Decision Making Pattern of Tribal Women in Dairy Enterprise in Melghat Region of Amravati District

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ABSTRACT

The present study was conducted in purposively selected Melghat region of Amravati district in Maharashtra state. Total 150 tribal dairy women were selected randomly to study the socio–economic profile and decision making pattern of tribal women in dairy enterprise. Study revealed that majority (75.33%) of the respondents belonged to middle age, illiterate (40.67), medium family (62%) and (61.33%) joint type of family. Seventy per cent of the respondents had medium herd size, small farmers (38.66%). More than 60 per cent respondents in daily milk production i .e. 5 to 34 liters per day and about 75 per cent found selling the milk 5 to 28 liters per day. Majority (80.67%) of the respondents belonged to medium categories of annual income, experiences in dairy enterprises i.e. 6 to 23 years and (82%) utilization information sources. Majority (78%) of the respondents had medium level of knowledge about dairy farming, perceived training needs (94%), preferred producer to consumer (76%) marketing channel choice and 70 per cent shown medium information needs of recommended dairy practices. Majority of the respondents shown medium (81.33%) level of decision making followed about 9 per cent in each high and low level. Overall in decision making majority of the respondents (59.11%) breeding, fodder production (63.80%), feeding (70%) and (59.11%) in health care practices were taken decision after consultation with others. More than 70 per cent respondents taken decision after consultation with others for marketing of milk and milk products and 47 per cent were independent in decision making for management of the dairy farming. The age, land holding, annual income, experience in dairy farming, knowledge and daily milk production shows significant relationship with decision making of the tribal women in dairy farming (P<0.01).

Key word: *Decision making, Dairy Enterprises, Tribal Women;*

Livestock farming considered as key asset for tribal livelihood. It offers advantages over other agricultural sectors and an entry point for promoting gender balance in tribal areas. According to WTO report in 2010 a higher proportion of women relative to men are involved in livestock farming. Women have a high stake in dairying; they account for 93 per cent of total employment in dairy production (*Anonymous, 2010*). A woman plays an important role in dairy enterprises as manager, decision makers and skilled workers in spite of that her hard work is mostly been unpaid and their considerable involvement or contribution in dairy production has been underestimated or ignored. The low participation of farm women was observed in decision making about economic aspects of animal husbandry farming. The knowledge and skill of women dairy occupation and their participation on decision making certainly affects their efficiency work and the development of dairy enterprise (*Ogdand, C.G. and A. S. Hembade, 2014*) In tribal communities, mostly the work of management in dairy enterprises is looking after by the woman who is also responsible for the bulk of the work as well as for decision making due to migration of men out side the village for their livelihood.

Keeping this in view, an attempt was made to study the decision making pattern of tribal women in dairy

enterprise in Melghat region of Amravati district.

METHODOLOGY

The present study was conducted in purposively selected Amravati district of Maharashtra state. Three tehsils namely Dharni, Chikhaldara and Achalpur were selected purposively due to large involvement of tribal people in dairy enterprises. A tribal woman rearing two cattle's or buffalo included in the total sample as respondent. Ten respondent from each village and five villages from each tehsils were selected randomly, total 150 respondents were selected randomly. The desirable data related to socioeconomic characteristics viz. age, education, family size, family type, herd size, land size, daily milk production, daily milk sale, annual income, information sources utilization, knowledge, training need, marketing channels choice, information need collected directly by personal interview through structured type of interview schedule. Decision making refers to the degree of involvement of respondent in deciding over and executing different livestock activities. The degree of decision making was categorized on the basis of who took the final decision as decision taken independently, considered after consultation with others and not considered with the score of 2, 1 and 0 respectively. By summing up the score of each farm activity, the final score was obtained. The degree of involvement in decision making was analyzed based on the decision taken by respondent on the each activity and was tabulated on the actual number for each activity. On the basis of observations the low, medium high categories were made on the basis of formula Mean $\pm$ S.D. The relationship between the socio-economic characteristics with decision making of tribal woman was tested with help of coefficient correlation i.e. 'r' value.

