Study on Calf Mortality Pattern of Dairy Animals in Eastern Zone of Uttar Pradesh

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ABSTRACT

Mortality of calf is one of the major effective factors for dairy owner economy and reduced milk production. The information was recorded for the period of 2 years (2020-2022). Mortality of male calves in cows and buffaloes were 6.00% and 48.00% respectively, in urban areas. In rural areas female calf mortality in cows and buffaloes were 8.00% and 22.00% respectively. Mortality rate of male buffalo than female in both areas was very high. Periodic calf mortality on the basis of information about more than 80% death found during just calving to 3 months of age. Out of which 49.00% deaths were between 16 to30 days and 14.00% death occurred in second weeks of age. Death rate was higher death rate were found in urban area than rural area during above mentioned period.

KEYWORDS

INTRODUCTION

Major Factors of early Calf Mortality on the basis of information has been showed in table-3. Its reveals that the in urban areas only 6.06 % early death was due to mismanagement of calf feeding. The objectives of the present study were illustrated the dairy animals in respect survival of young stock and suckling practices of various sex up to 2nd weeks of age of their life for obtaining about inculcate in overall capacity.

Mortality of calf is one of the major effective factors for dairy owner economy and reduced milk production. The information was recorded for the period of 2 years (2020-2022). Mortality of male

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calves in cows and buffaloes were 6.00% and 48.00% respectively, in urban areas. In rural areas female calf mortality in cows and buffaloes were 8.00% and 22.00% respectively. Mortality rate of male buffalo than female in both areas was very high. Periodic calf mortality on the basis of information about more than 80% death found during just calving to 3 months of age. Out of which 49.00% deaths were between 16 to30 days and 14.00% death occurred in second weeks of age. Death rate was higher death rate were found in urban area than rural area during above mentioned period India has one of the largest livestock populations (Approx.512.06 millions) in the world, and one of notable characteristics is that almost its entire that mis managemental practices and over feeding and under feeding of colostrum are main causes of calf mortality in the research areas. Maximum mortality rate of male buffalo than female in both areas.

Materials and Methods

The data of present study were collected from the Eastern Plain Zone (EPZ) of Uttar Pradesh which contribute for about 25% of dairy animal population in the state. Two districts of Varanasi divisions were selected randomly. The districts were Varanasi and Ghazipur. Data on urban trust or developed colonies of the districts was obtained. These colonies - constitute to the urban area of the two districts. Accordingly, the selected districts were stratified into two strata viz.(i) urban area and (ii) rural area. From each area, two sampling units (first phase sampling units) were randomly selected. Two community development blocks of the rural strata (one from each selected district) were randomly selected as the first phage units. The randomly selected community development blocks were Harahua in Varanasi district and Mardah in Ghazipur district. The information was collected during 2020 to 2022. The two sampling units selected from urban strata were Narayanpur colony in Varanasi district and Ghazipur proper in Ghazipur district. Similarity the list of all the community development blocks of Varanasi and Ghazipur districts was obtained to constitute the rural strata. A complete list of wards of selected colonies (urban strata) and villages (rural strata) was prepared, two wards from each colony and two villages from each community development block were randomly selected as phase-2 sample.

Results and Discussion

This is a basic chapter of research and contains the analytical results based on the face-face interaction and interview of dairy owners of urban and rural areas. The investigation was carried out during 2020-2021 and 2021-2022. The data obtained all over the course of investigation has been illustrated by table. The results have been analyzed by statistically and logically interpreted. The research involved in general status of dairy owners and feeding pattern of dairy animals.

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Table 1: Pattern of Calf Mortality on Sampled dairy Farm.

(Percent)

Particulars	Total cow and buffalo calf		Dead of cow calf		Dead of buffalo calf	
	Borne	**Dead**	**Male**	**Female**	**Male**	**Female**
Urban Small	100.00 (63.00)	70.00 (46)	3.00 (1.00)	6.00 (3.00)	51.00 (24.00)	59.00
Medium	100.00 (55.00)	75.00 (45.00)	9.00 (4.00)	0.00 (0.00)	60.00 (27.00)	31.00 (14.00)
Large	100.00 (83.00)	75.00 (67.00)	11.00 (4.00)	12.00 (11.00)	39.00 (25.00)	38.00 (26.00)
Mean	100.00 (67.00)	72.00 (52.00)	6.00 (3.00)	8.00 (5.00)	48.00 (25.00)	37.00 (22.00)
Rural Small	100.00 (87.00)	71.00 (65.00)	11.00 (7.00)	5.00 (4.00)	61.00 (40.00)	20.00 (14.00)
Medium	100.00 (54.00)	51.00 (65.00)	3.00 (1.00)	11.00 (3.00)	56.00 (15.00)	31.00 (10.00)
Large	100.00 (69.00)	70.00 (50.00)	10.00 (5.00)	8.00 (4.00)	52.00 (26.00)	30.00 (15.00)
Mean	100.00 (70.00)	63.00 (48.00)	8.00 (4.00)	8.00 (4.00)	61.00 (24.00)	22.00 (13.00)
Overall Mean	100.00 (68.00)	73.00 (50.00)	7.00 (4.00)	9.00 (5.00)	51.00 (26.00)	33.00 (16.00)

