

Studies on Causes of Disposal in Kankrej Cattle Herd

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ABSTRACT

Causes of disposal of cows and heifers of Kankrej herd at Anand were investigated and production level of culled cows was studied.

Average annual disposal of cows and heifers was 29.54 ± 6.26 and 12.21 ± 0.62 per cent of their respective average strength in the herd. Low yield (40.49%), breeding troubles (20.07%), tuberculosis (6.69%) and old age (5.63%) were the major reasons for disposal of cows due to sale. Similarly, accidents (10.98%), old age (6.85%) and diseases (72.19%) were the major reasons for disposal due to death. Tuberculosis (30.10%) and tympany (9.59%) were observed to be the main causes responsible for causing death.

Of the total heifers sold, 43.47% were sold with dam, 10.70% due to breeding troubles, 18.90% for breeding purpose. Disposal due to death constituted of 10.85% at birth, 19.53% due to accidents and 63.11% due to diseases.

The average daily milk production of those sold due to low production, breeding troubles and for breeding purpose was 2.45 ± 0.28 kg, 3.48 ± 0.46 kg and 3.72 kg against the average daily milk production of 4.75 ± 0.39 kg for whole herd.

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INTRODUCTION

Knowledge regarding causes of disposal of cows or heifers from the dairy cattle herd is of great significance to intensify the managerial practices on certain rectifiable causes so as to minimize the losses of highly productive animals. Further, it also helps in maintaining the herd strength and production level at an optimal target level. Moreover, it also aids in making rapid improvement through selection.

Large quantum of information is available on this aspect for herds of temperate countries (Seath, 1940, Asdell, 1951, Leech *et al.* 1960; White and

Nichols, 1965 and Fosgate, 1965). However, for herds of tropical countries like us, such information seems very limited except that reported by Dutt and Desai (1968) and Chhikara and Balaine (1977). Therefore, in the present paper an attempt has been made to present some information on disposal pattern of Kankrej cattle herd.

MATERIALS AND METHODS

The data of 20 years (1951-52 to 1970-71) were compiled from records of Kankrej cattle breeding farm at Institute of Agriculture, Anand. Since the main objective of the study was to analyse the causes of disposal of cows and

heifers, the herd register, birth and death register and sale register were studied critically. In order to compare the level of production the overall average daily milk production of the whole herd in a given year and the average daily milk production of the culled animals for the previous year were considered.

The average total herd strength for the period of study was 178.09 units. The average strength of cows and heifers was 60.43 ± 2.60 and 83.54 ± 3.49 units.

RESULTS AND DISCUSSION

Disposal of cows:

Analysis of the data showed that average annual disposal of cows was 29.54 ± 6.26 per cent of the average strength of cows. The proportion observed in this study is in agreement with the findings of Seath (1940), Asdell (1951), Leech *et al.* (1960) and O'Connor and Hodges (1963) for herds of temperate climate.

Analysis of the data further revealed that 79.55 per cent of the total disposal of cows was by sale and 20.45 per cent due to deaths. Various causes of disposal with their respective percentage are presented in Table 1.

TABLE 1

Causes and percentage of disposal of cows.

Disposal by sale				Disposal due to death			
Causes	Number culled	% of sold	% of total disposal	Causes	Number culled	% of died	% of total disposed
Low yield	115	40.49	32.22	Tuberculosis	22	30.14	6.16
Breeding trouble	57	20.07	15.97	Weak	12	16.44	3.36
Weak	23	8.10	6.44	Accident	8	10.96	2.24
Tuberculosis	19	6.69	5.32	Old age	5	6.85	1.40
Old age	16	5.63	4.48	Tympany	7	9.59	1.96
Breeding purpose	12	4.23	3.36	Other diseases	18	24.66	5.05
Mastitis	9	3.17	2.52	Unknown	1	1.37	0.28
Blind teats	8	2.82	2.24				
Other reasons	25	8.80	7.00				
Total	284	100.00	79.55	Total	73	100.00	20.45

From Table it can be seen that of the cows sold, 40.49% were due to low yield, 20.07% due to breeding troubles, 6.69% due to tuberculosis, 5.63% due to old age and 19.31% due to other reasons.

Of the total deaths 6.85% died due to old age, 10.96% due to accidents,

30.14% due to tuberculosis and 52.05% due to other diseases and unknown reasons.

The results are broadly in agreement with those reported by Seath (1940), Becker *et al.* (1954), White and Nichols (1965) Dutt and Desai (1968) and Chhikara and Balaine (1977).

