5. SHEEP MANAGEMENT

Sheep is one of the important livestock species. It contributes greatly to agricultural economy of India, especially in the arid/ semi-arid and mountainous areas where crop and dairy farming are not economical. Sheep are unique among livestock because they can be maintained under diverse environmental conditions. They are reared for variety of purposes viz. meat, wool and pelt production. Sheep rearing can be recommended as an occupation to the rural people especially to the weaker sections of the group in hilly, drought prone and desert areas, as they do not need expensive housing and on the other hand require less labour than other kinds of livestock. Sheep rearing helps in improving rural economy as it gives helping hand to the farmers at the time of crisis arising from crop failure.

Can you recall ?

Scientific name of Sheep is *Ovis aries*

Remember terms pertaining to sheep keeping

Flock / band	: Group of sheep
Ram	: Adult male
Ewe	: Adult female
Lamb	: Young male and female
Lambing	: Act of parturition
Mutton	: Sheep meat
Bleating	: Sound produced by sheep
Tupping	: Act of mating
Whether/ Wedder	: Castrated male
Spayed	: Castrated female
Docking	: Removal of tail

5.1 Importance of sheep farming

1. Sheep are economical converters of natural grasses and crop residues into meat and wool.
2. Sheep graze close to the ground and consume different herbs and shrubs. Hence, they act as natural weed killer.
3. Initial investment is less.
4. On an average one sheep produces 680 g of wool per annum.
5. Sheep contributes nearly 10 per cent of the total meat production of the country.
6. Sheep manure contains twice the quantity of nitrogen and potassium than cattle manure.
7. Sheep meat have no religious taboos. It is consumed and relished by all communities.
8. Sheep do not require expensive building to house.
9. Sheep farming requires less labour.
10. Unlike goats sheep hardly damage any tree.
11. Production of wool, mutton and manure provide source of income.

Remember...

Sheep possesses a typical lip structure (nibbling habit) which helps them to clean grains lost during harvesting and thus converts waste feed into valuable products.

5.2 Housing

Generally sheep do not require elaborate housing facilities. However, proper shelter will definitely increase the productivity. Therefore, it is necessary to protect sheep against sunrays, wind and rain. Generally sheep flocks are

penned in open during the fair weather and some temporary shelters are used in monsoon and summer. Orientation of shed should be preferably East-West. Shed should be properly ventilated, lighted, drained and easy to clean. Feeding manger and water trough should be provided.

Sheep can be economically reared under range system or loose housing system. Normally sheep are kept in the shed during night and taken out for grazing during day time.

Different components of sheep housing

1. Slatted housing

1. Sheep are housed in slatted housing where rainfall is heavy and sheep need protection against possible water logging.
2. It is elevated type of housing.
3. The slatted floor is prepared (0.9 to 1.5 m) above the ground level to facilitate cleaning.
4. Wooden strips of (7.5cm x 2.5cm) size or bamboos may be used for a floor.
5. A floor space of 0.75m x 0.35m is sufficient for each sheep.

2. Ewe shed

1. In one shed 50-60 adult ewes can be accommodated.
2. The roof should be 'A' shape with 3-4 meter height in the centre.
3. The floor should be made up of murum and brick on edge.
4. In heavy rainfall region and low lying areas, the ewe shed should be constructed at higher level than surrounding area.
5. In temperate regions floor should be of strong wood.

Observe

Visit the different Sheep farms and record the housing systems

3. Ram pen

1. Rams should be housed in separate pen.
2. Partition can be made in large shed for housing of rams.
3. An area of 2.25m x 1.5m is sufficient for housing one ram.

Fig. 5.1 : General sheep shed

4. Lambing pen

1. These are the maternity pens.
2. Pregnant and newly lambed ewes are kept in lambing pens.
3. During cold/winter season, to protect the lambs, some warming devices like room heater should be fixed.
4. Provide bedding of straw in the lambing pen.

5. Lamb shed

1. Weaned lambs up to maturity should be housed in lamb shed.
2. Maximum 75 lambs should be housed in one shed.
3. It is better to house the lambs according to growth stages viz. un-weaned, weaned but immature and lambs nearing the maturity into separate groups.

Remember...

- Provide bedding of dried grasses or gunny bags to lambs during winter season
- Use electric bulb and cover the open area of lamb shed for warming the lamb pen

6. Isolation box (sick animal shed)

1. To prevent spread of contagious diseases, sick animals should be isolated.
2. The isolation box should be away from main shed.
3. The size of isolation box should be 3m x 2m.
4. Depending upon the size of flock, number of isolation boxes should be constructed.
5. It should be well ventilated, lighted and provided with feeder and water trough.

