

KNOWLEDGE OF DAIRY FARMERS TOWARDS IMPROVED ANIMAL HUSBANDRY PRACTICES

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ABSTRACT

In the changed scenario of globalization, Indian farmers have to compete with farmers of developed countries whose socio-economic conditions are much better. The knowledge of an innovation is prerequisite for adoption. A higher knowledge of technical nature of improved practices would lead to a higher adoption possibly because knowledge is inert. Looking into this, the study was carried out on dynamics characteristics and knowledge of dairy farmers towards improved animal husbandry practices. The study was conducted in three talukas of Rajkot district viz., Jasdian, Padadhari and Rajkot were selected purposively. From each selected taluka, 5 villages, making total 15 villages were selected purposively due to KVK was working since at least last three years. From each selected village, 20 respondents were selected randomly and total 300 beneficiaries as sample. The result of the finding indicated that more than two fifth of the beneficiary dairy farmers were belonged to other backward class category (43.67 per cent) and nearly half of the them belonged to middle age group (48.00 per cent) with 36 to 50 years age group. Nearly two fifth (38.34 per cent) of the beneficiaries had small land holding i.e. between 1.1 to 2 hectare. Majority of dairy farmers (87.34 per cent) were; having primary, secondary and higher secondary level of education, small size family (52.00 per cent) i.e. up to 4 members in their family, annual income of between ₹ 1,00,001/- to ₹ 2,50,000/- (58.33 per cent) and small herd size of milch animals i.e. up to 5 animals (54.67 per cent). About three fourth of beneficiaries (72.00 per cent) who were engaged in dairy farming, had set aside their dairy animals in traditional cattle sheds and nearly half of them (49.33 per cent) had low social participation. In case of mass media, highest percentage of dairy farmers (59 per cent) were watch T.V. daily, followed by 23.67 per cent of the respondents were watch T.V. occasionally, 11.66 per cent rarely read newspaper and 95.00 per cent never used to watch educational films. The high level of knowledge about improved animal husbandry practices by dairy farmers were; animal breeding for animal breed improvement (68.67 per cent), animal nutrition (59.00 per cent), livestock production management (28.00 per cent), fodder production (28.67 per cent) and animal health (63.00 per cent), followed by medium knowledge by dairy farmers were; animal breeding (22.67 per cent), animal nutrition (33.67 per cent), livestock production management (54.33 per cent), fodder production (42.33 per cent) and animal health (20.67 per cent). It is due to that the dairy farmers are more aware about breed of animal and nutrition which resulting to increase the production of milk and ultimately raise the income.

Keywords : knowledge, improved animal husbandry practices, dairy farmers

INTRODUCTION

India is predominantly an agrarian society where animal husbandry forms the backbone of national economy. Dairying provides millions of small marginal farmers and land less labours means of their subsistence. Milch animals are reared mainly through the utilization of crop residues; the milk production is essentially a subsidiary activity in agriculture. The planner recognized dairying, because of the potential impact it can make, as an instrument to bring about socio-economic transformation in the rural sector (Raval and Chandawat, 2011). Dairy farming is means of subsistence for millions of dairy farmers in country. It provides livelihood

support to millions of small marginal farmers and land less labours. The dairy sector today provides approximately 70.0 million families, the triple benefits of nutritious food, supplementary income and productive employment. Gujarat has 18,536 dairy cooperatives society having 33,65,442 dairy farmers (Anon., 2019).

The livestock sector alone contributes nearly 25.6 % of value of output at current prices of total value of output in agriculture, fishing & forestry sector. The overall contribution of livestock sector in total GDP is nearly 4.11 % at current prices during 2018-19 (Anon., 2019). According to 20th Live Stock census, the total livestock population is 535.78 million

in the country showing increase of 4.6 % over livestock census 2012. Total Bovine population (Cattle, Buffalo) is 302.79 million in 2019 which shows an increase of 1.0 % over previous census. Livestock population has increased substantially in west Bengal (23.32%), Telangana (22.21 %), Andhra Pradesh (15.79 %), Madhya Pradesh (11.81 %) Bihar (10.67 %) and Gujarat (0.95 %). Total livestock population is 27.1 million in Gujarat.

