



KNOWLEDGE ABOUT SCIENTIFIC MANAGEMENT OF PREGNANT DAMS AND CALVES FOR STRENGTHENING LIVELIHOOD AMONG LIVESTOCK BENEFICIARIES OF RKVY PROJECT

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Received: March 05, 2016; Revised: March 14, 2016; Accepted: March 18, 2016

Abstract- The knowledge level of dairy farmers about scientific management practices in four major areas of dairy farming such as breeding, feeding, management and health care practices were studied in Navsari district of Gujarat state. Considering the potentiality of Gandevi, Jalalpore and Vansda talukas of the Navsari district, nine villages were selected proportionately. Proportionate random sampling method was used to identify 100 respondents from nine villages. The study find out that majority of the livestock beneficiaries (81.00 per cent) were in middle to old age groups, secondary level of education (57.00 per cent), small family size (64.00 per cent), higher level of animal husbandry experience (79.00 per cent), active social participation (69.00 per cent), small size of land holding (69.00 per cent), medium to large size of livestock possession (86.00 per cent), frequently accessed the information (70.00 per cent), medium to higher level of innovativeness (73.00 per cent), medium to higher level of risk orientation (82.00 per cent), moderate to higher level of scientific orientation (78.00 per cent) and 81.00 per cent earned their livelihood from two enterprises (animal husbandry + farming or animal husbandry + service/ business). In case of knowledge, majority of the livestock beneficiaries had high level of knowledge about breeding practices (74.00 per cent), feeding practices (60.00 per cent), management practices (66.00 per cent), and health care practices (72.00 per cent). In overall knowledge, majority of the livestock beneficiaries (76.00 per cent) were found with high level of knowledge about scientific management practices. Education of beneficiaries (0.3324**), social participation (0.2695**), source of information (0.3944**), risk orientation (0.4495**) and scientific orientation (0.4017**) found highly significant association with knowledge about scientific management.

Keywords- Knowledge, Livelihood, Scientific management, RKVY.

Citation: Bhuvra R.M., et al., (2016) Knowledge about Scientific Management of Pregnant Dams and Calves for Strengthening Livelihood among Livestock Beneficiaries of RKVY Project. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 8, Issue 13, pp.-1176-1179.

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Introduction

India is predominantly an agrarian society where animal husbandry forms the backbone of national economy. Animal husbandry plays an important role in socio-economic development and employment generation for rural people especially, to small and marginal farmers and landless labours by providing round the year steady income from animal produce. India has largest livestock population in the world but productivity of Indian dairy animal remains substantially low as compared to potential and world average. Besides the poor genetic potential and poor economic status, this low productivity could largely be attributed to low level of knowledge and adoption of scientific breeding, feeding, management and health care technologies. However, most of the rural farmers who keep dairy animals, do not follow scientific management practices of animal. There is an urgent need to sensitize the dairy farmers to the modern technologies and scientific interventions in dairy production in order to enhance milk yield and milk quality from dairy animals. Knowledge about scientific management of pregnant dams and calves by livestock farmers has great scope for improving productivity, profitability and sustainability of dairy farming, especially for resource poor and socio-economically deprived rural farmer. Keeping the above problems in view, the present study was taken up with the specific objectives.

1. To study the personal profile of livestock beneficiaries of RKVY project
2. To study the level of Knowledge about scientific management of pregnant dams and calves for strengthening livelihood among livestock beneficiaries of RKVY project
3. To study the Correlation between personal profile and level of knowledge

