COMMON HEALTH PROBLEMS AND FEEDING PRACTICES OF LIVESTOCK IN GANDERBAL, A CENTRAL HIMALIYAN DISTRICT OF KASHMIR VALLEY

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Received on: 08.03.2021
Accepted on: 18.05.2021

ABSTRACT

A field survey study was conducted in twenty villages representing four blocks of the district to assess the common health problems, existing feeding practices and nutritional status of livestock. For this purpose, 195 lactating crossbred cattle, 152 lactating does and 103 lactating ewes were evaluated through a questionnaire developed for the purpose. The most common health problems among dairy cows were repeat breeding, anestrous, ketosis, milk fever followed by post parturient haemoglobinurea, bloat and pica. In does and ewes abortions, alopecia, poor growth and anemia was common. Majority of the lactating cows (57.4%), does (98.0%) and ewes (100%) were on low plane of nutrition. 43.6 % of lactating cows, 1.54% of does and 0 % ewes were receiving mineral supplementation.

Key words: Feeding practices, nutritional status, health problems, mineral mixture

Introduction

Agriculture and livestock keeping represent the main activity of the rural population in India. The cattle represent the largest percentage of livestock and constitute a source of protein and revenue for the population. Despite ranking first in the world in cattle population the livestock sector is lagging behind because it is essentially based on a herd consisting largely of local indigenous breeds with weak growth performance. The productivity of indigenous as well as cross bred cattle is low as a result poor management practices, harsh environmental conditions, nutritional in adequacies, and production as well as reproduction diseases. Animal nutrition has been identified as the most important constraint in livestock sector development (ILRI, 1995; Chakravarthi *et al.* 2017; Hamadani *et al.,* 2019). Balanced ration as recommended by Indian feeding standards is required for optimum production in cattle (Reshi *et al.,* 2016). The availability of nutrients from ration depends upon consumption of feeds and fodders by livestock, which in turn is affected by the season, cropping pattern, agro-ecological conditions, the type and size of land holdings and socio-economic condition of farmers (Pantagne *et al.,* 2002). Little work has been carried out to evaluate the nutritional and health problems of livestock in Kashmir valley, therefore the present study was an attempt to study about the same in Ganderbal district, a livestock rich district of the Kashmir Valley.

Materials and Methods

A survey was conducted from October, 2019 to June, 2020 in twenty villages of four blocks *viz*. Ganderbal, Kangan, Wakura and Tulmula in Ganderbal, the central district and livestock rich area of Kashmir Valley. The villages for the study were chosen based in order to represent the whole block. Sampling details are provided in Table 1.

Selection of animals: In the selected villages, farm families owning atleast one dairy cow, sheep and goat flocks were selected randomly without any bias of age, feeding system, production and health status for collection. In all, 140 lactating crossbred cattle, 150 lactating does and 160 lactating ewes were evaluated during the study period.

As per the questionnaire, age, milk yield, disease history, body condition, ration offered, mineral supplementation, health status, production performances etc. about the animals were recorded.

Thoseanimals receiving green forage *ad libtum*, concentrates and mineral supplements were categorized as being on high plane of nutrition. The animals receiving green fodder and some (inadequate) amount of concentrates and occasional mineral supplementation were categorized of being on medium plane of nutrition.

Table 1: Sample collection from four blocks during the baseline survey

	Gander bal block	Lar block	Wakura block	Tulmula block	Overall
No. of Villages visited	5	5	5	5	20
Total animals sampled	145	105	130	70	450
Cattle	66	36	52	41	195
Does	44	48	38	22	152
Ewes	35	21	40	07	103

The animals fed on straws and little amount of greens with no concentrate and mineral supplement feeding was categorized as being on low plane of nutrition.

Health status based on the health history of last two years based on the information provided by the farmers was also assessed.

