Scientific Management practices followed by sheep rearining farmers

ABSTRACT

Livestock is one of the most remunerative enterprises among the farming community. The present study was undertaken to know the scientific sheep management practices by sheep owners in Raichur and Lingasugur taluks of Raichur district. For this purpose, 6 villages from each taluks were selected on the basis of highest sheep population. Ten respondents drawn from each selected village with 120 sample size. The data was collected by administering the structured interview schedule and the data were analyzed by using appropriate statistical methods.(Please Mention what was exactly used)The findings of the study indicated that a large majority of the sheep owners (85.00 %) administer the drugs for de worming in lamb management, followed by providing of fresh and clean water (83.33 %) and proper bedding material (80.00 %) in winter season. With regards feeding management of the sheep, a large majority of the respondents (85.00 %) allowed their sheep for grazing in community land. Nearly one fifth of the respondents provided green fodder throughout the year as their land comes under the canal irrigation provision, in addition to bore well facilities. Further, cent per cent (please use 100%)of the respondents had proper floor space for the sheep size with cleaning padlock regularly in housing management practices. It is worth to note that 83.00 per cent of them monitor heat detection in sheep and provided treatment to the animals which were suffering from reproductive disorder (87.50 %).This is mainly due to the availability of veterinary services in the locality. With regards health management practices, cent percent of the respondents check up the health of the sheep regularly and administer vaccination as scheduled (4/annum) and disinfection of the padlock in order to prevent the disease.

Key words: Livestock, Management, Sheep rearing, Practices

Introduction

A scientific management practice of sheep is an individual phenomenon in all social system. It is widely recognized fact that the flow of sheep farming innovations to sheep farming community in the rural sector is neither rapid nor smooth. To successfully transfer the sheep husbandry technologies, it is necessary to take stock of the felt factors restraining in the of scientific sheep farming. The low level of socio economic status of villagers is the major hindrance and less number of improved breeds, lack of appropriate feeding of animal and good management practices was the inhibitors for the higher production of animal produce .The major factors limiting a meaningful and sustainable improvement in small ruminants productivity in developing countries including India are seasonally related low levels of nutrition, high level pre-weaning mortality resulting from parasites and infectious diseases, morbidity losses, uncontrolled breeding, poor marketing opportunities. The constraints are interactive and are often aggravated in traditional husbandry system by lack of flock management the practices of management is dependent upon the time of organization of health camps for treatment of sick sheep, vaccination against contagious diseases and availability of veterinary doctor in time, supply of saplings of fodder trees, training in sheep rearing, health and other aspects, provision of remunerative price for sheep, easy availability of credit and arrangement of breeding bucks. These are essential for higher sheep production technology and also increasing the production in terms of meat, milk, *etc*.

Not a single reference is provided in the introduction

What are the reasons for taken up this study .Please justify

Material and methods

The Ex-post-facto design of social research was used in the present study due to the researcher is having no control over the independent variables which have already occurred. The present study was conducted in Raichur districts of Karnataka, India. Six villages from each taluks were selected on the basis of the highest sheep population. Thus, total 12 villages were selected from two selected taluks. A list of farmers who possess sheep from each selected village were prepared with the help of veterinary officer from each selected village 10 sheep farmers were selected with the help of simple random sampling procedure to makeup total number of 120 sheep farmers for the present study.

The level of scientific management practices is operationalised as the extent to which one makes the use of the recommended technologies/ practices in sheep rearing. In this study, the degree of scientific management practices was measured on the recommended management practices with respect to kid management, feeding management, general and housing management and breeding management, health care practices and overall management. All the was scored on a three-point continuum *viz.* 'Always', 'Occasionally ' and 'never' with a score of 2, 1 and 0, respectively. The scores were assigned for each individual respondent was quantified by the scientific management practices sheep farmers as the procedure followed by Maiti *et al*., (2014).

The total score for a respondent is obtained by summing up the score obtained on each practice. One respondent could get any score in between 0-20 for each scientific management practice.

Quantitative and qualitative data were generated through personal interview schedule along with participatory observation, interaction and discussion with key informants. Data thus generated were analyzed by calculating simple frequencies, percentages, means *etc*. along with descriptive analysis.

