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A CASE STUDY.....

Socio- economic profile of dairy farmers in Hisar district of Haryana

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ABSTRACT..... Among the different forms of livestock farming, dairying is considered as a "treasure" of the Indian rural economy. For the design and implementation of support programmes to promote dairy farming for rural development and for adoption of new technologies in dairy, profile of the dairy farmers is an important factor in developing countries like India. By considering this aspect the study was undertaken in Hisar district of Haryana. Among the 60 dairy farmers 73.3 per cent of respondents were middle aged with mean age of about 43 years. The respondents had fairly good formal education with mean value of 4.23 which indicates that majority (96.6%) of dairy farmers were literate. Family structure of dairy farmers was 65.0 per cent of the respondents belonged to joint families and 35.0 per cent to nuclear families. The family land holding ranged from 1 to 6 acres with a mean 2.60 acres. 43.3 per cent of the respondents preferred to have a herd size of 3-5 dairy animals. The respondents in general had poor social participation with mean value as low as 0.16. Further, majority of the respondents had low level of extension contact with mean value of 2.23. Mass media exposure of dairy farmers was also low with mean value of 2.65 which indicates majority (73.3%) of dairy farmers had low level of mass media exposure. However, economic motivation of dairy farmer was fairly high with mean value of 22.56. The dairy farmers in general had medium risk orientation with mean value 18.28.

KEY WORDS..... Dairy farmers, Socio-economic profile, Dairying, Rural development, Livestock farming

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INTRODUCTION.....

India's dairy industry is largely traditional, local and informal. Milk production is dominated by smallholders. India, almost 80 per cent of livestock products still come from small farmers with 3-5 animals and less than two hectares of land (Rangnekar, 2001). About 80 per cent of raw milk comes from farms having only two to five cows/buffalo. Approximately 78 per cent of milk producers are marginal and small farmers and they together contribute around 68 per cent to total milk production (Kumar and Joshi, 2012). This trend holds true more or less across all the states. Dairying is very

important in improving the socio-economic status of the rural poor by reducing the longstanding problems of unemployment and underemployment. It provides nutrition, draft animal power, organic manure, supplementary employment, cash income and a 'cushion' for 'drought proofing' in India (Patel, 1993). The sector involves millions of resource-poor farmers, for whom animal ownership ensures critical livelihood, sustainable farming and economic stability. The crop farming is now beset with stagnating growth and low absorption of unskilled agricultural laborers. As the distribution of livestock is more equitable than that of land, growth in the livestock sector is deemed to be antipoverty and equity-oriented (Ahuja, 2004). The demand of livestock products is expected to more than double by 2020 as compared to food grains whose demand is expected to rise by less than 50 per cent over the current levels (Paroda and Kumar, 2000). This enlarged demand for milk and milk products will certainly have implications for livestock production systems and for livestock producers in poor rural areas who are trying to adapt to the changing social, economical, market and trade circumstances (Rao *et al*., 2005). There is a possibility of concentrated livestock production and processing in large-scale integrated commercial companies, which would likely displace small-scale livestock farmers and exacerbate rural poverty (Steinfeld, 2003). It is worth mention here that over 880 million of the 1.1 billion extreme poor, defined as those who have to make a living on less than $1 a day, live in rural areas (World Bank, 2008). Of these, 555 million are estimated to fully or partially depend on livestock for their livelihoods (ILRI, 2002).

A point of concern is the marginalization of small farmers as a result of increasing competition resulting from globalization and opening of world markets, leading to intensification and commercialization of livestock production systems. This has already happened in poultry sector to which the contribution of the rural mixed crop-animal production has become insignificant compared to the almost entirely urban commercial production systems (Kurup, 1995). A similar transition in the crop-livestock systems can prove disastrous for the rural economy and livelihoods of a large majority of rural poor.

