COMPARISON OF BOOK VALUE AND AUCTION VALUE OF MEHSANA BUFFALOES DISPOSED AT AN ORGANIZED FARM

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ABSTRACT

An analysis was made on book value and auction value of Mehsana buffalo disposed at organized farm Livestock Research Station, S. D. Agricultural University, Sardarkrushinagar for the period of 05 years from 2009 to 2013. Total 72 buffaloes (36.55 %) were auctioned due to various reasons. The average book value, auction value and benefit over book value were Rs. 2616.42, Rs. 23387.67 and Rs. 20771.25 per buffalo. Highest benefit (Rs. 21640.00 per animal) was obtained from the animals disposed having reproductive disorders. Parity wise highest benefit has been gained from the animal having 5th parity (Rs. 26607.00 per animal). On an average benefit of Rs. 20771.00 per animal from the auction of 72 milch buffaloes was gained. The buffaloes disposed off due to various reasons was found significant ($P<0.05$) or book value whereas non-significant for auction value and benefit over book value.

Keywords: Auction, Buffalo, Reason, Parity, Benefit.

Culling could be voluntary (farmer has complete freedom of choice over the removal of buffalo/cow from the herd) on the basis of low milk production or involuntary when there is no choice but it is necessary to remove the animal from the herd, due to reproductive problems, teat and udder disorders, infectious diseases and poor growth[3]. Voluntary culling usually leads to increased profits while involuntary culling causes economic losses. Optimum herd profitability is attained by increasing

the number of animals culled by voluntary reasons and reducing the number of involuntary culls.

Gujarat had 8.8 millions buffaloes, of which 38.41 % (3.4 million) were belongs to Mehsana breed[1]. Livestock Research Station is an organized farm under S. D. Agricultural University, Sardarkrushinagar having Mehsana buffalo breed for the breed conservation and related various objectives. Having herd of Mehsana breed since 1978, regular disposal and culling practices are practiced every year. Looking to these last five years data of disposal and culling have been analyzed.

MATERIALS AND METHODS

The herd registers, death registers and disposal registers were studied critically in order to find out the exact reasons for disposal of animals

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from the herds. Data of each disposed buffalo from L. R. S., Sardarkrushinagar were taken for the duration of 2009 to 2013. Data like book value, auctioned value, number of parity and date of auctioned or disposed was recorded from culling and disposal registers/files. On the basis of disposal, different reasons were categorized into five (5) main reasons viz, Old age (R1), Low milk production (R2), Udder problems (R3), Reproductive disorders (R4) and Miscellaneous causes like vices, diseases, inferior growth, off breed, transfer (R5).

Parity wise book value, auction value and Benefit were calculated on the basis standard mean and standard error[5]. While, reason wise book value, auction value and Benefit over book value were subjected General Linear Model (GLM) procedure in the SPSS statistical software (version 20.0)[4] to analyze the non orthogonal data. Significance of the various factors was tested using Dunkan New Multiple Range Test[2]. Results were considered statistically significant for 0.05 e" P e" 0.01, whereas P- values less than 0.01 were considered highly significant.

To determine the fixed effect of reason on various attributes like book value, auction value and benefit over book value following linear model was used:

$$W = \mu + R_j + e_j$$

Where,

W is the individual observation subjected to effect of reasons for disposal (Rj),

ì is mean of population,

Rj is the effect of reason of culling, where j= 1, 2, 3, 4, 5, 6 and **ej** is the error associated with each observation.

RESULTS AND DISCUSSION

Parity wise book value, auction value and Benefit: Information furnished in table 1 revealed that book value of buffaloes under 8th & above parity was highest followed by 3rd, 5th, 1st, and 2nd parity. Book value of buffalo under 4th and 2nd parity was not considered as only one buffalo

has been auctioned. Good / high yielder generally remains for more number of parity and hence their book value also goes high. Auctioned value of buffaloes having 5th parity was maximum followed by 3rd, 1st, 8th & above and 2nd parity. Highest benefit has been gained from the animal having 5th parity (Rs. 26607.00 per animal) followed by Rs. 22897.00, Rs. 22140.00, Rs. 17154.00, Rs. 16508.00, Rs. 16131.00 per animal during 3rd, 1st, 2nd, 11th, 6th parity respectively. The average book value was Rs. 2616.00 and auction value was Rs. 23387.00. So, Rs. 20771.00 per animal was benefited from the auction of 72 animals.