Results and Discussion

(a) Existing feeding practices

All types of livestock species were stall fed during winter. Paddy straw, maize stover, rice bran and wheat bran were the most commonly used feed ingredients offered to the animals under intensive feeding system. Existing feeding practices followed by the farmers are summarized in Table

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Table 2: Farmers response to pre-prepared questionnaire

Attribute							
Block	Farm families interviewed	Avg. Milk yield/ cow/ day	Mineral mixture supplem-entation	Deworming	Vaccination	Veterinary care	AI Practiced
Ganderbal	98	5.6 litres	8 = 8/660%	05 =8.3%	25 =41.6%	30 =50%	54 =90%
Lar	76	7.5litres	7 =10.7%	13 =20%	65 =100%	65 =100%	65 =100%
Wakura	54	6.8 litres					
Tulmula	82	11.8litres					
Over all (%age)	310	5.1 litres	7 =5.6%	18 =14.4%	90 =76%	95 =60%	119 =95.2%

2 & 3. It was found that in case of cattle only 3.1 per cent cattle where on high plane of nutrition receiving adequate forage concentrates and mineral mixtures. However, more than 50 per cent of cattle in the study area were fed inadequate ration and hence put on low plane of nutrition. These findings are in contrast to the studies of Mircha *et al*. (2012) who reported 32.4 of cattle were on high plane of nutrition in Moga district of Punjab representing that nutritional status of cattle in Ganderbal (J&K) is far less than in Moga (Punjab). While we compared the nutritional status of cattle with sheep and goat it is obvious that cattle are fed better than goats in the study area, where 98 per cent of goats and 100 per cent sheep are put on low plane of nutrition. In case of cattle only 43.6 per cent and in goat 1.54 per cent receive mineral supplementation, whereas the mineral supplementation in the feeding of sheep

Table 3: Block wise plane of nutrition and veterinary health care available for livestock in District Ganderbal of J & K

Cattle	Ganderbal (N=66)	Lar (N=36)	Wakura (N=52)	Tulmula (N=41)	Overall (N=195)
Farm families interviewed	66	36	52	41	195
Avg. Milk yield/ cow/day	7.6 litres	8.5litres	7.8 litres	12.8 litres	9.17 litres
Mineral mixture supplementation	27 (40.9%)	15 (44.66%)	21 (40.38%)	22 (53.66%)	85 (43.60%)
Plane of nutrition	H= 0.0(0%) M= 25 (37.90%) L= 41 (62.1%)	H= 1 (2.78%) M= 14 (38.90%) L= 21 (58.33%)	H= 0.0(0%) M= 21 (40.38%) L= 31 (59.61%)	H= 5(12.20%) M= 17 (41.46%) L= 19 (46.34%)	H=6 (3.10%) M=77 (39.49%) L= 112 (57.44%)
Deworming	39 (59.10%)	21 (58.33%)	27 (52.0%)	31 (75.61%)	118 (60.51%)
Vaccination	48 (72.72%)	27 (75.0%)	32 (61.50)	35 (85.36%)	142 (72.82%)
Veterinary care	54 (81.81%)	31 (86.11%)	36 (69.2%)	39 (95.12%)	160 (82.05%)
AI Practiced	64 (970%)	33 (91.66)	50 (96.20%)	41 (100%)	188 (96.41%)
Goat	Ganderbal (N=44)	Lar (N=48)	Wakura (N=38)	Tulmula (N=22)	Overall (N=152)
Farm families interviewed	44	48	38	22	152
Avg. Milk yield/ doe/day	0.60litres	0.82litres	0.55 litres	0.85 litres	0.71litres
Mineral mixture supplementation	3 (6.8%)	0 (0%)	0(0%)	0 (0%)	3 (1.54%)
Plane of nutrition	H= 0.0(0%) M= 3 (6.8%) L= 41 (93.2%)	H= 0.0(0%) M= 0.0(0%) L= 48 (100%)	H= 0.0(0%) M= 0.0(0%) L= 38 (100%)	H= 0.0(0%) M= 0.0(0%) L= 22 (100%)	H=0.0(0%) M=3 (2.0%) L= 149 (98.0%)
Deworming	27 (61.4%)	23(47.9%)	17 (44.7.0%)	18 (81.8%)	85 (55.9%)
Vaccination	2461.5%)	18 (26.7%)	16 (35.6)	14 (63.6%)	142 (72.8%)
Veterinary care	54 (81.8%)	31 (86.1%)	36 (69.2%)	39 (95.1%)	160 (82.0%)
AI Practiced	64 (97%)	33 (91.6)	50 (96.2%)	41 (100%)	188 (96.4%)
Sheep	Ganderbal (N=35)	Lar (N=21)	Wakura (N=40)	Tulmula (N=07)	Overall (N=103)
Farm families interviewed	35	21	40	07	103
Avg. Milk yield/ cow/day	-	-	-	-	-
Mineral mixture supplementation	0	0	0	0	0
Plane of nutrition	H= 0 M= 0 L= 35 (100%)	H= 0 M= 0 L= 21 (100%)	H= 0 M= 0 L= 40 (100%)	H= 0 M= 0 L= 07 (100%)	H=0 M=0 L= 103 (100%)
Deworming	21 (60%)	06 (28.6%)	09 (22.5%)	4 (57.1%)	40 (38.8%)
Vaccination	08 (22.9%)	03 (14.3%)	11 (27.5)	4 (57.1%)	26 (25.2%)
Veterinary care	12 (34.3%)	03 (14.3%)	11 (27.5%)	3 (42.9%)	29 (28.2%)
AI Practiced	N.A	N.A	N.A	N.A	N.A