According to the National Sample Survey Office (NSSO) survey in 2009-2010, slightly more than 22 million persons were employed in the livestock sector, 88 per cent being employed in dairying. With the shrinking land holdings and increasing population base, the dairying is becoming increasingly important mainstay of the rural population in Haryana. Therefore, ascertaining the socio-economic profile of dairy farmers is important to provide valuable insight and has the potential to provide critical

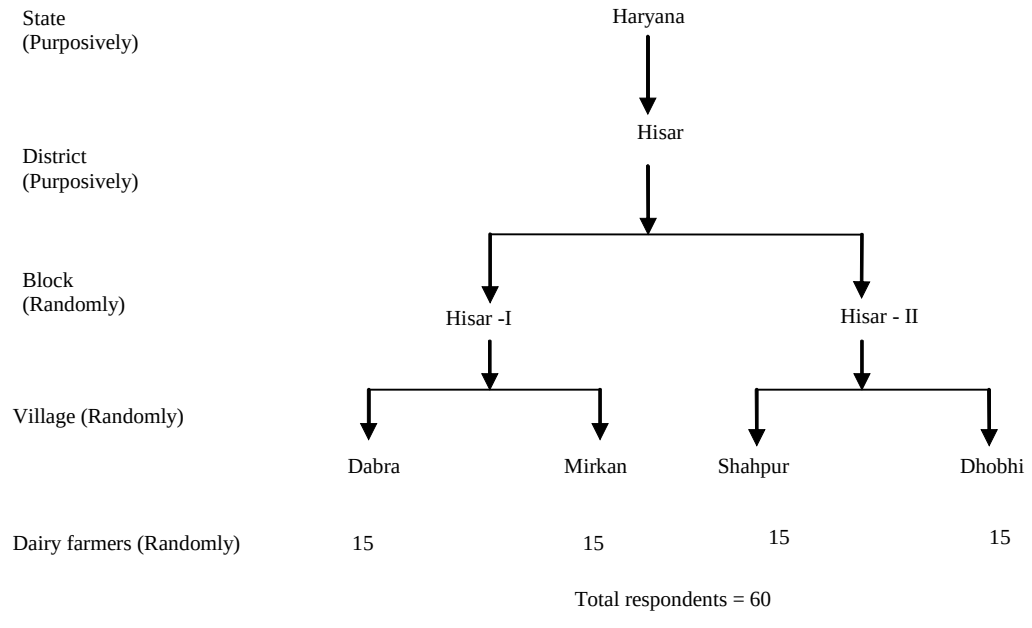

Fig. A : Sampling procedure followed for selection of repondents

inputs for the design and implementation of support programmes to promote dairy farming for rural development. Here in present study socio-economic profile of dairy farmers in Hisar district of Haryana were studied.

RESEARCH METHODS.....

The present study was conducted in Haryana which is situated between 270 29' to 200 55' N latitude and 730 27' 8" to 770 26' 5" E longitude. The Haryana state comprises of 21 districts of which Hisar is an important one. The (Hisar) district was selected purposively in the study keeping in view the researcher's ease and limitations. The district has a population of more than 17 lakhs with a density of 438 inhabitants per square kilometer. The sex ratio is on lower side with 871 females for every 1000 males and a literacy rate of 73.2 per cent (Anonymous, 2011). Further, the district has a large livestock population (796810) (Fig. A), which is highest among all the 21 districts (Anonymous, 2007).

The present study was conducted on 60 farmers practicing dairy farming randomly selected from four villages from Hisar district of Haryana State. The data was collected using a pre-structured interview schedule developed solely for this purpose and by holding personal interview with the respondents during the year 2011-12. Ten antecedent variables age, educational qualification, family type, lands holding (acres), herd size, social participation, extension contact, mass media exposure, economic motivation, risk orientation were selected and operationalized after a thorough review of available literature to find out socio-economic profile dairy farmers. The data was suitably analyzed using different statistical techniques.

RESEARCH FINDINGS AND ANALYSIS.....

The results obtained from the present investigation as well as relevant discussion have been summarized under the following heads :

Age :

It refers to chronological age of respondents in years at the time of data collection. It was measured by direct questioning of the respondents. The respondents were categorized into three age groups *i.e.* young age group (below 30 years), middle age group (31-55 years) and old age group (>55years) as depicted in Table 3. It is observed that 73.3 per cent of dairy farmers were middle aged and 15 per cent and 11.7 per cent were in each old and young age group with a mean age of about 43 years (Table 2). The observed range of age was 25-66 years indicating that dairy farmers of all age groups were adequately represented in the study. This finding is in agreement with the observations of Sharma *et al*. (2011).

Educational qualification :

It refers to the academic qualification of the respondents acquired through formal schooling. It was measured by using the socio-economic scale developed by Pareek and Trivedi (1964). Respondents were classified into three categories based on their formal education level *i.e.* low, medium and high. The respondents had fairly good formal education with mean value of 4.23 (Table 2). Majority of respondents (53.3%) were in high category followed by medium category (43.3%) and low category (3.3%) (Table 3). This is in accordance with findings of Wadear *et al.* (2003) and Chauhan *et al.* (2004).