Results and Discussion

Scientific sheep management practices followed by sheep rearing farmers

I. Lamb management practices of sheep rearing farmers

The data from Table 1 indicates that scientific lamb management practices followed by sheep farmers majority (83.33 %) of the sheep farmers always practiced providing clean and fresh water to the lamb this might be clean water easy available because study area comes under irrigated zone followed by, drug(any specific drug) for deworming (81.66 %) this might be farmers knew about effective control of internal parasites will make a large difference in the productivity and profitability of flock these organisms cause a range of problems including decreased growth of lambs, Girma (2013), proper bedding material in winter (80.00 %), locally available gravel and munds at a cheaper prices and which cools in summer and warmers during winter season as well as quick absorption of moisture due to urine, Ranjan (2013), defecation removal of mucous membrane around the mouth and nostril with cleaning cloth (70.83 %), this might be due to easy respiration of lamb and to prevent respiratory clinical diseases, Victor (2009), feed (green) from fifteen days onwards (75.00

%), this might be feeds were recollected from roadsides, irrigation areas, forest reserves, and river banks which are similar with report of Felekech *et al.* (2013), milk according sheep body weight (62.50 %), this might due to sometimes sheep avoiding to lactate his lamb on that time farmers take care of unhealthy or sometimes over consumption of milk lamb sufferance diarrhoea so sheep rears feeds the milk according body weight, feeding of colostrums before less 30 minute after birth (50.00 %) in the study farmers knew about the importance's of suckle the colostrums to newly born kids in order healthy growth and disease resistances capacity and cutting of naval cord and application of antiseptic is practiced (33.33 %) the care of lamb immediately after birth includes cleaning of mucous around nostril and the body with clean cloth and cut naval cord (2.50 cm) treatment should be needed using clean scissors with dipped in tincture iodine 7.00 per cent solution to protect lamb from extreme cold and soil licking, exposure of kids to solar radiation, Girma (2013),

The table also indicates that cent per cent of the sheep farmers never practiced castration and method of castration. The castration is important practices for better lamb management it is primarily practiced to improve the fattening potential and means of getting higher sale prices in markets. But farmers are not practicing may be, they may sell lamb according to demand for family requirements and 3-4 months lamb will fetch good price in market. Similar results were noticed by Chandra *et al*. (2005), Kumaravelu (2007) and Ramachandran *et al*. (2009).

II.Feeding management practices of sheep rearing farmers

From the Table 2 it indicated that cent per cent of the sheep farmers always allow animal for at least 5-6 hours for grazing followed by, clean and fresh water practiced (79.17 %) and green fodder (40.00 %) this might be grazing of sheep should involve the well management of amount and quality of forage resource from road sides and plant species present fodder around the year, present in study area so they feed 5-6 hours. Feed quality and quantity depend on age, sex, body size and physiological conditions like pregnancy, lactation *etc.* Water quality and quantity also play important role in feeding management. It is also seen that nearly three-fourth (76.66 %) of the sheep farmers occasionally provides green fodder around the year this might be reason that, the study area is coming under the Krishna and Tungabhadra river basin these sheep farmers had irrigation facilities to their land. salt to the feed formulation (60.00 %), concentrated feed during pregnancy and lactation (55.00 %) and dry matter (3-5 %) of body weight (54.18 %). The forest reserves also provide green fodder and farmers also provide grain, hay, or silage along with salt to increase the

palatability. This is common method practiced by many sheep farmers. The reason may give concentrates in later age may be due to compensate the lesser growth compared to younger age and concentrate feed mixture which has high amounts of protein, carbohydrates and fat, which contains less than 18 .00 per cent crude fibre and is usually low in moisture content.

A large majority (91.66 %) of the sheep farmers never allow animal for grazing before 10 AM and after 5 PM in summer. The reason may be local sheep are very well adapted to climate condition of the area. In summer season large amount of field were harvested and kept fallow there by huge amount of grazing land available. For this reason, they ignore the timings in summer. Similar findings were reported by Rashmi (2012) and Singh and Kumar (2007).

