

Breeding Practices in Sheep Farming

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Abstracts

The sheep is an important economic livestock species, contributing greatly to the Indian economy, especially in arid, semi arid and mountain areas. The current population in world is 1110.78 millions, around 44.85 millions (1987) sheeps in India (ICAR., 2002). Sheeps are mostly reared for meat and wool. The average annual wool production per sheep is between 3.5 to 5.5 kg of fine quality wool in Australia, New Zealand and U.S.S.R., where as in India except Magra sheep which annually yield more than 2 kg wool having staple length 5.8 cm, the average of rest of the wool produced is less than 1.0 kg per sheep of inferior quality (Banerjee G.C., 1998). Therefore many farmers in southern India adapted sheep rearing for meat production than for wool production. For yielding more production from sheep farming one should have sound knowledge of general information related to the reproduction and different breeding practices.

Keywords: Sheep, Breeding, Farming, Flushing, Synchronization, Heat, Ewe, Ram, Tagging, Mating, Wool, Artificial Insemination.

Age of Maturity

Sheep normally attain full growth at age of 2 years; however this may varies from 18 months to 3 years with different breeds and localities. Ewes of age 18-24 months are generally used for mating. The rams are matured at 1 year of age but it is desirable to use rams for mating from age 2 ½ years till 7 years of age (Banerjee G.C., 1998).

Mating season and oestrous cycle

Sheep is seasonally polyestrous having gestation period of 147 days. In India, there are three mating seasons viz. March to April or summer, June to July or autumn, September to October or post monsoon. Fertility is found to be high during autumn season in the plains whereas in hilly region, it is summer season (Verma D.N., 1999).

After every 16 days on an average (Actual range 14-20 days) the ewe shows heat except during pregnancy or any pathological or other dysfunction condition. The average length of heat period is 30 hours. Conception is best when breeding occurs late in heat period.

Detection of Oestrous

1.Symptoms: Vulvular swelling, frequent urination, restlessness, reduced appetite.

2.Use of teaser ram: Teaser is nothing but castrated ram. This is used after applying wet paint on the brisket of teaser to spot ewes in oestrous, which carry colour mark on the back due to mounting. This is helpful into better farm record keeping (Prasad J., 1996).

Preparation of ewes for mating

Flushing: It is practice of feeding of extra grain or lush green pasture, two or three weeks prior to the breeding season. It increases the number of ova shed from the ovary. Feeding about 250 gms grains daily to each ewe result into increase in lamb crop of 10-20 % and higher twinning is reported in flushing practices (Banerjee G.C., 1998).

Synchronization of Heat: Synchronization of heat is the practice of bringing all the ewes of flock coming in heat within 2-3 days period. This can be achieved by various methods but common practice is insertion of pessary containing a synthetic hormone called 'Cronolone' into the vagina of each ewe using special equipment. This hormone is then gradually absorbed through the lining of vagina into the blood stream. This hormone prevents ovulation. The pessary is removed after 15-17 days by pulling string attached to it. Most of ewes come in heat within few days after removal of pessary from vagina and then simultaneous breeding can be practiced (Banerjee G.C., 1998). Practical

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advantages of this method are as follows,

1. Owner may plan the lambing time in such a way, when the climate is most suitable for raising the healthy lambs with least effort.
2. It saves labour charges as servicing and lambing takes place within same short period.
3. Breeding by natural process or by A.I. becomes easier and economic.
4. Flock management is effective as all ewes are in same stage of pregnancy.
5. Owner may plan breeding as per future market demand.

Tagging: It is shearing or clipping of the locks of wool and dirt from dock. Sometimes ewes are not bred because wool or tag prevent ram from making satisfactory connections thus tagging makes service by the ram more certain.

Preparation of ram before breeding

Ringling: Before the breeding season starts the wool should be completely removed from all over the body of ram. He should at least be clipped from the neck and from the belly particularly at the region of the penis. The process is referred as ringling. The process makes it easier for the ram to have proper mating.

Marking the ram: For identification purpose of ewes, which are bred by rams, it is essential that rams have on their brisket, which at the time of mating will mark ewe at rump.

For paint either lampblack or Venetian red is mixed up with linseed oil to make paste, which is then applied in the brisket area at least once a week. During course of breeding ewe get marked on the rump.

Systems of mating

There are four systems of mating. They are as follows

1. Flock System: It is common method adapted by

commercial flock owners. This system includes mating of ram with two ewes for day and night during mating season at the rate of 35-40 ewes per ram. In no cases for any ram number of ewes per ram should not exceed more than 50 (Prasad J., 1996).

2. Pen System: In this system in a given number of selected ewes a selected ram is put in a pen for service during night and withdrawn in the morning. This practice is repeated daily when the animals return after grazing. Rams are either grazed separately and are stall-fed. Pen mating is the most favored practice at sheep farms.

3. Hand Service: In this method ewes in oestrous are separately by using teaser ram and mated with proven sire in breeding pens. The system is extremely useful for any experimental farmers but has got values in commercial farms.

4. Artificial Insemination (AI): 0.2 ml of freshly collected semen having 120-150 million minimum active spermatozoa is deposited at the head of cervix by using specially designed catheter with spirally shaped nozzle (Prasad J., 1996). AI in sheep cannot be adapted so easily as that of cattle and buffalo because dilution factor of ram semen is low and its preservability is very poor (Banerjee G.C., 1998).

By adopting good breeding practices in sheep, we will be in a position to increase the production, which will ultimately help to improve the Indian economy.

References

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Why Breed Sheep? Breeding sheep can be a fun, personally rewarding, and profitable endeavor. But like with anything else, there are lots of factors to consider and some risks involved. First, you should know how to care for sheep. It's fairly common practice to cross, or mix, breeds of sheep in commercial flocks. Hobby farms, or those interested in showing sheep, may choose to keep and preserve just one breed of sheep. This is especially true for people interested in preserving rare or heritage breed sheep, like the Hog Island or Leicester Longwool. For a flock intended for lamb production, I would recommend cross-breeds. Mixing breeds of any type of livestock animal helps encourage genetic diversity and discourage genetic problems, including propensity to certain diseases.