RESULTS AND DISCUSSION

Socio–Economic Profile of Tribal Women in Dairy Enterprise : It is revealed from Table 1 that the majority (77.33%) of the respondents belonged to the middle age, illiterate (42.67%) followed by (40%) primary educated however, more than 60 per cent were having medium family size i.e. 4 to 8 members and (61.33%) joint family. The similar findings were also reported by *Avinashilingam et.al. (2007).*

Seventy per cent of the respondents had medium herd size i.e. 4 to 26 animals were small farmers

Table 1 Socio–Economic Profile of Tribal Women in Dairy Enterprise (N = 150)

Category		No.	%
Age	Young (< 27.47)	14	9.33
	Middle (27.47 to 48.49)	113	75.33
	Old (> 48.49)	23	15.34
Education	Illiterate	64	42.67
	Primary education	60	40
	Secondary school	19	12.66
	Higher secondary	5	3.34
	Graduation & above	2	1.33
Family size	Small(< 4.42)	26	17.33
	Medium(4.42 to 7.76)	93	62
	Large(> 7.76)	31	20.67
Family Type	Nuclear	58	38.67
	Joint	92	61.33
Herd size	Small(<4.03)	34	22.66
	Medium (4.03 to 26.09)	105	70
	Large (>26.09)	11	7.34
Land holding	Landless (0 acres)	33	22
	Marginal (0.1-2.5 acres)	20	13.33
	Small (2.6 -5 acres)	58	38.66
	Medium (5-10 acres)	32	21.34
	Large (>10 acres)	7	4.67
Daily milk	Low (< 4.72 liters)	29	19.33
production	Medium(4.72 to 34.80 lit)	98	65.33
	High(>34.80 liters)	23	15.34
Daily milk sale	Low(<4.92 liters)	24	16
	Medium(4.92 to 28.46 lit)	112	74.66
	High(>28.46 liters)	14	9.34
Annual income	Low (< RS.38.694)	9	6
(in thousend)	Medium(Rs.38.70 to 1.67)	121	80.67
	High (>Rs.1,66730.87)	20	13.33
Experience in	Low (< 6.42)	5	3.34
dairy	Medium (6.42 to 23.44)	122	81.33
enterprises	High (> 23.44)	23	15.33
Information	Low(<8.95)	8	5.34
sources	Medium (8.95 to 17.55)	123	82
utilization	High(>17.55)	19	12.66
Knowledge	Low (<32.63)	17	11.34
	Medium(32.63 to 55.47)	117	78
	High(> 55.47)	16	10.66
Training need	Yes	141	94
	No	9	6
Marketing choice	Producer – Consumer	76	50.66
Producer–Village	Trader/Vender –Consumer	31	20.66
Producer-Hotels/Restaurants-	Consumer	23	15.33
Producer-Co-op.,	Society	20	13.33
Producer-Co-operative	Society –Consumer	0	0
Information	Low(<41.45)	25	16.66
need	Medium(41.45 to 63.53)	105	70
	High (>63.53)	20	13.34
Total	150	100	

(38.66%). About 65 per cent of the respondents had 4 to 34 liters of milk/day and 75 per cent had 5 to 28 liters daily milk sale. More than 80 per cent of respondents had the medium annual income, medium experiences in dairy enterprises i.e. 6 to 24 years. These findings also supported by (*Vinkare, 2002 and Yadav et. al., 2011*). Majority 82 per cent of the respondents were in medium category of utilization of sources of information, had the medium (78%) level of knowledge about improved dairy farming practices and (94%) perceived the training needs. More than 50 per cent of the respondents preferred the producer to consumer, marketing channel for the milk and milk products. These finding is in line with *Rajendran and Mohanty (2004)*. However, 70 per cent of the respondents expressed the information needs about dairy farming practices.

