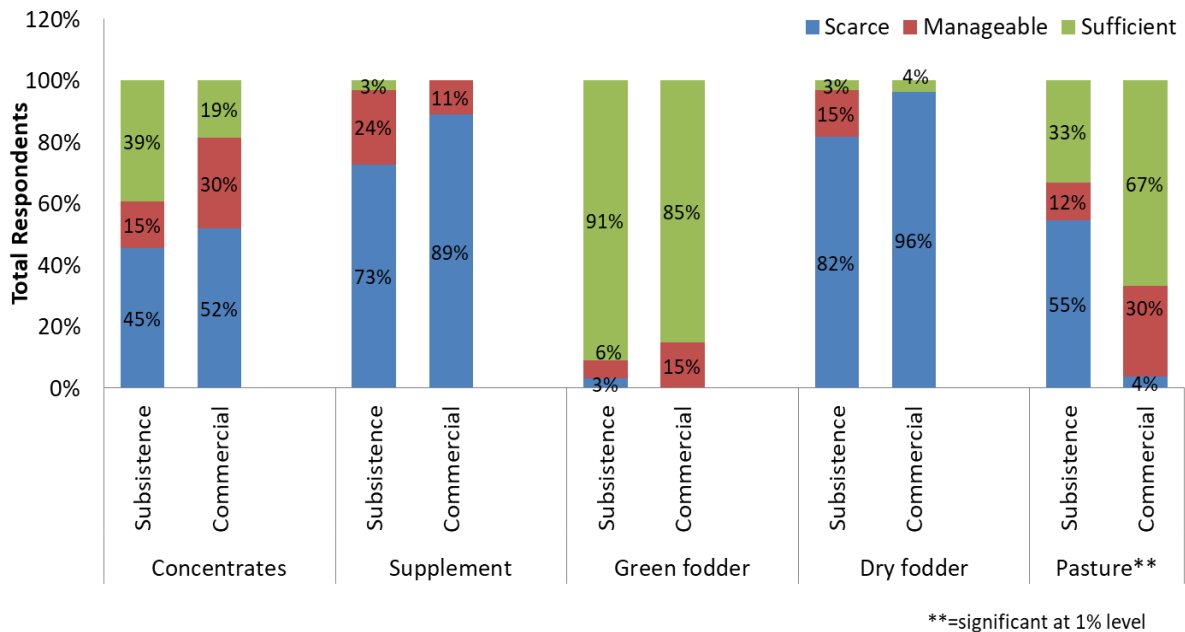


**Figure 8: System of housing in commercial and subsistence farms (b)**

The commercial farms were slightly forward at sufficient ventilation than the subsistence farms. The commercial farms attained a proper housing height than subsistence farms. Most (93%) of commercial farms practiced hanging grass facility inside housing. There was no vast difference in available of mineral block in both farms. (fig. a)

Similarly, separate housing for kids and separate housing for male and female was found highly significant in case of commercial farms. In case of separate housing for sick and pregnant subsistence farms were found behind the commercial farms. (fig. b)

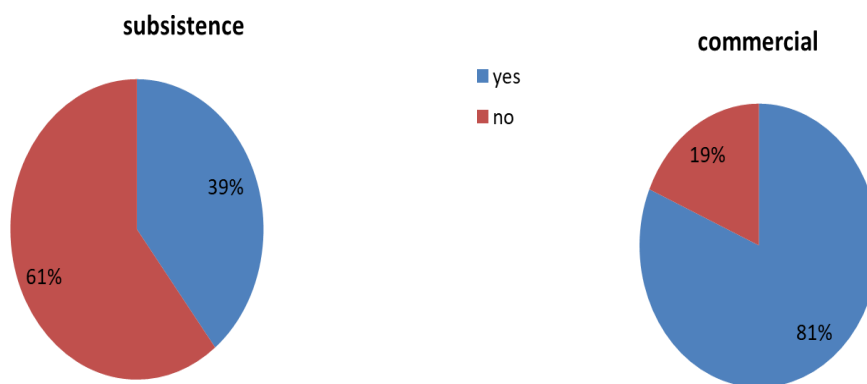
#### 4.6 Availability of feed and fodder



**Figure 9: Availability of feed and fodder in commercial and subsistence farms**

Availability of concentrate, supplements and dry fodder was scarce in both subsistence and commercial farms whereas availability of green fodder was sufficient in both types of farms. Similarly, availability of pasture is highly significant in commercial farms.