The unique characteristic of Indian dairy industry is that the bulk of milk production in our country is handled by small milk producers who are illiterate and unaware of economic aspects of milk production. Therefore, there is a need for poverty alleviation to be strengthened through dairying as enterprise. Scientists of SAUs are effortlessly engaged in doing research for location specific, low cost and suitable technologies in the sector of dairy farming, which may not only resulted in increase in productivity of dairy animals, but also reasonably reduces the cost of dairy farming. Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia, Rajkot are also making every efforts for increasing knowledge of dairy farmers in their operational area of intensive working by imparting vocational training programmes, through implementing Front Line Demonstration (FLDs) and On Farm Testing (OFT), advisory services to dairy farmers etc. And they were trying their best to ensure no stone remain unturned for disseminating knowledge among dairy farmers. But gap in knowledge level of dairy farmers still persists regarding SAU recommendations pertaining to improved animal husbandry practices.

Most of the rural dairy farmers, who keep dairy animals in traditional ways, do not follow scientific and modern animal husbandry practices which have been evolved through considerable quantum of research work carried out by the scientist resulted from decades of hard work. There is an urgent need to sensitize the dairy farmers towards the modern technologies and scientific interventions in dairy production, in order to enhance milk yield and milk quality

(A) Selected characteristics of dairy farmers

Table 1 : Distribution of the dairy farmers according to their selected characteristics

(n=300)

| Sr. No. | Particulars | Category | Frequency | Percent |
|---------|------------------|------------------------|-----------|---------|
| 1 | Caste | 1 Schedule Caste | 73 | 24.33 |
| | | 2 Schedule Tribe | 00 | 00.00 |
| | | 3 Other Backward Class | 131 | 43.67 |
| | | 4 General | 96 | 32.00 |
| 2 | Age group | 1 18 to 35 years | 105 | 35.00 |
| | | 2 36 To 50 years | 144 | 48.00 |
| | | 3 51 to Above years | 51 | 17.00 |

from dairy animals.

OBJECTIVES

- (1) To study the socio personal characteristics of dairy farmers about improved animal husbandry practices.
- (2) To know the knowledge level of dairy farmers towards improved animal husbandry practices.

METHODOLOGY

Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia, Rajkot is engaged in doing intensive work for betterment of farming community and dairy farmers community. The study was carried out in Rajkot district of Saurashtra region. Three talukas of Rajkot district viz., Jasdan, Padadhari and Rajkot were selected purposively because KVK, Rajkot was working in these taluka. From each taluka, 5 villages were selected purposively due to KVK was working since at least last five years. From each selected village, 20 farmers were selected randomly from the list of beneficiaries having dairying as their major or subsidiary occupation. Thus, total 300 beneficiaries were selected as sample for the study.

The data were collected through the personal contact with help of interview schedule. The interview schedule was pre tested with 20 non sample dairy farmers. Finally prepared interviews schedule with needy correction for data analysis. The collected data were tabulated for analysis and then average, frequencies and percentage were used.

RESULTS AND DISCUSSION

Information needs of farmers about improved animal husbandry practices are mainly influenced by different characteristics of beneficiaries. However, some important characteristics of the farmers were selected and findings have been presented Table 1.

| Sr. No. | Particulars | Category | Frequency | Percent |
|---------|-----------------------------|---|-----------|---------|
| 3 | Educational status | 1 Illiterate | 17 | 05.66 |
| | | 2 1 to 8 std | 63 | 21.00 |
| | | 3 9 to 10 std | 83 | 27.67 |
| | | 4 11 to 12 std | 116 | 38.67 |
| | | 5 Diploma | 12 | 04.00 |
| | | 6 Graduation | 09 | 03.00 |
| | | 7 Post Graduation | 00 | 00.00 |
| 4 | Size of land holding | 1 Landless (no land) | 00 | 00.00 |
| | | 2 Marginal land holding (up to 1 ha) | 42 | 14.00 |
| | | 3 Small land holding (1.1 to 2 ha) | 115 | 38.34 |
| | | 4 Semi-medium land holding (2.1 to 4 ha) | 96 | 32.00 |
| | | 5 Medium land holding (4.1 to 10 ha) | 40 | 13.33 |
| | | 6 Large land holding (above 10 ha) | 07 | 02.33 |
| 5 | Family size | 1 Small size of family (up to 4 members) | 156 | 52.00 |
| | | 2 Medium size of family (5 to 6 members) | 105 | 35.00 |
| | | 3 Large size of family (above 6 members) | 39 | 13.00 |
| 6 | Annual income | 1 Up to ₹ 25,000/- | 00 | 00.00 |
| | | 2 ₹ 25,001/ to ₹ 50,000/- | 11 | 03.67 |
| | | 3 ₹ 50,001/- to ₹ 1,00,000/- | 79 | 26.33 |
| | | 4 ₹ 1,00,001/- to ₹ 2,50,000/- | 175 | 58.33 |
| | | 5 ₹ 2,50,001/- and above | 35 | 11.67 |
| 7 | Livestock possession | 1 Small herd size (up to 5 animals) | 164 | 54.67 |
| | | 2 Medium herd size (6 to 10 animals) | 81 | 27.00 |
| | | 3 Large herd size (Above 10 animals) | 55 | 18.33 |
| 8 | Cattle Shed | 1 No cattle shed | 38 | 15.33 |
| | | 2 Traditional cattle shed | 216 | 72.00 |
| | | 3 Scientific cattle shed | 46 | 12.67 |
| 9 | Social participation | 1 Low social participation (Less than 1.20 score) | 148 | 49.33 |
| | | 2 Medium social participation (1.20 to 4.21)) | 104 | 34.67 |
| | | 3 High social participation (above 4.21 score) | 48 | 16.00 |