7. Shearing shed

1. It is a place where sheep are shorn.
2. The floor of shearing shed should be paved and smooth.
3. The shed should be fenced from one side where sheep should be collected before and after shearing.
4. There should be passage of 1.5m wide for entrance of sheep in the shed.

In addition to these building there should be office room, store room for feed, fodder, medicines and other items. At organized farm one dipping tank should be constructed.

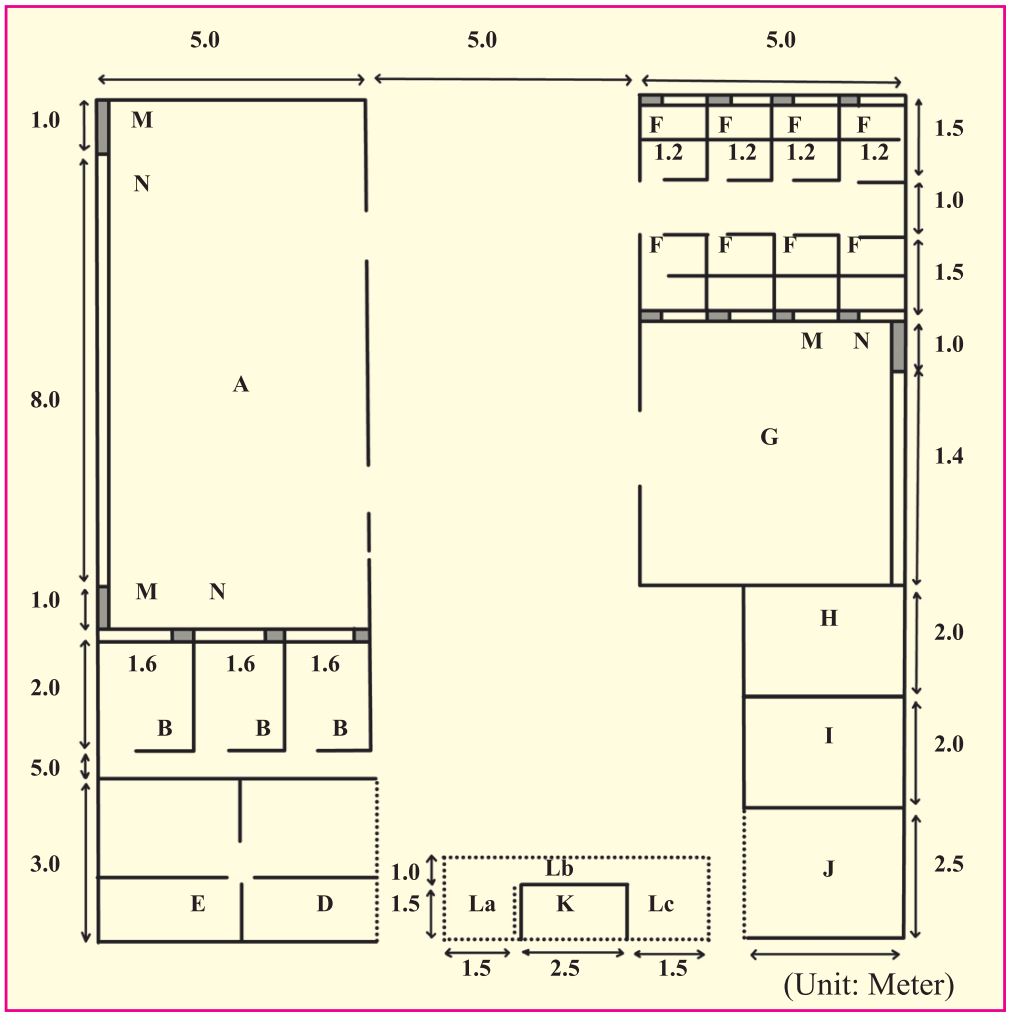


Fig. 5.2 : Lay out for Housing of 50 ewes

A. Ewe pen, **B.** Ram pens, **C.** Passage leading to ram pens, **D.** Shearing room, **E.** Wool store, **F.** Lambing pens, **G.** Lamb pen, **H.** Office, **I.** Store, **J.** Hay/straw, **K.** Dipping tank (1m deep), **La.** Assembly pen, **Lb.** Corridor for sheep movement, **Lc.** Draining platform, **M.** Water tank (1/10th length of manger in each pen), **N.** Manger.