#### 4.7 Change of breeding buck

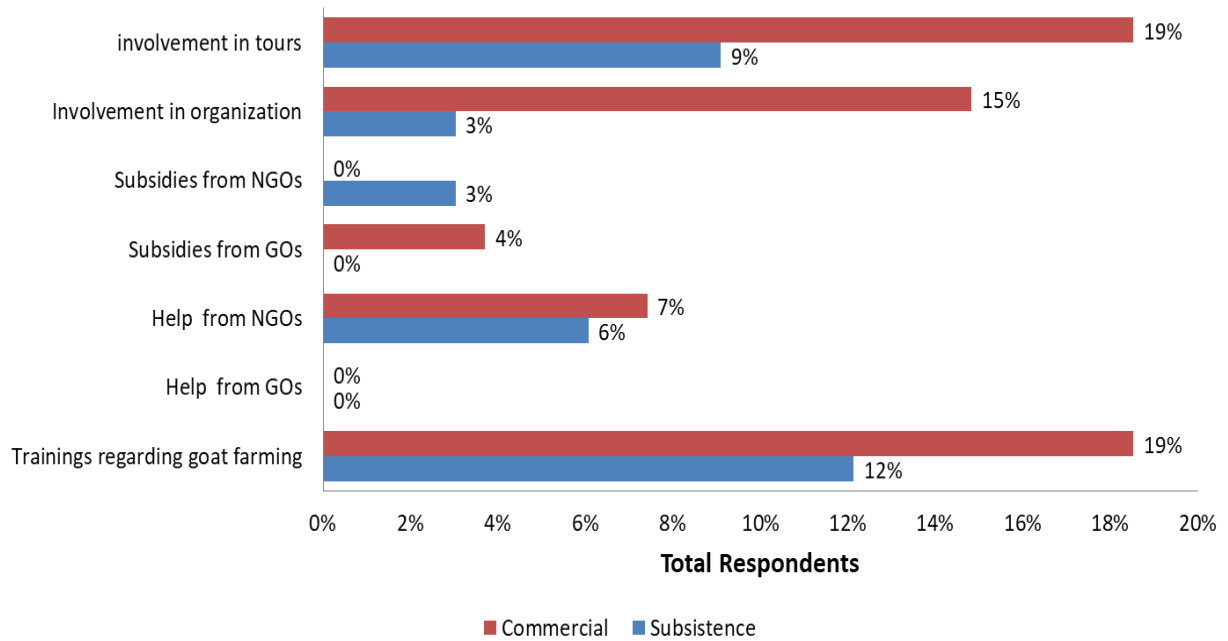


**Figure 10: Change of breeding buck in commercial and subsistence farms**



Most (81%) of commercial farmers practiced change of breeding buck whereas only a few (39%) of subsistence farmers practiced change of breeding buck.

#### 4.8 Support for farmers



**Figure 11: Access to external support to farmers practicing different farming system**

There was limited help for the farmers from government sectors and very limited help from non-government sectors. Subsidies support from GOs and NGOs were also lacking. Similarly, farmers’ involvement in tours, organizations and in trainings was negligible in both types of farms.

## **5. SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Summary**

The current study was conducted to assess the comparative study of different husbandry practices between commercial and subsistence goat farms. Goat rearing can be performed by every category of farmers of any age, gender and ethnicity. Though goat farming is a source of quick money, it is not enough for fulfilling the family demand of most of the farmers. Majority of subsistence goat farmers adopt intensive system of goat rearing whereas commercial farmers adopt semi-intensive system of goat rearing. Semi-intensive system of rearing can be a reason to more sustainability of commercial farms. Both the subsistence and commercial farms are not much successively forward in good management practices. Separate housing for male and female and for kids were found in commercial farms only. Pasture was found abundant in commercial farms, which is in line with the statement by MOAD, 2016 which states that “Increase in production and productivity of pasture lead to better animal health.” Despite of high scope in goat farming, farmers are not being able to sustain in competing market due to shortage of concentrates and lack of supplements.