III. Housing management practices of sheep rearing farmers

Table 3 noticed that cent per cent of the sheep farmers always clean padlock regularly this might be farmers aware of unhygienic condition may leads to establishment of disease ad spread of external parasites moreover sheep excreta is good sources of organic matter followed by, kachha roof animal shelter (66.68 %), this might be The basic needs of sheep housing are simple housing practices materials used according to the economic status of the family small numbers of herders build sheep house using corrugated iron sheet for roofs and wood and mud for wall construction proper floor space for the animal and follow proper identification method by tagging or slight cut the ear or marking on body (58.33 %), due to farmers aware of monitoring the performance of individual animals in their farm by identifying the animals through any of the following methods: ear marks, ear tags, markings on the body (tattoo),ventilation and proper lighting facility in shelter (50.00 %) the reason may be proper housing and micro-climate control are the tools that provide the optimal conditions for the animal to thermo-regulate efficiently while maintaining sustainable production, especially in hot climates. It is also necessary to consider prevailing climatic conditions in building sheep houses. (53.33 %) percentage of sheep farmers trim the hoof regularly this might be they cut the hoof regularly to safety walk for the animal and lime dropping with soil replacement practices (35.00 %) this might be lime dropping to prevent soil born disease and maintain hygienic in the penning approach is required with external parasites such as ticks, lice and flies

It is also seen that more than the half (55.00 %) of the sheep farmers provide occasionally feeding arrangement as per need and trim hoof regularly (41.67 %), This may

be due to many of the farmers not having irrigation facilities and uneven availability of fodder in summer and rainy season; this can be overcome from creating awareness about the use community grazing land followed by, trimming of animal hoof respectively, lime dropping with soil replacement (31.66 %) and providing ventilation and proper lighting facility in shelter (33.33 %). For this educate the farmer's about the importance of lime dropping and animal housing management practice. These findings are in line with the findings of Mohapatra, *et al.* (1996), Deoghare, *et al*. (1999) and Otarus *et al*. (2014).

IV.Breeding management practices of sheep rearing farmers

It is seen from the Table 4 indicates that, majority (87.50 %) of the sheep farmers always practice treatment to reproductive disorder this might be the possible reason may be mating was predominantly uncontrolled and the success of sheep farm largely depends upon the good breeding management practice. Many of sheep farmers aware of reproductive disorder they vaccinate immediately if disease noticed, followed by, timely heat detection (83.34 %),farmers knew about Reproductive management techniques such as oestrus detection and observation of heat is the most important aspect attributable to the farmers in influencing fertility almost all the farmers know and combine several heat behavioural attributes to detect oestrus in sheep however, the majority of the farmers perceive bleating and mucus discharge to be the most important signs of heat, oestrus synchronisation, very common practices in traditional systems of sheep management selection of good ram for mating (79.66 %), Sheep farmer select and keep good ram according to heard size to increase reproductive performance, maintain reproductive record (75.00 %), this might be Records keeping of farm animal production are very important because it can aid decision making in the farmers. The records may be mating record, lamb and kid birth record, weaning record, health record, feed and drug acquisition record, sales record, fattening record and milking record, provide care and proper feeding during pregnancy and after kidding (66.66 %), Supplement feeding with concentrates during the first 15 days of pregnancy energy requirements increase by 15 per cent, separate animal in advanced pregnancy (60.83 %) and selection compatible and same breed for successful mating (55.00 %). During pregnancy period there by slight increase in body weight and during the last stages of pregnancy it may increase up to 80-100 per cent compared with dry animals and farmers mainly restrict same breed for successful mating to avoid inbreeding depression respectively.

It is also notice that an equal (65.00 %) percentage of sheep farmers never allow animal for mating of animal after 10-12 hrs after initiation into heat oestrous and breed first

time sheep based on age and body weight followed by keep gap 60-90 days between kidding and next breeding practice (60.00 %). Reason may be some sheep farmers less aware of scientific management practices this can be improved through contact veterinary extension personal, mass media exposure, and training programme. These findings are in line with Rajanna *et al.* (2003), Mishra *et al.* (2004), Kandasamy *et al.* (2006).

