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Breeding and Feeding Practices of Dairy Animals in Eastern Uttar Pradesh

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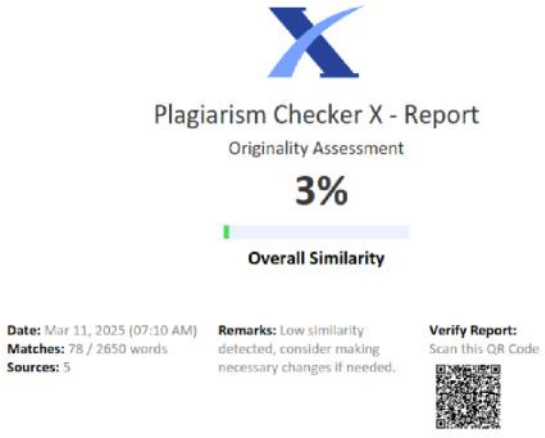

ABSTRACT

Time of conception plays an important role in overall economy of milch animals. Livestock farmers, basically depending on facilities are available in the areas, take their animals for A.I or Natural service. AI practices was very poor for buffaloes but both areas dairy owners were adopted both methods breeding for dairy farm animals. It was recoded that only 5.06% of buffaloes were conceiving by AI. Good quality of feeds and fodder are essential for production and productivity of dairy animals.Green fodder availability varied from owner to owner, area to area and animals to animals. Green fodder availability was maximum in rural area than urban area. Over 86% dairy owners were providing only dry fodder to their animals in urban area. However, in rural area it was 88.93%. There was minimal difference in the feeding of cow and buffalo.

KEY WORDS

Breeding, Feeding, Animals, Conception Rate, Fodder.

INTRODUCTION

Time of conception plays an important role in overall economy of milch animals. Livestock farmers, basically depending on facilities are available in the areas, take their animals for A.I or Natural service.Artificial Insemination maintained by small dairy owners for cows were receiving minimal of 2.32 AI per conception as against highest 2.46 AI in medium dairy owners to their livestock. Urban area dairy owners adopted breeding policy in cows was 63.74% through A.I and23.75% by natural service.

It was recorded that 13.58% cows could not conceive.Fodder growing was not major activity in urban areas because owners had less agricultural land, dairy owners was interested growing cash crops is creating high cost of green fodder as well as big gap between demand and supply raised by less area under fodder crops. have little agricultural land on which fodder growing is not a main activity because that place owners are growing cash crops. Less area under fodder crops is creating a high cost of green fodder as well as big gap between demand and supply. That reason the urban dairy owners are dependent on market for feeds and fodder.The green fodder availability varied from owner to owner, area to area and animals to animals. Green fodder availability was maximum in rural area than urban area. Over 86% dairy owners were providing only dry fodder to their animals in urban area. However, in rural area it was 88.93%. There was minimal difference in the feeding of cow and buffalo.

Materials and Methods

The information was collected from Eastern Utter Pradesh which contribute for about 25% of dairy animal's population in the state. Eastern Uttar Pradesh has 24% of the total female bovine population which is highest than any other respective part of U.P. The Varanasi division of eastern Uttar Pradesh is large compare to other two divisions.

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 founded. 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.

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-ll sampling, units. A random sample of 10 milk producers was selected from each ward/village using proportional allocation method with respect to the total number of the milk producers in each category. In this way 40 milk producers were selected from 4 wards of urban strata and 40 milk producers from 4 villages of rural strata, making a total sample of 80 milk producers for study

Results and Discussion

This is a basic chapter of study and contains the analytical results based on the face to face and door to door interaction and interview of 80 dairy owners of urban and rural areas. The investigation was carried out during 2020-2021 and 2021-2022.

Time of conception plays an important role in overall economy of milch animals. Livestock farmers, basically depending on facilities are available in the areas, take their animals for A.I or Natural service. The information on conception rate and type of breeding has been showed in Table-1. It is indicated that relatively a greater number of A.I per conception were required in buffaloes (2.97) than (2.40) in cows. More number of A.I were required in rural areas cows (2.48) than urban areas (2.40).