Table 1 : Operationalisation of independent variables

Sr. No.	Variable	Operationalisation
1.	Age (years)	Chronological age of respondents
2.	Educational qualification	Scale developed by Pareek and Trivedi (1964)
3.	Family type	Schedule developed
4.	Land holding (acres)	Scale developed by Pareek and Trivedi (1964)
5.	Herd size	Schedule developed
6.	Social participation	Scale developed by Dana (1987)
7.	Extension contact	Scale developed by Supe (1969)
8.	Mass media exposure	Scale developed by Singh (1978)
9.	Economic motivation	Scale developed by Supe (1969) with suitable modifications
10.	Risk orientation	Scale developed by Supe (1969) with suitable modifications

Family structure :

Respondents were asked to state their family status *i.e*. nuclear family or joint family. Nuclear family was taken as –when a respondent was living with his wife and children, whereas joint family was taken as where all the adult brothers along with the parents were residing in the same house and sharing common resources. A perusal of the data presented in the Table 3 indicates that 65.0 per cent of the respondents belonged to joint families and 35.0 per cent of them belonged to nuclear families. It clearly indicates that the dominant family type among rural dairy farmers is joint family.

Land holding :

It may be defined as the units of land in acre/ hectares in possession with the family of the respondents. It was operationalized using the socio-economic scale developed by Pareek and Trivedi (1964). The family land holding ranged from 1 to 6 acres with a mean 2.60 acres (Table 2). Among the selected respondents 16.7, 65 and 18.3 per cent possessed small, medium and large land holdings, respectively (Table 3). This finding is in agreement with the observations of Patange *et al.* (2001).

Herd size :

Herd size refers to the number of dairy animals possessed by the respondent at the time of interview. In the present study, the herd size was categorized into three classes- small, medium and large. It is observed that 43.3 per cent of the respondents preferred to have a herd size of 3-5 dairy animals.Among the selected respondents 20, 43.3 and 36.7 per cent possessed small, medium and large herd size, respectively (Table 3). It was noticed that the majority of dairy farmers possessed small and medium herd size indicating that their dependence on the income from sale of milk was not significant. Earlier experience with operation flood programme allows us to suggest that if the farmers are adequately incentivized, there will be growth of such production systems both in terms of size and numbers. This is in accordance with findings of Sharma *et al.* (2011).

Social participation :

It refers to the degree to which the respondent was associated with different social organizations (formal or informal) like village Panchayat, Panchayat Samiti, rural clubs, Zila Parishad, religious committee and co-operative society, as a member or office bearer. It was measured by using the scale developed by Supe (1969). It is observed that in general dairy farmers had poor social participation with mean value as low as 0.16 (Table 2). Majority of dairy farmers (86.7%) were having poor social participation (Table 3). It is again indicative of the fact that the dairy farmers are poorly included in social organizations. This finding is in agreement with the observations of Saha *et al.* (2010).

Extension contact :

It refers to both acquaintance of respondents with extension personnel of different ranks and frequency of contact with them. It was measured on three point continuum based on the frequency of use of different communication sources by the respondents. Scale developed by Dana (1987) was used to operationalize it. The respondent was requested to give responses on three-

Table 2 : Socio-economic profile of dairy farmers

Sr. No.	Variable	Possible range	Observed range	Mean	Standard deviation
1.	Age (years)	-	25-66	43.81	9.84
2.	Educational qualification	0-6	0-6	4.23	1.24
3.	Family type	1-2	1-2	1.35	0.48
4.	Land holding (acres)	1-6	1-6	2.60	1.23
5.	Herd size	1-3	1-3	2.16	0.74
6.	Social participation	0-4	0-3	0.16	0.49
7.	Extension contact	0-14	0-5	2.23	1.30
8.	Mass media exposure	0-16	0-7	2.65	1.64
9.	Economic motivation	6-30	20-26	22.56	1.84
10.	Risk orientation	6-30	14-23	18.28	2.19

point continuum scale, *i.e.* frequently utilized, occasionally and never utilized and the scores assigned 2, 1 and 0, respectively. Thus, the minimum and maximum possible obtainable overall scores were 0 and 18, respectively. It is observed that majority of dairy farmers (61.7%) were having low extension contact. This seems to indicate that the dairy farmers are not fully a part of extension coverage. This is in accordance with findings of Singh and Dalal (2006).