V. Health management practices of sheep rearing farmers

From the Table 5 it is indicated that cent per cent of sheep farmers always observe health of animal regularly, this might be due to majority of the sheep farmers they have basic knowledge on how a healthy animal should look like and them able to identify unhealthy animals in their farms to preventing disease outbreak and reduce the risk of diseases entering to flock fallowed by, vaccinate sheep regularly to prevent from the disease, The proper para veterinary services available in village help to reduce the disease prevention measures and thus lower the impact of disease, use of disinfection and maintain hygiene in around shelter and maintain quarantine before introducing new animal to the flock. Quarantine measure is also used to isolate new animals before allowing them to mix with a flock to reduce the chance of spreading disease to non-infected animals. A high majority (91.67 %) of the sheep farmers follow regular deworming, this might be control internal parasites of the sheep respondents of the study areas deworm their sheep in every six months. inform veterinary doctor in case of disease outbreak (85.00 %), this might be in disease outbreaks it's very difficult control in community level so farmers may inform veterinary doctor, contact veterinary doctor to treat sick animal (70.83 %) this might be that when farmers unable to control over the situation he like schemes to contact the veterinary doctor do smoothen the movement , and two-third of sheep farmers isolate sick animal from the flock this might be farmers knew about the disease and its effect to animals so he may separate the sheep to prevent the spread of the disease. It is also seen from the table cent per cent of the sheep farmer always fallow the dispose of dead animal in open field and prevent animal from ecto-parasite (80.84 %). Reasons may be attributed to the fact that lack of adequate education to acquire latest knowledge, less bio-security is the prevention of disease causing agents from entering or leaving any place where dead animals are present. It involves a number of measures and protocols designed to safeguard producers, animals from disease outbreaks, less extensions contacts, less mass media exposure, lack of motivation on the part of the extension personnel to make the farmers to practice adopt the improved sheep rearing

practices to a desired extent buried or dumping in soil. These findings are in line with, Reddy (1998), Rajapandi (2005), Nayak *et al.* (1994) and Sahana *et al.* (2004)

Sl. No.	Practice	Always	Occasionally	Never

1. Distribution of respondent according to individual scientific sheep management practices by sheep rearing farmers

Lamb management practices n= 120

		F (%)	F (%)	F (%)
1	Removal of mucous membrane around mouth and nostril and clean with cloth	85 (70.83)	35 (29.17)	0 (00.00)
2	Cut the naval cord and apply antiseptic	40 (33.33)	35 (29.17)	45 (37.50)
3	Feeding colostrums within in 30 min	60 (50.00)	54 (45.00)	6 (5.00)
4	Providing milk according to body weight	75 (62.50)	20 (16.66)	25 (20.83)
5	Providing drug for deworming	98 (81.66)	12 (10.00)	10 (8.34)
6	Providing feed (green/concentrate) from fortnight onwards	90 (75.00)	20 (16.67)	10 (8.33)
7	Providing clean and fresh water	100 (83.33)	20 (16.67)	0 (00.00)
8	Castrate of male kid before 2 months (For sale purpose)	0 (00.00)	0 (00.00)	120 (100.00)
9	What method do you follow for castration for male kid 1. Non-surgical. 2. Desi incision/(burdizzo/crushing) 3. Other	0 (00.00)	0 (00.00)	120 (100.00)
10	Proper bedding material in winter	96 (80.00)	24 (20.00)	0 (00.00)

F= Frequency, **%=**Per cent

Table 2. Feeding management practices of sheep rearing farmers

n= 120

Sl. No.	Management Practices	Always	Occasionally	Never
		F (%)	F (%)	F (%)
1	Providing dry matter 3-5 per cent of animal body weight	35 (29.16)	65 (54.18)	20 (16.66)
2	Providing green fodder around the year	18 (15.00)	92 (76.66)	10 (08.34)
3	Providing concentrate feed around the year	40 (33.33)	53 (41.16)	27 (22.51)
4	Providing green fodder without chopped	48 (40.00)	54 (45.00)	18 (15.00)
5	Providing salt to feed formulation	18 (15.00)	72 (60.00)	30 (25.00)
6	Providing mineral mixture to feed formulation	30 (25.00)	20 (16.67)	70 (58.33)
7	Providing clean and fresh drinking	95 (79.17)	25 (20.83)	0 (00.00)
8	Providing more concentrate feed during pregnancy and lactation	18 (15.00)	66 (55.00)	36 (30.00)
9	Allow animals for grazing at least 5-6 hours daily	120 (100.00)	0 (00.00)	0 (00.00)
10	Allow animals for grazing before 10 AM and after 5 PM in summer	0 (0.00)	10 (8.34)	110 (91.66)