## **5.2 Conclusion and Recommendation**

Schooling of farmers of all categories and farming types can be a key to unlock the personal development of farmers in managed goat production. Government and non-government organizations can play a vital role in providing financial and technical support to farmers considering that the overall development of locality can be well enhanced by goat farming. Providing proper feeding and management conditions, could contribute in better performance of goats in all farming systems. Similarly, research based goat production can be initiated to draw conclusion guidelines that will help to improve the productivity of farm and status of farmers.

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## APPENDICES









## QUESTIONNAIRE

Date:

Number:

### A) General information:

1. Name of respondent: \_\_\_\_\_ Age: \_\_\_\_\_ Gender: M/F  
Phone number:.....
2. Address:  
District: Dhading Municipality/Rural municipality:..... Ward no. :
3. Function of respondent in the farm:  
a) Owner b) Manager c) Relative
4. Name of farm:  
Type of ownership:
5. Education level:  
a) Illiterate b) Primary c) SLC d) +2 level e) Bachelor f) post graduate
6. Year of running business:  
a) <5 years b) <10 years c) 10-20 years d) >20 years
7. Employee management;

Employees	Permanent employee	Seasonal employee	Family members if present	Total
Number				
Cost				

### B) Status of farm:

8. Area of land:

Area	Self owned (kattha/hectares)	Leased (kattha/hectares )
i)		
ii)		
iii)		

9. Registration of farm  
i) Yes                      ii) No
10. Distribution of goat farms into flock size categories :  
i) Flock size group  
a) <100 goats b) 100-500 goats c) >500 goats  
ii) Number of breeding goats .....  
iii) Flock size (all goats) .....
11. Size and composition of the goat flock  
i) Initial flock size.....  
a) <50 b) 50-80 c) 80-100 d) >100  
ii) Current flock size (Total) .....  
a) Adult goats              i) Male....      ii) female.....  
b) 6-12 month goat      i) Male....      ii) female.....  
c) <6 months goat      i) Male....      ii) female.....
12. Distribution of goats breeds  
a) Initial breed...  
b) Breed at present

Breeds	Important	Traditional	Other breed if present

	Breed	Breed			
Name of the breed			i)	ii)	iii)
Percentage Share					

13. Reason for switching from traditional to other breeds: (Rank them from 1-5, 5 being more important)
- Less gain of body weight
  - Higher infestation of diseases and pests
  - Lesser adaptability to the environment
  - No availability of feed and fodder
  - Low economic return
14. Consumers preferred variety
- Local breed
  - Boer
  - 
  -
15. Production of kids;
- Major kidding season:
    - February-April
    - October- November
    - Other
  - Mortality rate:
16. Awareness and adoption of improved technologies
- Awareness on improved technology:
    - Recommended package of practices
    - Direction and type of shed
    - Feeding and watering services and mineral mixture
    - Use of vaccines
    - Medication required for prevention of diseases
    - Medication for curing diseases
    - Daily management practices
  - Adoption on improved technology:
    - Recommended package of practices
    - Direction and type of shed
    - Feeding and watering services and mineral mixture
    - Use of vaccines
    - Medication required for prevention of diseases
    - Medication for curing diseases
    - Daily management practices
17. Use of vaccination system:
- Yes
  - No
18. Use of processed product like cheese, yoghurt, etc
- Yes
  - No
19. Availability of feed and fodder:
- Insufficient
  - Sufficient
  - More than sufficient
20. Awareness and adoption of improved technologies:
- Awareness on improved technology:
    - Recommended package of practices
    - Direction and type of shed
    - Feeding and watering services and mineral mixture
    - Use of vaccines

- l) Medication required for prevention of diseases
  - m) Medication for curing diseases
  - n) Daily management practices
- iv) Adoption on improved technology:
- h) Recommended package of practices
  - i) Direction and type of shed
  - j) Feeding and watering services and mineral mixture
  - k) Use of vaccines
  - l) Medication required for prevention of diseases
  - m) Medication for curing diseases
  - n) Daily management practices