Artificial Insemination maintained by small dairy owners for cows were receiving minimal of 2.32 AI per conception as against highest 2.46 AI in medium dairy owners to their livestock. Urban area dairy owners adopted breeding policy in cows was 63.74% through A.I and23.75% by natural service. It was recorded that 13.58% cows could not conceive. Highest percentage of A.I coverage was 80.00% in large dairy owners and lowest was 45.00% in medium. Average percentage of A.I coverage in rural areas were as poor as 23.73%. The natural service was being provided to 75.83% cows and remains were not conceiving either by AI or natural service. Overall status of AI and natural service on sampled dairy farms was 33.93% and 60.22 percent respectively.

Artificial Insemination maintained by small dairy owners for cows were receiving minimal of 2.32 AI per conception as against highest 2.46 AI in medium dairy owners to their livestock. Urban area dairy owners

adopted breeding policy in cows was 63.74% through A.I and23.75% by natural service. It was recorded that 13.58% cows could not conceive. Highest percentage of A.I coverage was 80.00% in large dairy owners and lowest was 45.00% in medium. Average percentage of A.I coverage in rural areas were as poor as 23.73%. The natural service was being provided to 75.83% cows and remains were not conceiving either by AI or natural service. Overall status of AI and natural service on sampled dairy farms was 33.93% and 60.22 percent respectively.

AI practices was very poor for buffaloes but both areas dairy owners were adopted both methods breeding for dairy farm animals. It was recoded that only 5.06% of buffaloes were conceiving by AI. Maximum of dairy owners in both areas were breeding their buffaloes through service. Poor conceiving through AI indicates that its failure in buffaloes. Medium dairy owners of rural areas were adopted 75.85% natural service for buffaloes. There were 21.89% buffaloes are not conceived either by AI or natural service. Large dairy owners in urban areas buffaloes were more than 40% not conceived.

With highest number of AI needed per conception and maximum coverage of breeding through AI showed that techniques are flowless and mostly adopted by dairy owners in both areas. Requirements of maximum number of AI per conception strength be due to various number of factors i.e., Management, poor quality semen, lack of LN2 in the cry canes, poor cold chain, lack of thawing process, unbalanced heat periods and others, poor quality of semen and management (Gupta et al.1994 and Tripathi and Rathi1999.

Table 1: Conception Status in Cow and Buffaloes

Percent

Particulars	Cow				Buffaloes			
	Average No. of AI Done to Animals	Ave. no. cow conceived		Not Conceived	Ave. No. of AI Done/Animals	Ave. No. of Buffalo Conceived with		Not Conceived
		AI	Natural			AI	Natural Service	
URBAN								
Small	2.32	66.22	33.03	5.75	3.17	2.00	77.61	20.89
Medium	2.46	45.00	23.75	31.25	2.64	1.94	54.27	41.79
Large	2.42	80.00	15.00	3.75	3.10	4.24	45.66	40.21
Mean	2.40	63.74	23.75	13.58	2.97	5.00	62.91	34.09
RURAL								
Small	2.54	24.17	75.83	0.00	3.68	25.88	53.24	28.88
Medium	2.39	22.50	71.58	6.00	3.26	2.26	75.85	2.89
Large	2.28	24.29	72.29	3.43	2.84	7.86	55.83	36.31
Mean	2.48	23.73	72.69	3.43	3.26	7.54	60.95	312.32
Overall Mean	2.44	-	60.22	5.85	3.12	5.06	56.41	38.54

Figures in parentheses are the number.

Artificial Insemination maintained by small dairy owners for cows were receiving minimal of 2.32 AI per conception as against highest 2.46 AI in medium dairy owners to their livestock. Urban area dairy owners

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With highest number of AI needed per conception and maximum coverage of breeding through AI showed that techniques are flowless and mostly adopted by dairy owners in both areas. Requirements of maximum number of AI per conception strength be due to various number of factors i.e., Management, poor quality semen, lack of LN2 in the cry canes, poor cold chain, lack of thawing process, unbalanced heat periods and others, poor quality of semen and management (Gupta et al.1994 and Tripathi and Rathi1999.