F= Frequency, **%=**Per cent

Table 3. Housing management practices of sheep rearing farmers

n=120

Sl. No.	Management Practices	Always	Occasionally	Never
		F (%)	F (%)	F (%)
1	Sheepfold is separate from your residence	30 (25.00)	30 (25.00)	60 (50.00)
2	Manage animal shed according to season	20 (16.66)	32 (26.66)	68 (56.68)
3	Providing proper floor space for animals size	70 (58.33)	30 (25.00)	20 (16.67)
4	Proper lighting and ventilation facility in shelter	60 (50.00)	40 (33.33)	20 (16.66)
5	Build Kachha type roof for sheep	80 (66.68)	20 (16.66)	20 (16.66)
6	Proper identification method of sheep	70 (58.33)	30 (25.00)	20 (16.67)
7	Feeding sheep as for per schedule	42 (35.00)	66 (55.00)	12 (10.00)
8	Cleaning padlock regularly	120 (100.00)	0 (00.00)	0 (00.00)
9	Trim hoof regularly	64 (53.33)	50 (41.67)	6 (05.00)
10	Lime dropping and soil replacement on regular basis	64 (53.34)	38 (31.66)	18 (15.00)

F= Frequency, **%=**Per cent

Table 4. Breeding management practices of sheep rearing farmers

n= 120

Sl. No.	Management Practices	Always	Occasionally	Never
		F (%)	F (%)	F (%)
1	Timely heat detection	100 (83.34)	20 (16.66)	0 (00.00)
2	Keep gap 60-90 days between kidding and next breeding	18 (15.00)	30 (25.00)	72 (60.00)
3	Selection of good ram for mating of sheep	95 (79.66)	25 (20.84)	0 (00.00)
4	Mating of animals after 10-12 hrs after initiation into heat/estrous	12 (10.00)	30 (25.00)	78 (65.00)
5	Selection of compatible and buck of same breed for successful mating	66 (55.00)	36 (30.00)	18 (15.00)
6	Maintaining reproductive record	90 (75.00)	15 (12.50)	15 (12.50)
7	Breed first time of your sheep based on age and body weight	24 (20.00)	18 (15.00)	78 (65.00)
8	Separation of animals in advanced pregnancy	73 (60.83)	26 (21.67)	21 (17.50)
9	Treatment to reproductive disorders	105 (87.50)	15 (12.50)	0 (00.00)
10	Care and proper feeding during pregnancy and after kidding	80 (66.66)	40 (33.34)	0 (00.00)

F= Frequency, **%=**Per cent

Table 5. Health management practices of sheep rearing farmers

n= 120

Sl. No.	Management Practices	Always	Occasionally	Never
		F (%)	F (%)	F (%)
1	Sheep health checkup regularly	120 (100.00)	0 (00.00)	0 (00.00)
2	Isolation of the sick animals from flock	80 (66.66)	40 (33.33)	0 (00.00)
3	Regular vaccination as for schedule	120 (100.00)	0 (00.00)	0 (00.00)
4	Contact veterinarian/Para veterinarian for treating the sick animals	85 (70.83)	15 (12.50)	20 (16.67)
5	Use of disinfectant and maintain hygiene in and around animal shelter	120 (100.00)	0 (00.00)	0 (00.00)
6	Maintain quarantine before introducing new animas to herd	120 (100.00)	0 (00.00)	0 (00.00)
7	Regular deworming to animals	110 (91.67)	10 (08.33)	0 (00.00)
8	Prevent animals from ecto-parasite	0 (0.00)	23 (19.16)	97 (80.84)
9	Inform veterinary doctor in case of disease outbreak	102 (85.00)	12 (10.00)	6 (05.00)
10	Proper method to dispose of dead animals (Thrown in open field.)	120 (100.00)	0 (00.00)	0 (00.00)

F= Frequency, **%=**Per cent

Table 6. Overall scientific management practices of sheep rearing farmers

n=120

Sl. No.	Criteria	Frequency	Per cent
1	Low (Mean - 0.425*SD)	18	15.00
2	Medium (Mean ± 0.425*SD)	55	45.83
3	High (Mean + 0.425*SD)	47	39.17

Mean=74.74 SD=6.98

The table 6 and fig.01 data reveal that, the overall five management practices were combined together to know the overall management practices of respondents and presented. It is seen that 45.85 per cent of sheep rearing farmers belongs to medium level of scientific management practices followed by 39.17 per cent high and 15.00 per cent low level scientific management practices.

The possible reason for the finding could be attributed to their overall medium scientific sheep management practices of the sheep farmers may be due to management necessarily is a combination of various functions of planning, organizing, decision making and co-ordinating of activities to improve overall profits. The sheep farmers were middle aged, had medium flock size and medium annual income with nearly 20 years of experience in sheep farming and high value orientation which might be reflected in medium to high management orientation. The result was supported by the studies conducted by Krishnamurthy (1997).