21. Provision of labor in goat production:

Work	Tethering/grazing	Animal health care	Provision of water
Men			
women			

22. Management system

1. System of rearing:
  - i. Extensive system b) Semi-extensive system c) Intensive system
2. System of housing:
  1. No house b) Thatched house with no floor c) Thatched house with improvised floor
3. Breeding practices followed by goat farmers:
  - a) Heat detection Bleating, mounting other animals and wagging
  - b) Wagging of tail, urination and mounting
4. Type of breeding:
  - a) Natural service b) Artificial insemination
5. Selection criteria of breeding buck
  - a) Body size and physical appearance b) Twinning percentage of dam
6. Source of breeding buck
  - a) Neighbouring flock b) Market
7. System of mating:
  - a) Flock b) Hand c) Pen d) Flock and hand
8. Pregnancy diagnosis
  - a) Abdominal distension b) Absence of next oestrus
9. Castration of male kids
  - a) Yes b) No .

23. Mortality losses:

Category	No. of goats affected		No. of goats died		Total goats died	Mortality loss (Rs.)		Production loss (Rs.)	Total loss
	Adult	Kids	Adult	Kids		Adults	Kids		

24. Advertisement and publicity methods:

- i) Newspapers
- ii) Internet website/email
- iii) Hoardings

- iv) Publication of pamphlets/Booklets
- v) Publication of magazine on goat rearing
- vi) Organizing trainings for local farmers

**C) Economics**

i) Pattern of capital investment on farming unit:

Category	Capital investment (in lakhs Rs.)				Investment per adult goat (Rs.)
	Value of animals	Sheds and structure	Equipments	Total investment	
i) (1-5) lakhs					
ii) 5-10 lakhs					
iii) 10-15 lakhs					
iv) >15 lakhs					

ii) Annual cost of rearing a goat

Category	Fixed cost	Variable cost	Total cost	Cost per goat
i) <50,000				
ii) 50,000-1,00,00				
iii) 1-2,00,000				
iv) Upto 5,00,000				

iii) Variable cost

a) Feed cost on commercial goat farms:

Particulars	Green fodder	Dry fodder	Concentrate	Mineral mixture	Salt	Total feed cost
Average feed cost (Rs./annum)						
Percentage of total feed cost						

b) Miscellaneous expenditure:

Category	Miscellaneous expenditure				Total	Expenditure Rs./doe
	Electricity	Treatment	Insurance	Prophylaxis		
i) (1-5) lakhs						
ii) 5-10 lakhs						
iii) 10-15 lakhs						
iv) >15 lakhs						

iv) Annual return

Category	Return from kids	Return from selling adults	Value of manures	Value of milk	Gross returns	Net returns	Net return/goat
i)<50,000							
ii)50,000-1,00,00							
iii)1-2,00,000							
iv) Upto 5,00,000							

1. Markets for goats:
  - a) Home sales b) Weekly market c) Shops d) Daily market
2. Purchasing agents in markets
  - a) Middlemen b) Butchers c) Farmers
3. Age at marketing of goats
  - a) Up to 3 months b) 4-6 months c) 7-9 months d) 10-12 months
4. Time of sale
  - a) Round the year b) Special occasion
5. Reasons for selling adult goat
  - a) Unproductive b) Difficult to recover from illness c) Old age
6. Reasons for selling kids
  - a) To get income b) To avoid risk c) To reduce flock size
7. Utilisation of income from sale of goats:
  - a) To meet family needs b) Repayment of loans
8. Use of goat milk:
  - a) Yes b) No
9. Rank the problems on marketing of goats from 1-5.
  - a) High taxation b) Low price offered by middle man c) Occasional low demand d) lack of transport
10. Profitability of business during the whole year .....Yes / No
11. How many months does your agribusiness have positive cash flow? \_\_\_\_\_
12. Do you and your family keep written financial records of revenues and expenses?  
.....Yes/No
13. The development of your business over the last 24 months.
  - a) Declined significantly b) Declined somewhat c) Remained the same
  - d) Improved somewhat e) Improved significantly
14. Do you save money?..... Yes / No
  - i) How much do you have in savings? \_\_\_\_\_
  - ii) Over what period (how many months) have you accumulated these savings?  
\_\_\_\_\_
  - iii) Do you have a savings account with a financial institution?.....Yes / No
  - iv) What is the primary barrier to save?
    - a) Lack of Cash b) Lack of institutions to save c) Not being able to immediately get money