(1) Caste

The data in Table-1(1) showed that more than two fifth of the beneficiary dairy farmers belonged to other backward class category (43.67 per cent) followed by general category and schedule caste category with 32.00 per cent and 24.33 per cent, respectively. There is no anyone found schedule tribe category.

(2) Age

Age of the respondents is a significant factor in inducing individual to go for different enterprises. In the present study, the respondents were divided into three groups such as 18 -35, above 36 – 50 and above 51 & above years and the results are given below.

In case of age group in Table-1(2) revealed that nearer to half of the dairy farmers belonged to middle age group (48.00 per cent) with 36 to 50 years age group followed by young age group (35.00 per cent) who have 18 to 35 years

age group. Only 17.00 per cent of the beneficiaries belonging to old age group i.e. above 50 ages. The reason for this finding might be that middle age is considered as productive time period in the life of an individual and moreover old generation is taking up less interest in dairy farming as their occupation. This finding is similar to findings reported by Toppo (2005), Durgga (2009) and Tajpara *et al.* (2016).

(3) Education

It is evident from Table-1(3) that about two fifth of the dairy farmers had obtained higher secondary education (38.67 per cent), followed by 27.67 per cent and 21.00 per cent of them had secondary and primary level of education, respectively. Only 3.00 per cent and 4.00 per cent of the beneficiaries had education up to graduation level and diploma level, respectively. Few of them were illiterate (5.67 per cent). None of them had post graduate level of education. From the above finding, it can be concluded that majority of dairy farmers (87.34 per cent) were having primary, secondary and higher secondary level of education. The

probable reason for this finding might be that the facility for primary to higher secondary level of education available at the village and nearby cities might have limiting the dairy farmers to study up to that level. Similar findings have been reported by Gour (2002) and Durgga (2009).

(4) Land holding

Land holding is an important factor that determines the economics factor and potentiality of dairy farmers for adoption of new practices in dairy farming. It is apparent from Table-1(4) that majority (38.34 per cent) of the beneficiary respondents were with small land holding i.e. between 1.1 to 2 hectare, followed by 32.00 per cent with semi-medium land holding i.e. between 2.1 to 4 hectare, 14.00 per cent with marginal farmers i.e. up to 1 hectare and 13.33 per cent with medium size of land holding i.e. 4.1 to 10 hectare. Only 2.33 per cent of the respondents were having large land holding i.e. above 10.00 hectare. None of them had landless. The probable reason might be that caste system prevailed in village might be a reason for majority (70.34 per cent) of small and semi- medium size of land holding.

(5) Size of family

The size of family plays an important role for taking a decision regarding adoption of an innovation thought and action of the individual members in the farming in a large measure is influenced by the family as a single entity. Hence the family size of the respondent was studied. The data presented in Table-1(5), it indicated that majority of respondents (52.00 per cent) had small size family i.e. up to 4 members in their family, followed by 35.00 per cent and 13.00 per cent of respondents had medium (5 to 6 members) and large family size (above 6 members), respectively.