Table 2: Status of feed and Fodder Availability on Sampled Dairy Farms

Percent

Particulars	No of Dairy Owners	Feed Availability		Dairy Owners View	
		Owned	Purchased	Sufficient	Deficient
Urban Small	100.00 (16.00)	13.00 (2.08)	87.00 (13.92)	45.00 (7.20)	55.00 (8.80)
Medium	100.00 (12.00)	14.00 (1.68)	86.00 (10.32)	25.00 (3.00)	75.00 (9.00)
Large	100.00 (12.00)	14.00 (1.68)	86.00 (10.32)	38.00 (4.56)	62.00 (7.44)
Mean	100.00 (13.33)	13.67 (1.67)	86.33 (11.67)	36.00 (4.92)	64.00 (8.41)
Rural Small	100.00 (16.00)	90.00 (14.40)	10.00 (1.60)	100.00 (16.00)	0.00 (0.00)
Medium	100.00 (12.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)
Large	100.00 (12.00)	90.00 (10.80)	10.00 (1.20)	85.00 (10.20)	15.00 (1.80)
Mean	100.00 (13.33)	93.33 (12.44)	6.67 (0.89)	95.00 (12.66)	5.00 (0.67)
Overall Mean	100.00 (13.33)	52.51 (7.00)	47.51 (6.33)	68.77 (9.17)	31.26 (4.17)

Animal health and productivity are direct related to availability of feed and fodder. Percent values for availability of feeds and fodder regarding to it sufficiency has been presented according to dairy view in table-2. A perusal of information let out that more than 86.00% of urban dairy owners were not having their own feeds, deficiency of feeds and fodder are also found in urban area. All the dairy owners purchased of feeds

and dependent on markets. Deficiency of feeds and fodder of medium dairy owner was (75%) and small (55.00%) in urban area. Own feed and fodder were conserving by dairy owners in rural area and dairy producers had enough feed and fodder compare than urban areas.Rural area dairy farmers have agricultural land and many livestock keepers grown some fodder crops for their animals. The wheat and paddy straw produced in their fields and stored first for their animals in sufficient quantity. Rural area dairy owners have more feeds and fodder for animals than urban aera.

Table 3: Green Fodder Feeding Practices on Sampled Dairy Farms

Percent

Particulars	No of Sampled Dairy Owner	Buffalo				Cow			
		Frequency		Chaffing and Mixing With Straw		Frequency		Chaffing and Mixing with Straw	
		Daily	As per Availability	Yes	No	Daily	As per Availability	Yes	No
Urban Small	100.00 (16.00)	24.00 (3.84)	76.00 (12.16)	15.00 (2.40)	85.00 (13.60)	0.00 (0.00)	100.00 (16.00)	15.00 (2.40)	85.00 (13.60)
Medium	100.00 (12.00)	25.00 (3.00)	75.00 (9.00)	28.00 (3.36)	72.00 (8.64)	0.00 (0.00)	100.00 (12.00)	25.00 (3.00)	75.00 (9.00)
Large	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	14.00 (1.68)	86.00 (10.32)	14.00 (1.68)	86.00 (10.32)	50.00 (6.00)	50.00 (6.00)
Mean	100.00 (13.33)	16.33 (2.28)	83.67 (11.04)	19.00 (2.48)	81.00 (10.85)	24.67 (0.56)	95.33 (12.94)	30.00 (3.80)	70.00 (9.33)
Rural Small	100.00 (16.00)	100.00 (16.00)	0.00 (0.00)	100.00 (16.00)	0.00 (0.00)	100.00 (16.00)	0.00 (0.00)	100.00 (16.00)	0.00 (0.00)
Medium	100.00 (12.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)
Large	100.00 (12.00)	75.00 (9.00)	25.00 (3.00)	100.00 (12.00)	0.00 (0.00)	75.00 (9.00)	25.00 (9.00)	100.00 (8.00)	0.00 (0.00)
Mean	100.00 (13.33)	91.67 (12.22)	8.33 (1.11)	100.00 (13.33)	0.00 (0.00)	91.67 (12.22)	8.33 (1.11)	100.00 (13.33)	0.00 (0.00)
Overall Mean	100.00 (13.33)	56.51 (7.67)	43.51 (5.57)	57.76 (7.83)		48,26 (6.50)	51,26 (6.83)	62.52 (8.33)	37.50 (5.00)

Feeding practices of green fodder adopted at sampled dairy farms are presented in Table-3. Fodders are not available for feeding of milch animals in urban areas. Only 24.00% of livestock owners were provided green fodder to animals, the chaffing of fodder and mixing with straw was followed by 15% of owners. Remain of dairy owners were provided un-chaffed fodder to the animals. The chaffing practices and mixing in wheat straw was highest in medium dairy owners. The availability of was quite differ in rural areas where 100% of owners were giving daily green fodder daily. All the dairy farmer were providing green fodder just after chaffing and mixing with straw.