5.3 Management of lambs

For successful sheep farming proper management of lambs is essential. It is better to raise the lambs on the farm rather than purchase because we know the pedigree of particular lamb. Care of lamb starts from the pregnancy of ewe. Therefore, care of pregnant ewe is also essential.

Fig. 5.3 : Lamb pen

1. Feeding

1. Provide sufficient colostrum and ensure proper suckling of lambs. Colostrum provides immunity to lambs.
2. For orphan lambs foster mother may be used. Goat can also serve as an excellent foster mother. Over feeding and under feeding should be avoided.
3. Provide creep feed with fresh tender legume fodder to increase weight gain and faster growth rate up to 6 months.
4. Provide extra creep ration with 16% D.C.P. to the stunted lambs.

Internet my friend

Collect the information on colostrum feeding

a. Feeding of suckling lambs

In early part of life lambs are dependent on their mother's milk. Colostrum should be fed @10 % of the body weight four times in a day for four days. Colostrum is the first milk drawn and fed to lamb within 30 min to 1 hour after its birth. Milk should be fed @ 10% of body weight up to two months. After two months milk should be fed @ 5% of body weight. Lambs are weaned after three months of age.

Fig. 5.4 : Suckling lamb

It is most economical to put the lambs on good quality pasture. If the pasture is of poor quality, then the ration may be supplemented with starter feed. Starter feed should include 42 parts maize, 35 parts groundnut cake (GNC), 10 parts wheat bran, 10 parts fish meal, 2 parts mineral mixture and 1 part common salt.

b. Feeding early weaned and orphan lambs

Lambs are usually weaned at 3 months of age. Some lambs may be orphaned due to the death of ewes or due to disowning by the mother. Early weaners and orphan lambs must be well fed.

Up to six weeks of age, grains should be crushed before feeding to lambs. After this, grains can be fed as such except hard grains. The infant lambs should get good pasture or high quality legume hay in addition to grain. If only poor roughages are fed, give them additional feed supplement with 12 % DCP and rich in vitamins.

A few recommended rations for the creep feeders and weaners are as follows:

i. Maize 40% + Oat 30% + Barley 30% + Lucerne hay adlib.

ii. Oat 20% + Maize 40% + Barley 20% and GNC 20%, supplementation with vitamins.

iii. Maize 20% + Oat 40% + wheat bran 20% + GNC 20%, supplementation with vitamins.

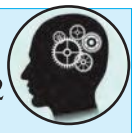
Do you know ?

Orphan lamb means a lamb who lost his mother

2. Management

1. After the birth of lamb, allow the ewe to lick the lamb to clean the body. Within few hours, lamb will stand on legs and start suckling.
2. Cut the naval cord 2-3cm from the body and apply tincture iodine.
3. To facilitate defecation and passing out of meconium easily, give a teaspoonful of castor oil.
4. Do not handle the lamb frequently, allow them to stay with mother for maximum period in early stage.
5. Protect lambs from adverse climatic condition.
6. Ear tattooing and castration should be carried out at 2 to 3 weeks of age.
7. Monthly body weight should be recorded.
8. Lambs having stunted growth should be culled at 6 months of age.

Remember...



- Age of puberty in ewe is 6-12 months.
- Length of oestrous cycle is 17- 19 days.
- Breeding season is June-August and January- February.

3. Health Care

1. Cleaning

Sanitation and cleaning are key to good health. Unhygienic conditions provide scope for development of pathogens which cause many diseases. Regular cleaning and disinfection of animal sheds prevent infection. Following steps should be taken to ensure cleaning.

- Empty the water troughs and scrap the sides and bottom with brush.
- Wash it with clean water and apply white wash inside.
- Clean the floor, gutter, manger by removing dung, urine and left over feed carefully.
- Scrap the floor with brush and broom and wash with clean water.
- Remove the cobwebs with the help of long broom.

2. Deworming

Worms are present in the stomach and intestine of sheep. They are called endoparasites. They suck the blood and cause many diseases in sheep. To control endoparasites follow deworming schedule given in table 5.1.

3. Vaccination

Vaccination is done to protect the lambs and sheep against many diseases like enterotoxemia, black quarter, haemorrhagic septicemia ,foot and mouth disease, peste des petits ruminants etc.