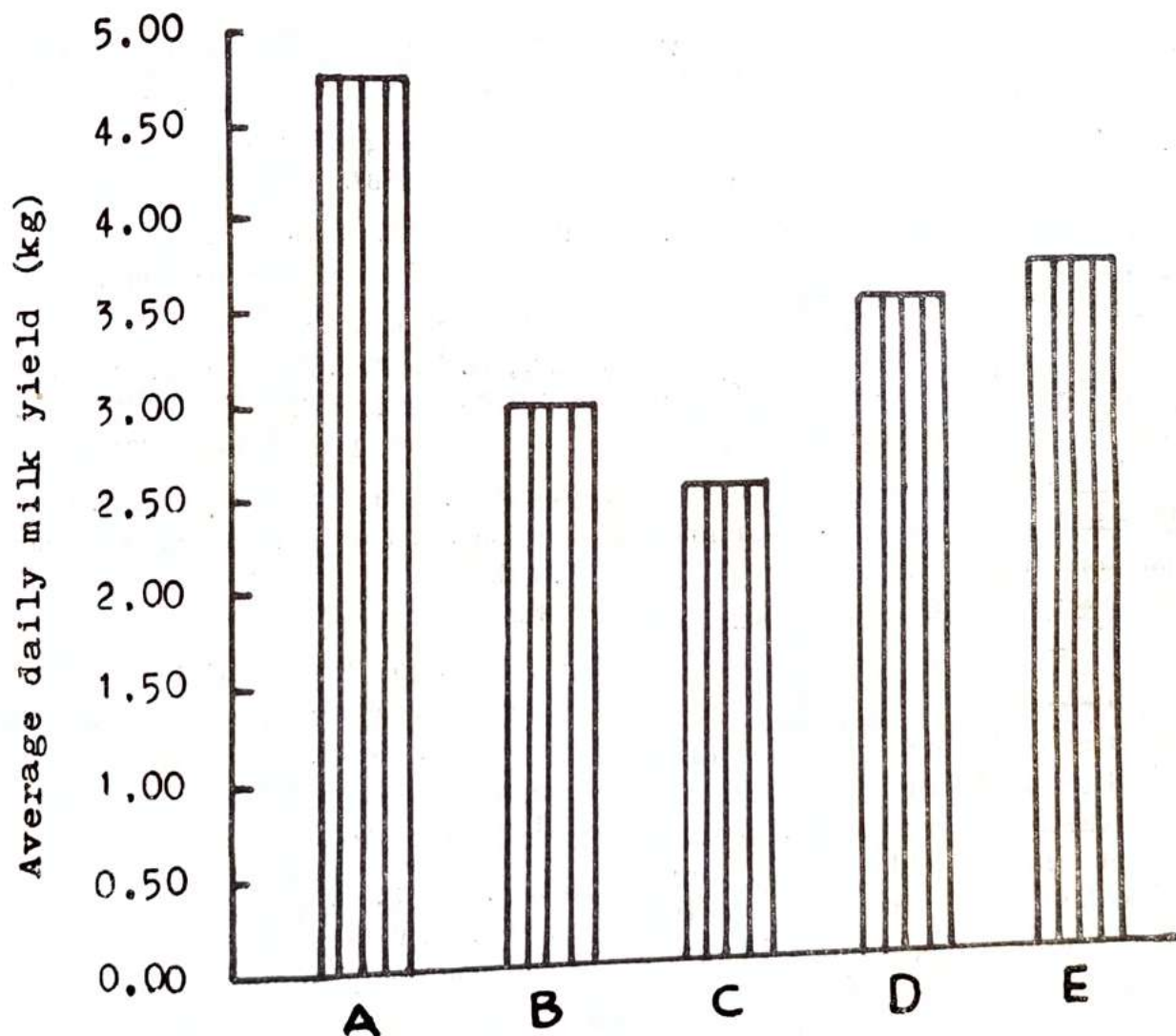
Thus, analysis of the data very clearly indicated that low milk yield, breeding trouble, old age and extremely high incidence of tuberculosis were the major reasons for disposal of cows. Chikkara and Balaine (1977) observed considerably low incidence of

reproductive disorders and tuberculosis as compare to this study.

Production level and disposal of cows:

The production levels of the cows sold due to different reasons are presented in Figure 1.

Figure-1 : Performance level of the herd and the cull cows.



A = Whole herd.

B = All cows sold.

C = Sold due to low production.

D = Sold due to breeding trouble.

E = Sold for breeding purpose.

From Figure 1 it can be seen that the average daily milk production of the whole herd was 4.75 ± 0.39 kg, whereas the average for all cows sold was 3.03 ± 0.09 kg. Thus there was a difference of 1.72 kg (36.21%) in the average daily milk production of whole herd and that of cull cows. This is in agreement with Seath (1940).

The average daily milk production for those sold due to low production, breeding trouble and for breeding purpose was 2.45 ± 0.28 kg, 3.48 ± 0.46 kg and 3.72 ± 0.25 kg respectively.

Age and disposal of cows:

Age of the cows disposed off due to old age varied from 10 to 16 years. About 63% of the total 16 animals were disposed off between 10-13 years of age. Similar results have been reported by Seath (1940), Nikolic *et al.* (1964) and Kecsker (1965).

Disposal of heifers:

The average number of annual disposal of heifers from the herd was 10.20 ± 1.30 which is 12.21 ± 0.52 per cent of the average strength of the heifers.

Analysis of the data indicated that 77.45% of the total disposal was due to sale, whereas 22.55% was due to deaths. Of the total heifers sold, 43.47% were sold with dam (being unweaned herd), 10.71% due to breeding trouble, 18.90% for breeding purpose and 26.92% due to other reasons. Of the total deaths, 10.85% died at birth, 19.53% due to accidents, 63.11% due to diseases and 6.5% due to unknown reasons. Horwood and Weaver (1949) and Dhanda and Khera (1957) found lower proportion of sales and deaths than recorded in the present study.

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