Materials and Methods

Project on scientific management of pregnant dams and calves for strengthening livelihood among livestock owners was launch in Navsari district during 2010-11 by Krishi Vigyan Kendra, Navsari through Rashtriya Krishi Vikas Yojana. Therefore, list of the beneficiaries was obtained from KVK. Considering the potentiality of Gandevi, Jalalpore and Vansdatalukas of the district, nine villages were selected for the present study. Proportionate random sampling method was used to obtain the 100 respondents from the obtained lists. An Ex-post facto research design was used for the study. Based on objectives, the interview schedule was developed and respondents were interviewed at their home and farms. The most relevant variables were scrutinized from the available research reviews, thus 12 independent and 3 dependent variables for the study. The appropriate scaling techniques were finalized to measure them. SES scale developed by Pandya (2010) was used to measure the education, family size, social participation, land holding and livestock possession. Scale developed by Silvakumar (1988) was used to measure the animal husbandry experience. Scale developed by Singh (1977) was used to measure innovativeness. Scale developed by Supe (1969) was used to measure the risk orientation and scientific orientation. A teacher made test was developed in context to study the source of information and livelihood option. Knowledge of project beneficiaries regarding scientific management of pregnant dams and calves was measured by asking various questions related to scientific management practices. These are about breeding, feeding, management and health care. A set of thirty questions was prepared by referring research reviews and after consulting experts of animal husbandry discipline. The response on each statement included under the each

practice was obtained on three continuum viz., known, partially known and not known with the weightage of 3, 2 and 1 score respectively. Total possible score range of knowledge was 0 to 90. All four practices wise scores were obtained separately and equally grouped to get three categories of knowledge level of beneficiaries. Further, same procedure was followed to get the three categories of overall knowledge. Later on, same score were used to find out the correlation with dependent variables. The collected data were analyzed by using percentage, mean, standard deviation and correlation coefficient (*r*).

Results and Discussion

Personal profile of livestock beneficiaries of RKVY

The data related to distribution of the livestock beneficiaries according to their profile presented in [Table-1].

Age

A perusal of data in [Table-1] reveal that nearly half (48.00 per cent) of the livestock beneficiaries were in middle age group followed by 33.00 and 19.00 per cent belonged to old and young age groups respectively.

Education

It is evident from [Table-1] that concluded that nearly half (48.00 per cent) of the livestock beneficiaries had secondary level of education followed by 43.00 and 9.00 per cent had primary and college and above level of education respectively.

Family size

It is apparent from [Table-1] that majority (64.00 per cent) of the livestock beneficiaries had small family size followed by 24.00 and 12.00 per cent had medium and big family size respectively.

Table-1 Distribution of livestock beneficiaries according to their personnel profile *n*=100

Sr. No.	Categories	Frequency	Per cent
Age			
1.	Young age	19	19.00
2.	Middle age	48	48.00
3.	Old age	33	33.00
Level of education			
1.	Primary level	43	43.00
2.	Secondary level	48	48.00
3.	College and above level	9	9.00
Family size			
1.	Small family	64	64.00
2.	Medium family	24	24.00
3.	Big family	12	12.00
Animal husbandry experience			
1.	Lower level of animal husbandry experience	21	21.00
2.	Medium level of animal husbandry experience	62	62.00
3.	Higher level of animal husbandry experience	17	17.00
Social participation			
1.	No social participation	31	31.00
2.	Poor social participation	48	48.00
3.	Moderate social participation	15	15.00
4.	Good social participation	6	6.00
Land holding			
1.	Small land holding	69	69.00
2.	Medium land holding	18	18.00
3.	Big land holding	13	13.00
Livestock possession			
1.	Small (1 to 2 animal)	14	14.00
2.	Medium (3 to 4 animal)	47	47.00
3.	Large (Above 4 animal)	39	39.00
Source of information			
1.	Rarely accessed the information	17	17.00
2.	Frequently accessed the information	70	70.00
3.	Regularly accessed the information	13	13.00
Innovativeness			
1.	Lower level of innovativeness	27	27.00
2.	Medium level of innovativeness	62	62.00
3.	Higher level of innovativeness	11	11.00
Risk orientation			
1.	Lower level of risk orientation	18	18.00
2.	Medium level of risk orientation	63	63.00
3.	Higher level of risk orientation	19	19.00
(Mean= 12.08/ SD= 1.93)			
Scientific orientation			
1.	Lower level of scientific orientation	22	22.00
2.	Moderate level of scientific orientation	63	63.00
3.	Higher level of scientific orientation	15	15.00
(Mean= 13.84/ SD= 1.96)			
Livelihood option			
1.	One livelihood activity	5	5.00
2.	Two livelihood activity	81	81.00
3.	Three livelihood activity	14	14.00
Total		100	100.00