Level of Decision Making by Tribal Women in Dairy Enterprise: Table 2 reveals that majority (81.33%) of the respondents were belonged to medium followed by low (9.33%) and (9.34%) high level of decision making. It might be due to the more involvement of respondents in decision making after consultation with other towards improved dairy management practices. This finding is also supported *by Bharathi (2006)* and *Singh and Srivastava (2011)*.

Table 2. Distribution of respondents according to the Decision Making

Category	No.	%
Low (< 26.83)	14	9.33
Medium (26.83 to 46.43)	122	81.33
High (>46.43)	14	9.34
Total	150	100

Decision Making Pattern of Tribal Dairy Women towards Improved Dairy Farming Practices:

Decision Making About Breeding Practices : It is evident from Table 3 that majority of respondents (59.11%) took decision after consultation with other and only 7.22 percent took independent decision regarding breeding practices. This is in consonance with *Sarma & Payeng (2012)*. About ratio of male: female animal to be kept in herd 60.67 per cent took decision after consideration with other whereas, for age of service in case of heifers 77.33 per cent had saying with other.

For other breeding practices such as types of service (N.S or A.I.) to animal in heat, right time of N.S. or A.I. to animals in heat, breed of milch animal to be purchased and selection of breeding bull above 50 per cent had consider their decision after consultation with other family members mainly with husbands, as these practices were mainly done by male counterparts.

Decision Making About Fodder Production Practices: It is observed from Table 3 that majority of respondents (63.80%) about fodder production practices took decision after consideration with other whereas only 9.05 took independent decisions. This also supported by *Suman and Kumar (2011)*. About silage & hay making 49.34 per cent of respondents not consideration. It is in consonance with *Sarma & Payeng (2012)*. Where 58.66 per cent of respondents had followed same pattern for fertilizers application in forage crop.

For seed treatment, use of hybrid seed and fodder & forage variety to be cultivated above 60 per cent had involve in decision making after consultation with other. About harvesting of forage crops & feeding practices to be utilized 70.67 and 84.67 per cent of respondents took their decision after consideration with other. This also show that the women had major saying in utilization of feeding practices whether it is stall feeding, semi- stall feeding or range feeding etc.

Decision Making About Feeding Practices : It is evident from Table 3 that majority of respondents (70 %) took decision about feeding practices after consultation with other. However, 19.73 percent had taken independent decisions. This findings also supported by *Ogdand and Hembade, (2014)*. It also observed that 57.33 per cent of respondents consult other while 40.66 took independent decision about colostrums feeding to calves.

As these tribal women involve in feed making of 79.33 of them show they had saying with other while feeding of balance diet to their heifers and calves. Same decision making pattern was observed with above 72 per cent of respondents while feeding extra ration to the advance pregnant animals and the type of concentrate to be given to dairy animals. About use of mineral brick or 2.00% mineral mixture 66.66 per cent had saying after consultation with other.

Decision Making About Health Care Practices : Table 3 reveals that majority of respondents (59.11%) had considered after consultation with other in decision making towards health care practices of dairy animals. However 16 per cent had taken independent decisions.

The 63.33 per cent contribute in decision making with other members in treatment of animal. More than

Table 3. Decision Making Pattern of Tribal Dairy Women towards Improved Dairy Farming Practices