Table 5.1 : Deworming schedule for sheep

Sr. No.	Type of worm	Schedule
1	Round worms	Once in a month from 1 to 6 months of age
		From 6 – 12 months of age, once in 2 months
		From 1 year onwards, once in 4 months i.e. June, October and March
2	Tapeworms	Twice a year i.e. January and June in lambs in problem flocks
3	Liver flukes	Twice a year i.e. May and October in disease prone area

Table 5.2 : Vaccination schedule for sheep

Sr.No.	Disease	Primary vaccination	Regular vaccination
1	Foot and mouth disease	3 months and above	Twice a year i.e. in March and September
2	Peste des petits ruminants(PPR)	3 months and above	Every 3 years
3	Sheep pox	3 months	Every year in December
4	Anthrax	3 months and above	Every year before monsoon in endemic area
5	Enterotoxaemia	3 months and above if dam is vaccinated.	Every year before monsoon-two doses at an interval of 15 days
6	Haemorrhagic septicaemia	3 months and above	Every year before monsoon
7	Black quarter	3 months and above	Every year before monsoon

3. Control of ectoparasites (Ticks, Fleas etc)

- Ticks, lice, fleas and flies can be best controlled by keeping the surrounding clean, regular cleaning of sheds, proper disposal of dung and dipping of animals in insecticide solution.
- Use chemical dip or spry with solution of deltamethrin @2-3 ml/L on animal body and @ 5ml/L in lamb shed or Amitraz @ 2-4 ml/L on animal body and @ 4 ml/L in lamb shed to kill the ticks and fleas.
- Avoid dipping in very young lambs.

Remember...

- Dipping is the process of immersion of animals in medicated water.
- In this method the insecticide is diluted in a big water tank and animals are dipped in it one by one for at least 2 minutes.
- Head should not be dipped.
- Drinking water should be provided to animals before dipping.
- Keep head above the level of dipping solution.

5.4 Management of pregnant ewes

To have healthy and vigorous lamb production, pregnant ewes have to be looked after very carefully. Gestation period in sheep is 150 days

Feeding

1. Grazing on good pasture can fulfill the nutritional requirement of pregnant ewes.
2. Provide sufficient green leguminous fodder.
3. Proper nourishment during pregnancy to avoid lambing paralysis.
4. In the last two months of pregnancy, 70% growth of foetus takes place. To fulfill the nutritional requirement of growing foetus additional ration of 250-300 gm should be given.
5. In the last month of pregnancy, ration of pregnant ewes must be supplemented with ad lib green fodder.
6. Provide fresh and clean drinking water.

7. Flushing

It is generally done in small ruminants (especially sheep and goat) and can be practiced in other livestock. Flushing is a gradual increase

in the total concentrates provided to the livestock 2 weeks prior to mating. Flushing not only helps in maintaining the body condition of the animal after conception but also enhance the conception rate. Further, it has been seen that the ovulation rate increases after flushing. For flushing, give 100 grams concentrate over the normal concentrate ration and gradually increase it to 250 grams.

Remember...

Inadequate and poor nutrition may result in pregnancy toxemia, abortion and premature births of weak lamb hence in the last month of pregnancy, the growth of foetus is very fast. Therefore, additional provision of 250-300 gm of concentrate should be made to increase number of viable lambs, growth rate and birth weight of lambs and milk yield in coming lactation.

Management

1. Frequent handling of pregnant ewes should be avoided.
2. Advance pregnant ewes should be separated from main flock.
3. Grazing at long distance should be avoided.
4. Protect pregnant ewes from extreme cold and hot climate.
5. Keep houses of pregnant ewes clean and well ventilated.

Fig. 5.5 : Grazing sheep

Fig. 5.6 : Feeding at farm

Health Care

1. For control of internal parasites, regular deworming should be carried out. However deworming should be avoided during early pregnancy
2. Vaccination against enterotoxemia is advocated during pregnancy in order to transfer passive immunity to newborn lambs
3. Avoid dipping of sheep in advance pregnancy

5.5 Management of lactating ewes

To have healthy and vigorous lamb production, lactating ewes have to be looked after very carefully.

Feeding

1. Grazing on good pasture usually fulfills the nutritional requirement and increases the milk production of lactating ewes.
2. Provide sufficient hay preferably legume hay to ewes during lactation.
3. As the lactating ewes drink more water, provide plenty of fresh and clean water for 4 to 5 times in a day.
4. Provide concentrate to lactating ewes @ 200-300 gm to meet additional nutritional requirement for milk production.

Remember...

The daily feed and fodder requirement of one adult sheep is

- 2-3 Kg green fodder
- 1-1.5 Kg dry fodder
- 250-350 gm concentrate mixture

Do you know ?