Animal husbandry experience

It is observed from [Table-1] that majority (62.00 per cent) of the livestock beneficiaries had medium level of experience followed by 21.00 per cent of them had lower of animal husbandry experiences and 17.00 per cent of them had higher level of animal husbandry experiences respectively

Social Participation

It is clear from [Table-1] that nearly half (48.00 per cent) of the livestock beneficiaries had poor social participation followed by 31.00, 15.00 and 6.00 per cent of them had no social participation, moderate social participation and good social participation respectively.

Land holding

The data pertaining to [Table-1] revealed that majority (69.00 per cent) of the livestock beneficiaries possessed to small land holding category followed by 18.00 and 13.00 per cent were in medium and big land holding categories respectively.

Livestock possession

The data presented in [Table-1] shows that nearly half (47.00 per cent) of the livestock beneficiaries had medium sized livestock possession followed by 39.00 per cent had large sized and 14.00 per cent had small sized livestock possession.

Source of information

The [Table-1] indicates that majority (70.00 per cent) of the livestock beneficiaries had frequently accessed the information followed by 17.00 and 13.00 per cent had rarely and regularly accessed the information for the development of enterprise respectively.

Innovativeness

The data presented in [Table-1] indicated that majority (62.00 per cent) of the livestock beneficiaries had medium level of innovativeness followed by 27.00 and 11.00 per cent had lower and higher level of innovativeness respectively.

Risk orientation

It apparent from the [Table-1] that majority (63.00 per cent) of the livestock beneficiaries had medium level of risk orientation followed by 19.00 and 18.00 per cent had higher and lower level of risk orientation respectively.

Scientific orientation

The [Table-1] indicates that majority (63.00 per cent) of the livestock beneficiaries had moderate level of scientific orientation followed by 22.00 and 15.00 per cent had lower and higher level of scientific orientation respectively.

Livelihood option

It is evident from [Table-1] that majority of the livestock beneficiaries (81.00 per cent) were engaged with two livelihood activity (animal husbandry + farming or animal husbandry + service/ business) followed by 14.00 and 5.00 per cent were engaged with three (animal husbandry + farming + agri. labour or animal husbandry + farming + service or business or animal husbandry + farming + migration) and one livelihood activity (animal husbandry) respectively.

Knowledge about scientific management practices

The data related to distribution of beneficiaries according to their level of knowledge about scientific management practices presented in [Table-2]. A perusal of data in [Table-2] reveal that majority (74.00 per cent) of the livestock beneficiaries had higher level of knowledge followed by 26.00 per cent of the livestock beneficiaries had medium level of knowledge while none was found in low level category of knowledge about breeding practices.

The majority (60.00 per cent) of livestock beneficiaries had higher level of knowledge followed by 40.00 per cent of the livestock beneficiaries had medium level of knowledge while none was found in low level category of knowledge about feeding practices.

The majority (66.00 per cent) of the livestock beneficiaries had higher level of

knowledge followed by 34.00 per cent of the livestock beneficiaries had medium level of knowledge while none was found in low level category of knowledge about management practices.

The majority (72.00 per cent) of the livestock beneficiaries had higher level of knowledge followed by 28.00 per cent of the livestock beneficiaries had medium level of knowledge while none was found in low level category of knowledge about healthcare practices.

On the basis of the above results, it can be concluded that majority of the livestock beneficiaries were found with high level of knowledge about breeding practices(74.00 per cent), high level of knowledge about feeding practices (60.00 per cent), high level of knowledge about management practices (66.00 per cent), and high level of knowledge about health care practices (72.00 per cent).

