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Attitude of Dairy Farmers towards Cultivation of Green Fodder Crops in North Eastern Transition Zone of Karnataka, India

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Abstract

An ex-post-facto study was conducted to know the attitude of dairy farmers towards cultivation of green fodder crops in North Eastern Transition zone of Karnataka, India using an attitude scale through personal interview method. The study conducted in Bidar district of Karnataka reported that majority of the respondents had low level of favorable attitude towards green fodder crops cultivation. Further the variables herd size, land holding, annual income, distance from veterinary institution, extension participation, decision making ability, scientific orientation, economic orientation and risk orientation of the farmers was found to be significantly correlated with attitude towards cultivation of green fodder crops. The study concluded that, there is a need to educate the farmers about green fodder cultivation and feeding through various extension approaches for improved dairy production in the study area.

Keywords: Attitude, Green Fodder, Karnataka, Livestock Owners, Sujala-III Project

Introduction

Dairying is an integral part of rural economy creating additional income to rural poor, particularly landless farm laborers, small and marginal farmers who are resource deficit. In India, low animal productivity is found due to various factors like climate, social, economic factors and poor scientific knowledge etc. Although India possess enormous bovine wealth, their per capita production is one of lowest in world due to the reasons that the farmers do not adopt the improved dairy management practices at the desired level (Sharma, 2004) which is attributed to various factors. Further, serious efforts to transfer the scientific dairy husbandry practices to the farmers have been made yet various studies indicate that farmers have adopted to a very negligible extent (Meena *et al.,* 2012; Rathod *et al*., 2014). In scientific dairy farming, feed and fodder plays a pivotal role in improving the animal health and productivity. The farmers depend predominantly on crop residues for livestock feeding over green fodder and concentrates leading to poor health and low milk production at field conditions. Even the farmers with adequate land holding do not seem to be enthusiastic/inclined towards cultivation of fodder crops but focus on cultivation of food grain and vegetables crops. Further, it should be noted that feeding of green fodder to dairy animals fetch good milk yield as well as productivity per animal will increase substantially. Hence, the farmers need to know about the importance of cultivation and feeding of green fodder for improving productivity. Therefore, keeping this in view the study was carried out to know the attitude of livestock owners towards cultivation of green fodder crops in Bidar district of Karnataka, India.

Material and Methods

The study was conducted in purposively selected Sujala watershed project area of Humnabad and Aurad talukas of Bidar district in Karnataka, India. The data was collected during March to July, 2018. From each taluka four villages were selected randomly for study. Further, 15 respondents were selected from each village by random sampling to make the sample size of 120 respondents. The primary data was collected through personal interview method with the help of attitude scale developed by Kunzru and Tripathi (1994) which included 14 statements and the responses on three-point continuum. The responses for each statement included 'Agree', 'Undecided' and 'Disagree' with the score of '3', '2' and '1' for positive statements and vice-versa for negative statement. A set of questions about socio-personal and psychological characteristics of the respondents was also enquired. The information collected through interview was analyzed using statistical tools like frequency, percentage, mean, SD, correlation and regression and the results were discussed accordingly keeping in view the objectives laid for the study.

Results and Discussion

Socio-Personal, Economic and Psychological Characteristics Respondents

Table 1 shows that majority of the respondents in the study area belong to the middle age group with the average age of 46 years which might be attributed to the fact that middle aged farmers were more cosmopolite, hardworking and did not hesitate to take economic risk when compared to old farmers. Further, majority of respondents were found illiterate followed by those having education upto primary school which might be due to their poor economic status, improper guidance and less awareness about importance of education. Majority (54.16%) of respondents belong to nuclear family type since majority of the farm families had interaction with the urban population and migration to urban areas. Majority (92.50%) of respondents pursued both agriculture and animal husbandry as their source of livelihood since these occupations were interdependent and integrated since generations. The study (Table 1) also indicated that majority of respondents had medium levels of herd size, experience in dairy farming, land holding, experience in fodder production and annual income. This might be due to the fact that majority of respondents belong to nuclear family with agriculture and livestock as major occupation possessing manageable size of herd size and land holding over a period of time. Due to limited land and livestock holding, the farmers could earn medium income primarily through agriculture and animal husbandry in the study area. The Table 1 depicts that majority (93.33%) of the respondents did not have any social participation, had high distance from veterinary institution and received service in moderate time, which could be attributed to low level of education, hesitation to work in group to solve the problems, did not show interest in social participation for their development. Further, it was found that (Table 1) majority of respondents were in medium category of information seeking behavior, extension participation, decision making ability and economic orientation. This might be due to poor education level and poor social participation leading to negligible contact with other organizations or extension functionaries in the study area.