Flushing is the process of putting ewes on a grain ration or move them to fresh pasture area where feed is more abundant, 2 weeks before onset of breeding season to…

- Increase ovulation rate.
- Brings all the ewes into heat at nearly the same time resulting in uniform lamb crop.
- Increases incidence of multiple births in the flock.
- Helps in effective flock management.

Management

1. Lactating ewes should be separated from main flock and kept in separate pen.
2. After lambing let ewe lick the lamb and keep the lamb with mother for 7-10 days to develop maternal instinct.
3. Keep houses of ewes clean and well ventilated. Protect the lactating ewes from extreme cold and heat.
4. After lambing, ensure the expell of placenta. If placenta is not expelled within 8-10 hrs treatment should be given.
5. Shearing should be done twice a year preferably in the month of March- April and September- October.

Do you know ?

Removal of wool from the body of sheep with the help of shearer is known as shearing.

Fig. 5.7 : Shearing

Internet my friend

Collect the videos of machine and hand shearing

Health Care

1. In high yielding ewes, calcium supplement may be given.
2. Vaccination should be done against commonly occurring contagious diseases.
3. Deworming should be done as per schedule given in Table 7.1.
4. For control ectoparasites, dipping of sheep in insecticide solution, removal of vegetation from surrounding area and spraying of animal shed should be done.

5.6 Management of breeding Ram

The ram is the half of the flock, hence proper management of ram is necessary.

Feeding

1. Feed the rams as like the feeding of ewes.
2. Provide supplementary feeding to ram for a month before as well as during breeding season.
3. Feed concentrate with 14 to 16% DCP at the rate of 300-500 gm per day during breeding season.
4. Feed them with mineral and vitamin mixture.

Management

1. Give regular exercise to ram to maintain vigour.

2. Use the ram for service at the age of 18 to 24 months.
3. Up to the age of 5 years ram can be used for breeding.
4. Keep one ram for 30-40 ewes.
5. Examine testicles for poor libido.
6. Use highly pedigreed ram for breeding.
7. Before start of breeding season ringing, eyeing and shearing is practiced.
8. Change the ram after every two years to avoid inbreeding.

Do you know ?

Hand mating, Pen mating, Flock mating and Artificial inseminations are the different mating systems followed in Sheep and Goats

Health Care

1. Testing for Brucellosis, Jhone's disease and Tuberculosis should be carried out regularly.
2. Regular vaccination against F.M.D., Enterotoxaemia, sheep pox, PPR (Peste des petits ruminant) should be carried out.
3. Dipping should be followed at least twice in year for control of ectoparasites.
4. Deworming should done as per the schedule given in Table7.1.

Exercises

Q.1. Fill in the blanks.

1. On an average sheep produces …….. g of wool per year.
2. Sheep manure contains …… the quantity of nitrogen and potassium than cattle manure.
3. Ideal age of ram for breeding purpose is…….
4. Gestation period in ewe is ……days.
5. Vaccination against enterotoxemia is recommended in the month of..…
6. Feed the concentrate @.... gram per day during breeding season to ram
7. Lambs are usually weaned at an age of …..
8. Sound produced by sheep is called……
9. ……. is also called as maternity pen.
10. In one ewe shed maximum number of ……ewes can be accommodated.

Q.2. Match the pairs

Group A	Group B
1. Ram	a. Control of endoparasites
2. Lambing	b. Removal of hairs
3.Tupping	c. Control of ectoparasites
4. Shearing	d. Act of mating in Sheep
5. Deworming	e. Male Sheep
	f. Removal of wool
	g. Act of parturition in Sheep

Q.3. State True or False

1. Young male/female of Sheep is called as Lamb
2. Twinning is most common in Sheep
3. Orphan lamb means a lamb with its mother
4. Flushing means removal of fecal materials from byres
5. Deltamethrin is used for deworming

Q.4. Answer in brief

1. Why sick animals should be shifted to isolation box?
2. Give the ideal ratio of ram to ewe?
3. Which is the proper time for shearing?
4. How much area is required for housing of ram?
5. Why docking is followed in sheep?
6. Define flushing.
7. What do you mean by dipping?
8. Name the chemicals used for dipping.
9. Write the breeding season of sheep.
10. Define shearing.

Q. 5. Answer the following questions.

1. Give advantages of sheep farming in India.
2. Enlist different components of sheep housing with their uses.
3. Give advantages of flushing.
4. Write in brief about feeding management of lambs.
5. Explain in brief management of lactating ewes.