(6) Annual income

Annual income of the family plays an important role in one's life and livelihood. Table-1(6) gives clear information regarding annual income of the family of the respondents. It reflected that majority (58.33 per cent) of the dairy farmers belonged to annual income of between ₹ 1,00,001/- to ₹ 2,50,000/- followed by annual income of between ₹ 50,001/- to ₹ 1,00,000/- and ₹ 2,50,001/- and above had 26.33 per cent and 11.67 per cent, respectively. Only 3.67 per cent of the beneficiary farmer belonged annual income between ₹ 25,001/- to ₹ 50,000/- per year. None of them had below poverty line (up to ₹ 25,000/-).

This finding might be due the fact that most of the dairy farmers had large livestock possession along with agriculture and allied activities. It is also due to majority of household depends not only on agriculture and animal

husbandry but other farm based activities as additional source of income.

(7) Livestock possession

A look into Table-1(7) showed that majority (54.67 per cent) of the farmers had small herd size of milch animals i.e. up to 5 animals followed by 27.00 per cent had medium herd size of milch animals i.e. 5-10 animals, while 18.33 per cent of them had large herd size of milch animals i.e. above 10 animals.

It can be concluded that the farmers had a relatively small and medium livestock possession (81.67 per cent) i.e. maximum up to 10 animals. The probable reason for this finding might be that the respondents were aware of the importance of dairying, which can provide them regular income in all seasons. It can also be minimizing the risk of crop failure and provide valuable organic manure for agriculture. In dairy business, high value of milk fats, so they earned as supplementary income.

(8) Cattle Shed

Cattle shed are an important factor for rearing and good environmental condition of animal in scientific way. It is also consequence on health condition and ultimately on milk production. The data in Table-1(8) interfered that about three fourth of respondents (72.00 per cent) who were engaged in dairy farming, had kept their dairy animals in traditional cattle sheds. Whereas, 15.33 per cent of respondents were not had any cattle shed for their dairy animals. Only 12.67 per cent respondents had scientifically prepared cattle shed for their dairy animals.

(9) Social participation

Participation in different social activities definitely influences one's way of thinking, acting and behaving. It is seen that more social participation by the elders in the family has greater influences on the family members.

As reveals from data presented in Table-1(9) that nearly half of the respondents (49.33 per cent) had low social participation, followed by 34.67 per cent with medium social participation and only 16.00 per cent of the respondents were having high social participation. It can be concluded that majority of the respondents (84.00 per cent) were having low and medium social participation. The possible reason for these findings might be that the most popular and service-oriented village organizations meet the needs of dairy farming and financial assistance by village dairy co-operative societies. Hence, most of the respondents were members of only one organization for availing these benefits.

Mass media exposure

Mass media exposure is essential for quick

dissemination of the information and innovation regarding farming, animal husbandry and other activities.

Table 2 : Distribution of the respondents according to their mass media exposure

(n=300)

| Sr. No. | Source of Mass Media Exposure | Daily | | Occasionally | | Rarely | | Never | |
|---------|-------------------------------|--------|---------|--------------|---------|--------|---------|--------|---------|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1 | Newspaper | 77 | 25.66 | 65 | 21.66 | 35 | 11.66 | 124 | 41.32 |
| 2 | Farm magazine | 15 | 05.00 | 35 | 11.67 | 24 | 08.00 | 226 | 75.33 |
| 3 | Folder leaflets | 04 | 01.33 | 17 | 05.67 | 13 | 04.33 | 226 | 88.67 |
| 4 | Radio | 11 | 03.67 | 07 | 2.33 | 08 | 2.67 | 274 | 91.33 |
| 5 | Television | 177 | 59.00 | 71 | 23.67 | 31 | 10.33 | 21 | 07.00 |
| 6 | Educational films | 00 | 00.00 | 04 | 1.33 | 11 | 03.67 | 285 | 95.00 |

The data in Table-2 depicted that among the respondent's highest percentage of respondents (59.00 per cent) watch T.V. daily followed by reading newspaper daily (25.66 per cent). Only 5.00 percent of the respondents read the farm magazine daily. A few of them, 3.67 percent and 1.33 per cent of the respondents had listen to radio and read folder leaflets daily, respectively.

In case of occasionally use of mass media sources, highest use of television by respondents (23.67 per cent) followed by 21.66 per cent, 11.67 per cent, 5.67 per cent, 2.33 per cent and 1.33 per cent of respondents read newspaper, farm magazine, folder leaflets, listen radio and saw educational films, respectively.

While in case of rarely use of mass media sources, nearly equal per cent of the respondents read newspaper (11.66 per cent), television (10.33 per cent) and farm magazine (08.00 per cent). A few of them had read folder leaflets (4.33 per cent), see educational films (3.67 per cent)

and listen radio (2.67 per cent).