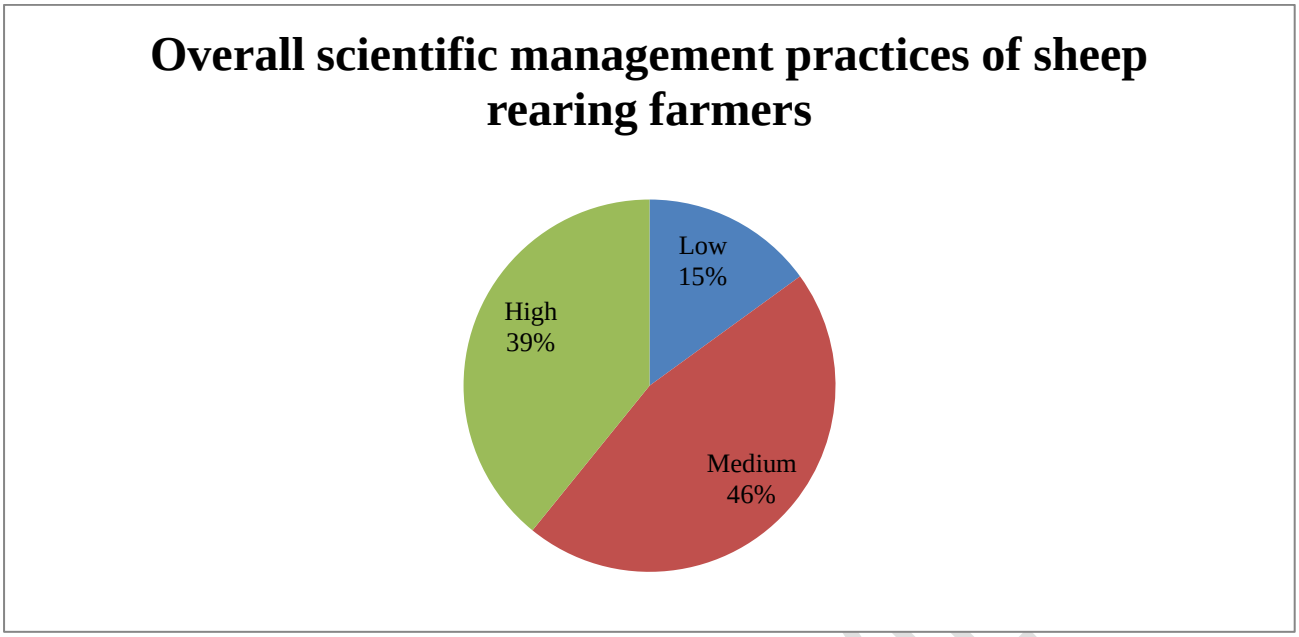

Fig. 01 Distribution of sheep farmers according to their overall scientific management practices.

Conclusion:

The study area there is still exist ignorance, superstitious beliefs, religious taboos and misconceptions among the respondents which are coming in the way of successfully following scientific sheep management practices. To overcome this moderate trend of management practices by the sheep farmers, it should be the endeavour of the animal husbandry veterinary services and extension personnel to transfer the latest scientific information coupled with services and supplies to the beneficiaries frequently and also remove the misconceptions in scientific management practices by educating them through mass media, field trips which will certainly motivate them to follow scientific management practices. A further probe into the scientific sheep management practices revealed that practices like provision of clean drinking water, rotational grazing system, deworming and vaccination of the flock at regular intervals, treatment of sick animals, cleaning of sheds, cleaning of feeding and water troughs were followed to a large extent by the respondents. The full-scale following these practices might be due to personal interest in having regular contact with local veterinary personnel, the interpersonal net work which was active in these villages and experience acquired by the respondents from their elders. On the contrary, the practices like cross breeding with improved rams, pregnancy diagnosis, identifying the problem of infertility, feeding balanced concentrate ration, weaning of lambs were partially adopted by

the sheep farmers. Lack of knowledge about certain practices and high cost of innovations might have forced them to tailor their needs and adopt the innovations partially. The practices like ear tagging for identification, using shearing machines, addition of mineral mixture, salt and vitamin supplements to feed were not practiced by the sheep farmers. The cause of this none practicing might be incompatibility of the innovations to the past experiences of the respondents, misconceptions about some practices, illiteracy, and indirect effect of the recommended practices to the economy and finally failure of extension agencies in transferring the technology.

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