Mass media exposure :

The mass media exposure was operationalized as frequency of exposure and the use of different mass media like radio, television, exhibition, clinical camp, magazines, newspaper etc. for getting information about dairy farming practices. Scale developed by Singh (1978) was used to operationalize it. The respondents were asked to give their reply on three-point continuum *viz.*, frequently, occasionally and never utilized and scores of 2, 1 and 0 were assigned to these responses, respectively. Thus, the minimum and maximum possible obtainable overall scores were 0 and 16, respectively. The total score of each individual on this variable was worked out by adding the scores on various aspects. The overall mass media exposure of dairy farmers was poor with mean score of 2.65. It is observed that majority of dairy farmers 73.3 per cent of them had low level of mass media exposure. This finding is in agreement with the

Table 3 : Classification of antecedents of socio-economic profile of dairy farmers

Sr. No.	Antecedent characteristics	Category	Respondents (n=60)	
			Frequency	Per cent
1.	Age	Young (Below 30 years)	7	11.7
		Middle (31-55 years)	44	73.3
		Old (>55 years)	9	15.0
2.	Educational qualification	Low (0)	2	3.3
		Medium (1-4)	26	43.3
		High (5-6)	32	53.3
3.	Family structures	Joint (1)	39	65
		Nuclear (2)	21	35
4.	Land holding	Small (1)	10	16.7
		Medium (2-3)	39	65.0
		Large (4-6)	11	18.3
5.	Herd size	Small (Upto 2)	12	20.0
		Medium (3-5)	26	43.3
		Large (>5)	22	36.7
6.	Social participation	Low (0)	52	86.7
		High (>0)	8	12.4
7.	Extension contact	Low (0-2)	37	61.7
		Medium (3-4)	20	33.3
		High (>4)	3	5
8.	Mass media exposure	Low (0-3)	44	73.3
		Medium (4 - 6)	15	25
		High (>6)	1	1.7
9.	Economic motivation	Low (17-19)	-	-
		Medium (20-23)	39	65.0
		High (24-26)	21	35.0
10.	Risk orientation	Low (14-16)	13	21.7
		Medium (17-20)	35	58.3
		High (21-23)	12	20.0

observations of Sharma *et al*. (2011).

Economic motivation :

It refers to the occupational success in terms of profit maximization and the relative value placed by a farmer on economic ends. It was operationalized with the help of scale developed by Supe (1969) with suitable modifications. The scale contained 6 items. The responses were obtained on five point continuum and the score ranged from 6 to 30. It is observed that the economic motivation of dairy farmer were fairly high with mean value of 22.56. A majority of respondents (65%) were having medium economic motivation followed by high economic motivation group (35.0%). This seems to indicate that respondents did share an urge for betterment of life. This is in accordance with findings of Sharma *et al*. (2011).

Risk orientation :

It refers to the capacity of farmer to bear the risk and face uncertainty. It was operationalized using the scale developed by Supe (1969) with suitable modifications. The scale contained 6 items. The responses were obtained on five point continuum and the score ranged from 6 to 30. It is observed that the dairy farmers in general had medium risk orientation with mean value 18.28. Among the respondents 58.3, 21.7 and 20 per cent of the dairy farmers were having medium, low and high level of risk orientation, respectively. This finding is in agreement with the observations of Sharma *et al.* (2011).

Conclusion :

A majority of dairy farmers were middle aged with mean age of about 43 years. They had fairly good formal education indicating that a majority of dairy farmers were literate. The dairy farmers in general exhibited poor social participation indicating that the peer to peer information exchange will have limited reach. They had poor extension contact and mass media exposure.

Both the things are undesirable and are indicative of limited information access especially about improved dairy husbandry practices. Poor extension contact is an area of concern and requires significant improvements. Organization of extension services need. An affirmative action should be initiated to include dairy farmers. Mass media can be employed as a potent tool in creating awareness about dairy innovations. The average scores of economic motivation were fairly high, perhaps indicating that there exists an urge for the betterment of life. The respondents in general had medium level of risk orientation indicating their average risk taking capacity. Socio- economic profile is important to provide valuable insight and has the potential to provide critical inputs for the design and implementation of support programmes to promote dairy farming for rural development.

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