Table 4: Practices of Dry Fodder and Concentrate Feeding on Sampled Dairy Farms

Percent

Particulars	No. of Sampled Dairy Owners	Feeding of Straw		Feeding Concentrate		Frequency of Feeding Concentrate	
		Dry	Wet	Properly	Sprinkle	During	Only
Urban Small	100.00 (16.00)	85.00 (13.60)	15.00 (2.40)	15.00 (2.400)	85.00 (13.60)	15.00 (2.40)	85.00 (13.60)
Medium	100.00 (12.00)	86.00 (10.32)	14.00 (1.68)	0.00 (0.00)	100.00 (12.00)	12.00 (1.44)	88.00 (10.56)
Large	100.00 (12.00)	100.00 (12.00)	0.00 (0.00)	25.00 (3.00)	75.00 (9.00)	25.00 (3.00)	75.00 (9.00)
Mean	100.00 (13.33)	90.33 (12.04)	9.67 (0.75)	13.33 (1.78)	86.67 (11.58)	17.33 (2.31)	82.67 (11.01)
Rural Small	100.00 (16.00)	0.00 (0.00)	100.00 (16.00)	100.00 (16.00)	0.00 (0.00)	100.00 (16.00)	0.00 (0.00)
Medium	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)
Large	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	100.00 (12.00)	0.00 (0.00)	100.00 (12.00)	0.00 (0.00)
Mean	100.00 (13.33)	0.00 (0.00)	100.00 (13.33)	100.00 (13.33)	100.00 (13.33)	100.00 ()	0.00 (0.00)

Method of concentrate feeding plays an important role in proper feed utilization and increasing production and productivity of dairy animals. The discussion regarding dry fodder and concentrate feeding have been summarized in Table-4. It indicates that 86% medium dairy owners of urban area were given feed to animals as dry or mixing with little quantity of water and large urban livestock owners do not soak or even wet the straw with water to fed animals. There were only 15% and 14% small and medium dairy owners who provide straw after mixing with water. Dairy owners of rural areas were providing straw only after proper mixing with water.

The concentrate feeding after proper mixing was used by 13.33% of urban dairy owners. Table indicates that 86.67% owners provided the concentrate by sprinkling over the feed. It is notable that such practices of concentrate feeding were regularly followed during milking. Feeding practices of concentrates in rural areas was quite before milking after soaked and mixed with straw.

CONCLUSION

Animal husbandry is closely related with agriculture and play an important role in urban as well as rural economy and inculcating living standard of dairy producers. The feeding practices followed during different seasons also have significant effect on health and lactation yield of animals and time of conception play an important role in significant results.

REFERENCES

1. Anonymous (2010) Basic Animal Husbandry Statistics, Govt. of India, Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries, Krishi Bhawan, New Delhi.
3. Bachan, Shiv; and Pal, R. K. (2022) Study on management practices of dairy animals in eastern zone of Uttar Pradesh. *Indian Journal of Agriculture and Allied Sciences.* Vol: 8 (2),1-5.
3. Gupta, BD.; Kaushik, S.N.; and Mishra, R.R. (1994) Study on reproduction efficiency parameters of Murrah buffaloes *Indian J Sci.* 47(4); 257-264.
4. Gupta, B.N. (1981) Dairy cattle feed resources and feeding practices in the north eastern states. National Dairy Research Institute, *Karnal (ICAR). Publication No*.
5. Pal, R.K.; and Shiv Bachan (2021) Studies on feed consumption and nutritional status on lactating murrah buffaloes of rural areas of kushi Nagar district U.P. *Progressive Research-An International Journal* vol 10 (1): 47-50.
6. Pal, R.K.; and Shiv Bachan (2021) Impact of managemental practices for eastern hariyana cow in eastern zone of Uttar Pradesh, *SHODH SAMAGAM*, vol 4(3): 1876-1881.
7. Singh, Mridula; and Lal, Murari (1992) Fodder development policies and strategies in U.P (Global view). Proceedings of National seminar on Role and Functions of State Land Use Bord for Conservation, *Management and Development of Land Resources*. 14-16 Oct 1992, p. 96-132.
8. Singh, P. (1970) Optimal combination of feeds and fodder in dairy enterprises on farmer in Etah district (U.P). Ph. D. Thesis, IARI, New Delhi.
9. Shivhare, P, R.; and Shiv Bchan (2019) Impact of managemental practices on the performance of cattle farming at organized dairy farm. *Bioved.* 30 (1): 117-119.

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