Practices	Not considered	Considered after consultation	Decision taken independently
Breeding practices			
Ratio of male: female animals to be kept	44(29.33)	91(60.67)	15(10)
Types of service(N.S or A.I.) to animal in heat	59(39.33)	80(53.33)	11(7.37)
Right time of N.S. or A.I. to animals in heat	56(37.33)	85(56.67)	09(6.00)
Breed of milch animal to be purchased	57(39.33)	85(56.67)	08(5.33)
Selection of breeding bull	66(44)	75(50)	09(6.00)
Age of service in heifers	21(14)	116 (77.33)	13(8.67)
Overall	*50.50 (33.67)*	*88.67(59.11)*	*10.83(7.22)*
Fodder production practices			
Silage & hay making	74(49.34)	71(47.33)	05(3.33)
Fertilizers application in forage crops	42(28)	88(58.66)	20(13.33)
Seed treatment for forage cultivation	37(24.67)	90(60)	23(15.33)
Use of hybrid seed for forage cultivation	37(24.67)	96(64)	17(11.33)
Fodder & forage variety to be cultivated	53(35.34)	92(61.33)	05(3.33)
Harvesting of forage crops	28(18.67)	106(70.67)	16(10.66)
Different feeding practices	14(9.33)	127(84.67)	09(6.00)
Overall	*40.71(27.15)*	*95.71(63.80)*	*13.58(9.05)*
Feeding practices			
Feeding of balance diet to their heifers & calves.	14(9.33)	119(79.33)	17(11.33)
Colostrum feeding for new born calves	03(2.00)	8657.33	61(40.66)
Use of mineral bricks or 2% mineral powder in feed	38(25.33)	100(66.66)	12(8.00)
Feeding extra ration to the advance pregnant animals	07(4.66)	109(72.66)	34(22.66)
Type of concentrate to be given to animals	15(10.00)	111(74.00)	24(16.00)
Overall	*15.40(10.27)*	*105(70.00)*	*29.60(19.73)*
Health care practices			
First aid treatment to animal	38(25.33)	95(63.33)	17(11.33)
Treatment of animal either locally or by Vet.	22(14.66)	128(85.33)	00(00)
Vaccination of animals against FMD, HS, BQ, RP, Anthrax etc.	26(17.33)	124(82.88)	00(00)
Disinfection of animal shed	60(40)	88	
(58.66)	02(1.33)		
Deworming of calves & adult animals for ecto-endo parasites	75(50)	75(50)	00(00)
Protection of animal from extreme weather	03(2.00)	22(14.66)	125(83.33)
Overall	*37.3(24.89)*	*88.67(59.11)*	*24(16)*
Management practices			
Drying-off time of advanced pregnant animals	26(17.33)	106(70.66)	18(12)
Castration of male calves	90(60)	49(32.66)	11(7.33)
Quantum of milk to be save for further milk product preparation	06(4.00)	20(13.33)	124(82.66)
Improving housing condition	02(1.33)	72(48)	76(50.66)
Maintaining farm record of daily expenditure & earning	43(28.66)	49(32.66)	58(38.66)
Washing udder before milking with clean water	04(2.66)	33(22)	113(75.33)
Frequency of milking in a day	07(4.66)	48(32)	95(63.33)
Frequency of feeding in a day	07(4.66)	70(40.66)	73(48.66)
Overall	*23.12(15.41)*	*55.88(37.26)*	*71(47.33)*
Marketing practices			
Selection of milk marketing channel	33(22)	110(73.33)	07(4.67)
Selling & purchasing of animal	24(16)	112(74.66)	14(9.33)
Purchasing of animal feed	17(11.33)	118(78.67)	15(10)
Selling of milk and milk product	15(10)	110(73.33)	25(16.67)
Overall			
Miscellaneous practices			
Insurance of cattle and buffaloes	127(84.67)	13(8.67)	10(6.66)
Farm credit for dairy farming	96(64)	22(14.67)	32(21.33)
Applying new practices, idea, technologies etc.	106(70.67)	24(16)	20(13.33)
Government policies / scheme for Dairy enterprise	115(76.67)	25(16.67)	10(6.66)
To participate in S.H.G. and dairy farming	80(53.33)	40(26.67)	30(20)
Overall	*104.80(69.87)*	*24.80(16.53)*	*20.40(13.60)*

*Figures in parenthesis indicate percentage

80 per cent of respondents consulted with other family members for treatment and vaccination of animal against FMD, HS, BQ, RP, Anthrax etc either locally or by veterinary doctors. This finding is also supported by *Singh and Srivastava (2011)*.

Decision Making About Management Practices: It is observed from Table 3 that majority of respondents 47.33 took independent decision about the management practices in dairy, whereas 37.26 took decision after consultation with other. To decide drying-off time of advance pregnant animals 70.66 per cent of respondents had consulted with other.

