Adoption of improved dairy husbandry practices by the tribal in Dangs district

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INTRODUCTION

Dairy business has a crucial role in our economy. Despite the facts, that milk production in our country is characterized in a traditional way. That resulted low productivity of milch animals and clearly affects the per capita availability of milk in the country. The present per capita availability of milk in the country is 110gm against the world average 300 g. It is mainly because of rearing non-descriptive breed of animals and their low milk potential, shortage of feeds and fodder and improper management practices. However, India has large animal population. The situation in the hilly region like Dangs is very alarming in this regard. The average milk productivity in Dangs is only 3-5 Liter/ day/ animal. Still there exists a wide gap between the technology available at the research juncture and its adoption particularly in animal rearing. For increasing the milk production and making the dairy business more remunerative, it is essential to go for the adoption of improved dairy husbandry technologies in the field of health care, feeding, breeding and management. Hence, the study is planned with the following objectives:

Objectives :
– To study the profile of the respondents.

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– To know the extent of adoption of selected dairy husbandry practices .
– To examine the relationship between dependent and independent variables.
– To identify the constraints in dairy husbandry faced by the live stock owners.
– To suggest the remedial measures to overcome the constraints in dairy husbandry.

Present study was conducted in 10 villages of Dang district where HF and cross breed cows are kept by the live stock owners. Out of 10 selected villages, 100 livestock owners' were selected *i.e.* 10 farmers from each village by using random sampling technique. To measure adoption of dairy husbandry technologies, one score was given for adoption of particular technology and Zero score for non adoption. Recommended technologies were selected with the help of experts in the concerned field as well as review of literature. The information was collected through personal interview methods with the help of well structured schedule. The statistical tools like correlation, regression were used to interpret the result.

Major findings :
Majority of the respondents were belonged to young and middle age group, educate up to primary and secondary level, marginal to small land holding,, agriculture with dairy as main occupation, rearing animals up to 5, high level of selling pattern index of milk, 76 per cent of the respondents were obtained highest yield up to 15 liter/day and medium level of adoption with a mean score of 10.96.

An attempt was also made to know the practice wise extent of adoption. The result indicated that artificial insemination and drying fodder were adopted by all the respondents followed by heat detection techniques (88.00%), vaccination (81.00%), watering (66.00% timely insemination, treatment by veterinary doctor / Livestock inspector (61.00%) ,timely pregnancy diagnosis (59.00%), cleanliness of shed (57.00%), use of concentrate for milch animals (51.00%), deworming of adult animals and use of concentrates for pregnant animals (49.00%) respectively. Besides, the adoption was in the tune of 19 per cent to 45 per cent in case of use of mineral mixture, grooming fertility care of heifers, Quarantine of animals, storage of dry fodder and colestrum feeding to calves.. It was also observed that the adoption was very poor in case of post-partum care, calf feeding, deworming to calves, use of urea treated dry fodder,, fodder production, use of fodder and use of concentrates for dry animals. However practices namelyproper shed and manger, use of pedigree bull, fodder, use of cake and proper method of milking were not adopted by the live stock owners.

The association between size of land holding, occupation and highest milk yield /day was found significant with the adoption of improved dairy husbandry practices. The highly significant association between milk and adoption clearly showed the importance of improved practices.

In the regression analysis the contribution of all the selected independent variables were up to the extent of 59.78 per cent whereas, milk yield was significantly contributed with

Table 1 : Distribution of the respondents according to their selected characteristics (n=100)

Age :		Number of animals :		Occupation :		Highest milk production/day :	
Young age group(up to 35 years)	50	Up to 2animals	15	Agri+ dairy	90	Mean: 10.52, SD: 3.91	58
Middle age(36 to 50 years)	45	3-5 animals	45	Dairy+ labour	07	1. up to 10 liter	28
Old age (> 5o years)	05	> 5 animals	40	Agri+ Dairy+ other	03	2. 10.01 to 15 liter	14
						3. > 15 liter	
Education :		Size of land holding :		Commercialization index :		Adoption :	
Illiterate	15	land less	07	Mean. 94.26, SD. 7.62		Mean: 10.96, SD. 4.18	
Primary(up to 7th std)	50	Marginal (< 1 ha)	29	1. Milk sold up to 75%	06	1.low level of adoption	11
Secondary (8th to 10th)	29	Small (1-2 ha)	37	2. 75.01 to 85 %	05	(up to 7 score)	
Higher education(> 10th std	06	Medium(2.01 to 4 ha)	20	3. > 85 %	89	2. Medium level of adoption	74
		Large (> 4 ha)	07			(8 to 15 score)	
						3. High level of adoption	15
						(> 15 score)	

Table 2 : Practice wise extent of adoption of improved dairy husbandry practices (n=100)