Respondents were never used mass media exposure viz., watch educational films (95.00 per cent), listen radio (91.33 per cent), read folder leaflets (88.67 per cent), farm magazine (75.33 per cent), newspaper (41.32 per cent) and watch television (07.00 per cent),

(B) Extent of knowledge

The knowledge of an innovation is prerequisite for adoption. A higher knowledge of technical nature of improved practices would lead to a higher adoption possibly because knowledge is inert. For measuring the extent of knowledge regarding improve practices of animal husbandry, teacher made knowledge test was developed. On the basis of information collected for this purpose, respondents were classified into three groups i.e. high, medium and low knowledge level on the basis of mean and standard deviation.

Table 3 : Extent of knowledge about improved animal husbandry practices by dairy farmers

(n=300)

| Sr. No. | Improved animal husbandry practices | Knowledge level | | | | | |
|---------|-------------------------------------|-----------------|---------|-----------|---------|-----------|---------|
| | | High | | Medium | | Low | |
| | | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| 1 | Animal Breed Improvement | 206 | 68.67 | 68 | 22.67 | 26 | 08.67 |
| 2 | Live Stock Production Management | 84 | 28.00 | 163 | 54.33 | 53 | 17.67 |
| 3 | Animal Nutrition | 177 | 59.00 | 101 | 33.67 | 22 | 07.33 |
| 4 | Fodder Production | 86 | 28.67 | 127 | 42.33 | 87 | 29.00 |
| 5 | Animal Health | 189 | 63.00 | 62 | 20.67 | 49 | 16.33 |

It is evident from the Table-3 that 68.67 percent respondents possessed high level of knowledge regarding animal breeding for animal breed improvement followed by 22.67 per cent and 8.67 per cent of the respondents had medium and low level of knowledge, respectively. In case of animal nutrition practices, three fifth of the dairy farmers

(59.00 per cent) had high level of knowledge, followed by 33.67 per cent had medium and 7.33 per cent respondent had low level of knowledge regarding.

Whereas, livestock production management is concerned, more than half of the dairy farmers (54.33 per

cent) had medium level of knowledge, followed by 28.00 per cent and 17.67 per cent of them had found in the category who possessed high level and low level of knowledge, respectively. In case of fodder production, more than two fifth of respondents (42.33 per cent) had medium level of knowledge, followed by 29.00 per cent and 28.67 per cent respondents who possessed low and high level of knowledge, respectively.

Regarding improved animal husbandry practices of animal health, majority of the dairy farmers (63.00 per cent) had high level of knowledge, while, 20.67 per cent had medium level and only 16.33 per cent respondents having low level of knowledge. This all findings in contrast indicated with the findings of Patil *et al.* (2009).

CONCLUSION

It can be concluded that more than two fifth of the beneficiary dairy farmers were belonged to other backward class category (43.67 per cent) and nearly half of the them belonged to middle age group (48.00 per cent) with 36 to 50 years age group. Nearly two fifth (38.34 per cent) of the beneficiaries had small land holding i.e. between 1.1 to 2.0 hectares. Majority of dairy farmers (87.34 per cent) were; having primary, secondary and higher secondary level of education, small size family (52.00 per cent) i.e. up to 4 members in their family, annual income of between ₹ 1,00,001/- to ₹ 2,50,000/- (58.33 per cent) and small herd size of milch animals i.e. up to 5 animals (54.67 per cent). About three fourth of beneficiaries (72.00 per cent) who were engaged in dairy farming, had set aside their dairy animals in traditional cattle sheds and nearly half of them (49.33 per cent) had low social participation. In case of mass media, highest percentage of dairy farmers (59.00 per cent) were watch T.V. daily, 11.66 per cent rarely read newspaper and 95.00 per cent never used to watch educational films.

The high level of knowledge about improved animal husbandry practices by dairy farmers were; animal breeding for animal breed improvement (68.67 per cent), animal nutrition (59.00 per cent), livestock production

management (28.00 per cent), fodder production (28.67 per cent) and animal health (63.00 per cent), followed by medium knowledge by dairy farmers were; animal breeding (22.67 per cent), animal nutrition (33.67 per cent), livestock production management (54.33 per cent), fodder production (42.33 per cent) and animal health (20.67 per cent). It is due to that the dairy farmers are more aware about breed of animal and nutrition which resulting to increase the production of milk and ultimately raise the income.

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