While majority of 60 per cent had not took decision of castration of male calves as it was mainly done by male members of family. 82.66 per cent of respondents took independent decision of quantum of milk to be saved for further milk product preparation as women's domination kitchen business. This is in consonance with *Duguma et al. (2011)* more than 50 per cent of respondents had taken independents decision in improving animals housing condition. 38.66 per cent of had maintaining farm record of daily expenditure & earning. About washing udder before milking with clean water, frequency of milking in a day and frequency of feeding in a day 75.33, 63.33 and 48.66 had taken independent decisions, respectively.

Decision Making About Marketing Practices : Table 3 reveals that majority of respondents (75.00%) had consult with other before decision making about marketing practices. However, only 10.17 per cent had taken independent decisions. For selection of marketing channels 73.33 per cent consult with other. As tribal women had less farm credit on their account thus majority of them (74.67%) had consulted with other while selling and purchasing of animals. Same pattern was observed in purchasing of animal feed with 78.67 percent of respondents. However, about 73 per cent of respondents had consulted before selling of milk and milk product. This findings is in line with *Sarma and Payeng (2012)* who is also found that collective (30%) followed by joint (23.57%) decision has to be taken by farmwomen in Sonitpur district of Assam.

Decision Making About Other Practices Related To Dairy Enterprises : It is observed from Table 3 that majority of the respondents (69.87%) had considered in decision making towards other practices like insurance of animal, farm credit, applying new practices, idea, technologies, government policies/scheme for dairy enterprise, to participate in S.H.G etc.

About insurance of dairy animals majority (84.67 %) had no say in decision making While 21.33 per cent of respondents had took independent decision towards their farm credit. This was old age category or senior respondents. Above 70 per cents had no saying in applying new practices, ideas, technology etc. and taking advantages of government policies/ scheme for dairy enterprise. This is also supported by *Singh and Srivastava (2011)*. While to participated in self-help group only 20 percent took independent decision. It also observed that there was very less development of dairy related self-help group in the study area.

Relationship between Socio–Economic Profile and Decision Making towards Dairy Enterprise by Tribal Women : The independent variable such as age, land holding, annual income, experience in dairy farming & knowledge shows significant relationship with decision making in dairy farming by tribal women ($P<0.01$). This is may be due adult or senior respondent in the family naturally has more respect in family and society as they possess more experience about the dairy enterprise (Table 4). These findings are in line with *Acharya et. al. (2010)*.

Table 4. Relationship between Socio–Economic Profile and Decision Making towards Dairy Enterprise by Tribal Women

Independent Variable	r- Value
Age	0.303**
Education	-0.268**
Family Size	-0.042
Herd Size	0.037
Land Holding	0.321**
Daily Milk Production	0.138*
Daily Milk Sale	0.082
Annual Income	0.316**
Experience in Dairy farming	0.302**
Utilization of Information Sources	-0.019
Knowledge	0.662**
Utilization of Marketing Channels	-0.113
Training Needs	-0.014
Information Needs	-0.499**

Note: * Significance at 5% degree of freedom
** Significance at 1% degree of freedom

Land holding and daily milk production shows positive significance for decision making in dairy farming

by tribal women. The knowledge had highly positive relationship with decision making in dairy farming by tribal women. Herd size and daily milk sale, utilization of information sources utilization of marketing channels not showing any significance, whereas education and information need shows highly negative significance.

CONCLUSION

It is concluded that majority of respondents belong to medium category of middle age, education, family size, herd size, daily milk production, daily milk sale, annual income, experience in dairy farming, information utilization sources, knowledge and information needs about improved dairy management practices. It was observed that the majority of respondents were found in medium category of extent of decision making and after consultation with other pattern of decision making for breeding, fodder production, feeding, health care, & marketing improved dairy management practices. Overall majority of respondents were found in medium level of decision making towards improved dairy management. However, age, land holding, annual income, daily milk production, experience in dairy enterprises and knowledge were positive and significantly related with decision making of tribal women.

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