(Souce: Primary Data)

The calf mortality pattern in detail has also been presented in Table-1. Table let out that mortality of male calves in cows and buffaloes were 6.00% and 48.00% respectively, in urban areas. In rural areas females calve mortality in cows and buffaloes were 8.00% and 22.00% respectively. Maximum mortality rate of male buffalo than female in both areas.

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Table 2: Periodic Calf Mortality Pattern on Sampled Dairy Farms

(Percent)

Particulars	Number of calf dead						Major cause of mortality		
	0-15 days	16-30 days	31-90 days	91-365 days	Above 1styrs	Total	Managemental	Disease	Both
Urban Small	13.00	61.00	16.00	8.00	2.00	100.00	81.00	15.00	4.00
Medium	12.00	61.00	25.00	3.00	0.00	100.00	91.00	7.00	2.00
Large	11.00	60.00	20.00	7.00	2.00	100.00	91.00	7.00	2.00
Mean	11.00	60.00	19.00	2.04	2.00	100.00	87.00	9.00	3.00
Rural Small	10.00	60.00	20.00	8.00	2.00	100.00	90.00	8.00	2.00
Medium	29.00	51.00	8.00	10.00	2.00	100.00	40.00	29.00	31.00
Large	22.00	32.00	24.00	20.00	2.00	100.00	50.00	44.00	6.00
Mean	20.00	35.00	22.00	10.00	2.00	100.00	55.00	28.00	14.00
Overall Mean	14.00	49.00	28.00	8.00	2.00	100.00	74.00	19.00	7.00

(Souce: Primary Data)

Periodic calf mortality on the basis of information has been shown in Table-2. Its indicate that about more than 80% death found during just calving to 3 months of age. Out of which 49.00% deaths were between 16 to30 days and 14.00% death occurred in second weeks of age. Higher death rate was found in urban area than rural area during above mentioned period. and more than 73.00% calf mortality cases were due to mismanagement and about 19.00% was caused by diseases.

Table 3: Major Factors of Early Calf Mortality on Sampled Dairy Farms

(Percent)

Particulars	No. of calf dead	Colostrum feeding			Parasitic		Disease Out Break	Climate factor
		Excess	Deficient	No 0f feeding	Infection	Infestation		
Urban Small	100.00	9.35	40.65	2.17	80.13	15.52	53.35	14.14
Medium	100.00	0.00	0.00	0.00	46.67	0.00	82.22	0.00
Large	100.00	8.96	0.00	5.98	60.18	14.40	60.18	15.95
Mean	100.00	6.06	12.29	4.16	65.70	9.98	60.18	14.95
Rural Small	100.00	0.00	25.69	5.08	34.40	6.54	48.66	4.62
Medium	100.00	0.00	0.00	5.45	60.80	10.36	66.20	3.48
Large	100.00	42.00	35.00	12.00	41.80	22.00	67.10	8.00
Mean	100.00	14.58	25.00	6.25	42.36	11.20	57.64	5,65
Overall Mean	100.00	22.74	38.65	4.60	55.90	8,28	62.25	5.97

(Souce: Primary Data)

Major Factors of Early Calf Mortality on the basis of information has been showed in table-3. It reveals that in urban areas only 6.06 % early death was due to over feeding of colostrum and 12.29% due to deficit of feeding of colostrum. The situation was quite reverse in rural areas where over 22.00% deaths was due to over feeding of colostrum and about 38.65% death was due to less feeding of colostrum.

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CONCLUSION

In nut shell, miss managemental practices was the major causes of calf mortality. Influence of period, total calf born and dead, male and female and cause of disease on mortality rate of dairy animal calves has been investigated. The sex and period of death do not have significantly impact on the calf mortality, might be age and disease has significantly influence on the mortality rate of calf in dairy animals.

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