Table-2 Distribution of beneficiaries according to their level of knowledge about scientific management practices (n= 100)

Sr.	Categories of level of knowledge about practices	Frequency	Per cent
A. Breeding Practices			
1.	Low (up to4 score).	0	0.00
2.	Medium (5 to 8 score)	26	26.00
3.	High (above 8 score).	74	74.00
Total		100	100.00
B. Feeding practices			
1.	Low (up to 9 score).	0	0.00
2.	Medium (10 to 18 score)	40	40.00
3.	High (above 18 score).	60	60.00
Total		100	100.00
C. Management practices			
1.	Low (up to 7 score).	0	0.00
2.	Medium (8 to 14 score)	34	34.00
3.	High (above 14 score).	66	66.00
Total		100	100.00
D. Health care practices			
1.	Low (up to10 score).	0	0.00
2.	Medium (11 to 20 score)	28	28.00
3.	High (above 20 score).	72	72.00
Total		100	100.00

Table-3 Distribution of beneficiaries according to their overall level of knowledge about scientific management practices (n= 100)

Sr. No.	Categories of overall knowledge	Frequency	Per cent
1.	Low (up to 30 score).	0	0.00
2.	Medium (31 to 60 score)	24	24.00
3.	High (above 60 score).	76	76.00
Total		100	100.00

In overall knowledge about breeding, feeding, management and healthcare, clear from [Table-3] that majority (76.00 per cent) of the livestock beneficiaries had higher level of knowledge followed by 24.00 per cent of the livestock beneficiaries had medium level of knowledge while none was found in low level category of knowledge. The finding is in concurrence with the findings reported by [1,9,10].

Correlation between independent variables of beneficiaries and level of knowledge

The data manifested in [Table-4] revealed that the education of beneficiaries (0.3324**), social participation (0.2695**), source of information (0.3944**), risk orientation (0.4495**) and scientific orientation (0.4017**) found highly significant association with knowledge about scientific management. However, livestock possession (0.2549*), animal husbandry experience (0.2491*) and innovativeness (0.2169*) were found positive and significantly associated with knowledge about scientific management. On the other hand age (0.1168^{NS}), land holding (0.1799^{NS}) and livelihood option (0.0427^{NS}) were found non significantly while family size (-0.0059^{NS}) was found negative and non significantly associated with knowledge about scientific management. This finding is in conformity with those of [6,8,11,13].

Conclusion

Majority of the livestock beneficiaries were in middle to old age groups, secondary

level of education, small family size, higher level of animal husbandry experience, active social participation, small size of land holding, medium to large size of livestock possession, frequently accessed the information, medium to higher level of innovativeness, medium to higher level of risk orientation, moderate to higher level of scientific orientation and they earned their livelihood from different enterprises like animal husbandry, farming with animal husbandry and service/business. In case of knowledge, majority of the livestock beneficiaries had high level of knowledge about breeding, feeding, management and health care practices whereas, in overall knowledge, majority of the livestock beneficiaries had high level of knowledge about scientific management practices. The probable reason for above finding might be due to their secondary level of education, enough experience of their enterprise, assured source of information and good rapport with the project-executing agency. Education, social participation, source of information, risk orientation and scientific orientation of beneficiaries found highly significant association with knowledge about scientific management. However, livestock possession, animal husbandry experience and innovativeness were found positive and significantly associated with knowledge about scientific management.

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Table-4 Correlation between independent variables of beneficiaries and level of knowledge about scientific management (n=100)

Sr. No.	Independent variables	Coefficient of correlation (r)
1.	Age	0.1168 ^{NS}
2.	Education	0.3324**
3.	Family size	-0.0059 ^{NS}
4.	Social Participation	0.2695**
5.	Land holding	0.1799 ^{NS}
6.	Livestock possession	0.2549*
7.	Source of information	0.3944**
8.	Animal husbandry experience	0.2491*
9.	Innovativeness	0.2169*
10.	Risk orientation	0.4495**
11.	Scientific orientation	0.4017**
12.	Livelihood option	0.0427 ^{NS}

Conflict of Interest: None declared

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