was found non-existent. Veterinary health cover, vaccination and deworming was comparatively better in in the study area as is indicated in Table 3; 82, 72.8 and 60.5 per cent cattle, 82, 72.8 and 55.9 per cent goat, 28.2,25.2 and 38.8 per cent sheep were covered, respectively. The present finding with respect to mineral supplementation of animals was significantly higher (43.6%) than Meena *et al.* (2007), who reported 24% mineral supplementation of cattle in Uttaranchal state. The present findings are however supported by Reshi *et al.* (2012) who recommended adequate supplementation of minerals in dairy cattle of Kupwara district for optimum production. The study with respect to low nutritional status of sheep and goat are in agreement with Anaeto *et al.* (2009), who reported that concentrate and mineral supplements were not included in the diet of the sheep and goat in Ogun, Africa.

(b) Common health problems reported in livestock

Most common diseases in cattle of Ganderbal district were mastitis, ketosis, repeat breeding, anestrous, abortion, pica and low milk yield whereas diarrhea, acidosis, pregnancy toxemia, poor growth, alopecia and pica was found in sheep and goat (Table 4 & 5). Repeat breeding was found be most common disease in cattle (59%). Mircha *et al*. (2012) also reported repeat breeding as the most common health disorder in cattle and buffalo in Moga district of Punjab. Karwani and Sharma (2003) reported comparatively lower (19.6%) incidence of repeat breeding in Punjab than the present study. In sheep and goat poor growth rate, rough hair coat, alopecia and abortion rate was predominantly found suggestive of their poor nutritional status on account of poor plane of nutrition. Ishfaq *et al*. (2017) also reported high incidence of repeat breeding (41.8%) in livestock in Budgam district of Kashmir Valley 41.8% animals had reproductive problems with repeat breeding in 14.51%, mastitis in 7.20% and still birth in 0.23% of total animals. Other health disorders like lowmilk yield pica, alopecia, rough hair coat and even repeat breeding could be due to poor nutritional status of livestock. The health problems encountered by sheep and goat like diarrheas, pregnancy toxemia, acidosis, poor growth, anaemia, pica etc is also attributed to poor plane of nutrition in small ruminants. Supplementation of ration with mineral mixtures, timely deworming and improved plane of nutrition would improve animal health and production.

Table 4: Common diseases of cattle in Ganderbal district of J&K

Disease	No. of Animals affected cattle (N=195)	Percentage of affected animals
Clinical Mastitis	7	3.6
Ketosis	26	13.33
Low milk yield	61	31.28
Haemoglobinurea	5	2.56
Repeat breading/ Anestrous	115	58.97
Retention of placenta	16	8.21
Abortions	6	3.08
Anemia	11	5.64
Rough hair coat	25	12.82
Pica	19	9.74

Table 5: Common diseases of Sheep & Goat in Ganderbal district of J&K

Disease	Sheep (N=103)	Percentage of affected animals	Goat (N=152)	Percentage of affected animals
Diarrhoea	16	15.53	6	3.95
Pregnancy toxemia (Ketosis)	18	17.48S	15	9.87
Lactic acidosis	21	20.39	23	15.13
Mastitis	08	7.77	11	7.24
Abortions	22	21.36	14	9.21
Poor growth	52	50.49	43	28.29
Anaemia	22	21.36	09	5.92
Alopecia	24	23.30	15	9.87
Rough hair coat	31	30.10	12	7.89
Pica	28	27.18	21	13.82

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