Sr. No.	Selected practices	% adoption	Sr. No.	Selected practices	% adoption	Sr. No.	Selected practices	% adoption
1.	Proper shed	00	11.	Fertility care	27	22.	Use of mineral mixture	45
2.	Proper manger	00	12.	Fodder production	04	23.	Use of salt	12
3.	Cleanliness of shed	57	13.	Use of Fodder	03	24.	Watering	66
4.	Grooming	37	14.	Drying fodder (Grasses)	100	25.	Vaccination	81
5.	Heat detection techniques	88	15.	Use of urea treated dry fodder	02	26.	Quarantine of animals	22
6.	Use of pedigree bull (Bull for natural service)	00	16	Storage of dry fodder	28	27.	Treatment by veterinary doctor/ livestock inspector	61
7.	Artificial insemination	100	17.	Use of cakes	00	28.	Deworming of Adult animal	51
8.	Timely insemination	61	18.	Use of concentrates for milch animals	51	29.	Proper method of milking	00
9.	Timely pregnancy diagnosis	59	19.	Use of concentrates for Pregnant animals	49	30.	Colestrum feeding to calves	29
10.	Post partum care	07	20.	Use of concentrates for dry animals	11	31.	Calf feeding	06
11.	Fertility care	27	21.	Use of Pashu Poshak	18	32.	Deworming to calves	02
						33.	Care of heifers	19

Table 3 : Correlation analysis between the characteristics of the respondents with the adoption of improved dairy husbandry practices (n=100)

Sr. No.	Independent variables	" r " value
1.	Age	- 0.0120
2.	Education	0.1040
3.	Size of land holding	0.3110*
4.	Number of animals	0.0191
5.	Occupation	0.3288*
6.	Commercialization index	0.1706
7.	Milk production	0.7490**

Table 4 : Multiple regression analysis between dependent and independent variables

Sr. No.	Independent variables	Regression co-efficient	't'value
1.	Age	-0.0005	-0.014
2.	Education	0.1169	1.321
3.	Size of land holding	0.1944	1.389
4.	Number of animals	-0.1129	-0.917
5.	Occupation	0.8399	0.902
6.	Commercialization index	-0.0525	-1.369
7.	Milk production	0.7777 **	9.499

R^2 = 59.78%

Table 5: Constraints faced by the tribal in dairy husbandry (n=100)

Sr. No.	Constraints	Frequency/% respondents
1.	Anoestrus and repeat breeding	100
2.	Non-availability of good quality fodder	98
3.	Non-remunerative price of milk	95
4.	High rate of concentrate	95
5.	Scarcity of irrigation water for fodder production	98
6	Scarcity of drinking water for animals	71
7.	Lack of technical know-how	85
8.	Lack of training about improved dairy practices	57
9.	Problems of keeping and housing of animals	80
10.	Poor first aid veterinary facilities	75

adoption of recommended dairy husbandry technologies.

The major constraints faced by the respondents were anoestrus and repeat breeding, non availability of good quality fodder, non-remunerative price of milk, high rate of concentrate, Scarcity of irrigation water for fodder production, Scarcity of drinking water for animals, lack of technical know-how, Lack of training about improved dairy practices problems of keeping and housing of animals and poor first aid veterinary facilities.

The suggestions offered by the respondents were availability of good quality fodder must be ensured on

Table6 : Suggestions to overcome the constraints faced by the tribal in dairy husbandry (n=100)

Sr. No.	Suggestions	Frequency/%
1.	Ensure the availability of good quality fodder on subsidize basis	100
2.	Regular availability of drinking water	71
3.	Remunerative price of milk	95
4.	Reduce the rate of concentrate	95
5.	Organize awareness and training programme at village level	75
6.	Impart training to the dairy societies personnel about the record keeping as well as to handle the equipmentsie fat testing machine etc.	55
7.	Provide financial help to make pucca manger and shed	91

subsidiary basis, ensure the regular availability of drinking water, remunerative price if milk, provide financial help to make of pucca manger and shed, awareness and training programme must be organized at village level.

Conclusions :

It is concluded from the results of this study that commercialization index of milk was very high. Artificial insemination, drying fodder (grasses) adopted by all the respondents. Adoption was very poor in case of post-partum care, calf feeding, deworming to calves, use of urea treated dry fodder, fodder production, use of fodder and use of concentrates for dry animals. Proper shed and manger, use of pedigree bull for natural service and proper method of milking were not adopted by any of the respondents. The association between size of land holding, occupation and highest milk yield /day was found significant with the adoption of improved dairy husbandry practices. Contribution of all the selected independent variables was up to the extent of 59.78 per cent. Milk yield was significantly contributed with adoption of recommended dairy husbandry technologies. The major constraints faced by the respondents were; Anoestrus and repeat breeding, non-availability of good quality fodder, non-remunerative price of milk, high rate of concentrate, Scarcity of irrigation water for fodder production. The suggestions made by the respondents were - Availability of good quality fodder must be ensured on subsidiary basis, ensure the regular availability of drinking water, remunerative price of milk, provide financial help to make ofpucca manger and shed.

Implications :

Following measures could be suggested to enhance the milk production in the region :
– There is an urgent need to motivate the live stock

owners for adoption of improved dairy husbandry practices by organizing awareness programme, camps, training and short duration courses with effective demonstrations.

- Poor economic conditions inhibit livestock owners to make a standard house for keeping animals. Therefore there must be a provision for making standard house for animal on subsidiary basis.
- No chaff cutter facility is available in the area so that initiation of chaff cutter in the region may be proved boon to remove the fodder problem in the region up to a considerable extent

- It is not possible at all to produce that much green fodder in the area.
- Therefore fodder must be made available from the surrounded area to ensure the availability of good quality green fodder as per the season.
- There may be started a scheme for per liter milk subsidy as an incentive to dairy business in the region.

LITERATURE CITED

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