Buffaloes auctioned after 5th parity fetched higher prices than other might be due to reason that they were good yielder. Being good yielder they were kept upto 5th parity but they were auctioned due to defects like long service period, one teat loss or anoestrous reason.

Reason wise book value, auction value and Benefit: Information predicted in Table 2 revealed that the highest benefit (Rs. 21640.00 per animal) was obtained from the animals disposed having reproductive disorders, followed by Rs. 21178.00, Rs. 17820.00, Rs. 16863.00 and Rs. 16487.00 from the disposed animal having low milk production, udder problems, miscellaneous (Vices, diseases, inferior growth, off breed, transfer and old age) reasons respectively. Buffaloes auctioned due to reproductive disorders might be in lactating condition and giving good amount of milk, having long service period but were pregnant at the time auction or either in good condition might be the reasons for more benefit. Average book value, auctioned value and benefit value from 72 buffaloes disposed due to various reasons was Rs. 2616.42 ± 164.16, Rs. 23387.67 ± 1180.57 and Rs. 20771.25 ± 1174.11, respectively. Auctioned value and benefit value was 8 times and 7 times respectively was higher than book value. This showed the interest and demand of farmers for Mehsana buffaloes and also by the name of organized farm.

The book value of different category of animals (buffaloes) was decided on the basis of circular framed by the committee of the S. D. Agricultural University. The buffaloes disposed off due to various reasons was found significant (P<0.05) for book value whereas non-significant for auction value and benefit over book value. The significant result of book value of buffaloes for different category of reasons indicates transparency of circular framed by the committee nominated.

Table 1: Parity wise book value, auction value and Benefit:

Parity	No. of animals auctioned	Book value (Rs.)	Auction value (Rs.)	Benefit (Rs.)
1	20	2559.52 ± 05.08	24700.00 ± 2623.77	22140.48 ± 2628.06
2	12	2304.17 ± 390.97	19458.33 ± 1305.96	17154.17 ± 1162.88
3	12	2770.00 ± 416.95	25666.67 ± 2621.51	22896.67 ± 2497.48
4	1	3600.00 ± 0.00	46000.00 ± 0.00	42400.00 ± 0.00
5	9	2570.56 ± 439.92	29177.78 ± 3554.57	26607.22 ± 3550.37
6	6	1768.67 ± 218.88	17900.00 ± 1754.23	16131.33 ± 1794.73
7	1	4500.00 ± 0.00	15000.00 ± 0.00	10500.00 ± 0.00
8 & >	11	3137.45 ± 528.30	19645.45 ± 2693.37	16508.00 ± 2827.24
Overall	72	2616.42 ± 164.16	23387.67 ± 1180.57	20771.25 ± 1174.11

Table 2: Reason wise book value, auction value and Benefit:

Reason	No. of animals auctioned	Book value (Rs.)	Auction value (Rs.)	Benefit (Rs.)
Old age	02	2012.50± 687.50[bc]	18500.00 ± 2500.00[a]	16487.50 ± 812.50[a]
Low milk production	21	3430.45±297.19[ab]	24609.09 ± 1859.72[a]	21178.64±1849.00[a]
Udder problems	05	2900.00± 732.50[bc]	20720.00 ± 3527.38[a]	17820.00±3723.23[a]
Reproductive disorders	39	1913.31 ± 153.37[c]	23553.85 ± 1790.80[a]	21640.54±1766.20[a]
Miscellaneous	05	4477.00 ± 316.12[a]	21340.00 ± 5363.82[b]	16863.00±5336.37[a]
Overall	72	2616.42 ± 164.16	23387.67 ± 1180.57	20771.25 ± 1174.11
The means bearing similar superscript do not differ significantly.				

CONCLUSION

Study revealed that reproductive disorder (repeat breeder, long service period, anestrous, and abortion) was the major cause for disposal at farm. It was also concluded that highest benefit was achieved from the animals auctioned due to reproductive disorders.

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