Table 1: Socio-personal, economic and psychological characteristics of respondents N=120

Variables	Mean & S. D	Categories	Frequency	Percentage
Age	Mean-46.175 S.D-10.358	Young age	19	15.84
		Middle age	81	67.5
		Old age	20	16.66
Education	Categorical Value	Illiterate	56	46.66
		Primary School	25	20.84
		High school	24	20
		College &Above	15	12.5
Family type	Categorical Value	Nuclear	65	54.16
		Joint	55	45.84
Occupation	Categorical Value	Agriculture	111	92.5
		A.H	2	1.66
		Business	6	5
		Government service	1	0.84
		Labour	0	0
Herd size	Mean-3.077 S.D-1.123	Low	9	7.5
		Medium	93	77.5
		High	18	15
Experience in dairy farming	Mean-6.725 S.D-3.449	Low	17	14.16
		Medium	87	72.51
		High	16	13.33
Land holding	Mean-4.716 S.D-2.647	Low	4	3.33
		Medium	106	88.34
		High	10	8.33
Experience in fodder production	Mean-6.608 S.D-3.569	Low	17	14.16
		Medium	87	72.51
		High	16	13.33
Annual income	Mean-72808.333 S.D-39182.0	Low	3	2.51
		Medium	113	94.16
		High	4	3.33
Social participation	Categorical Value	Nil	112	93.33
		Member of one organization	6	5
		Member of more than One Organization	2	1.67
		Office bearer	0	0
		Public leader	0	0
Distance from veterinary institution	Mean-40.5 S.D-8.219	Less	16	13.33
		Medium	46	38.33
		Longer	58	48.34
Average time spent to receive service	Mean-31.7 S.D-13.568	Less time	13	10.84
		Moderate time	84	70
		Delayed time	23	19.16
Common service provider	Categorical Value	Veterinary officer	75	54.16
		VLI	65	45.84
		Local healer	0	0
		Any other	0	0
Information seeking behavior	Mean-32.0 S.D-2.882	Low	14	11.67
		Medium	84	70
		High	22	18.33
Extension participation	Mean-15.4 S.D-4.082	Low	26	21.66
		Medium	75	62.5
		High	19	15.84
Decision making ability	Mean-15.116 S.D-4.421	Low	40	33.33
		Medium	75	62.51
		High	5	4.16
Scientific orientation	Mean-12.491 S.D-5.329	Low	44	36.66
		Medium	29	24.17
		High	47	39.17
Economic orientation	Mean-12.066 S.D-4.959	Low	42	35
		Medium	49	40.84
		High	29	24.16
Risk orientation	Mean-11.891 S.D-4.920	Low	43	35.84
		Medium	38	31.66
		High	39	32.5

Further, it was observed that majority of the respondents were in medium decision-making ability which means that all the members were involved in decision making related to different aspects of dairy farming. It was found that majority of the dairy farmers were in high level of scientific orientation, medium category of economic orientation and low risk orientation. Although high to medium scientific orientation was a positive trend in the study area, the farmers lacked the interest to involve in scientific dairy farming due to their poor economic status and low risk-taking ability. Almost similar findings were also reported by Rathod *et al.* (2014) and Rathod (2016).

Attitude of Respondents Towards Cultivation of Green Fodder Crops

Table 2 depicts that 42 per cent of respondents had low favorable attitude towards cultivation of green fodder crops followed by high and low favorable attitude towards cultivation of green fodder crops. Although the results appear to be negative, there was an increase in the number of farmers in medium and high favorability as compared to the previous study conducted by Rathod (2016). Low to medium and high favourable attitude was a positive trend in the study area which might be due to the ongoing watershed project in the study area. This project might have improved that attitude of dairy farmers towards green fodder cultivation. Similar efforts are also required by different organizations to emphasize the importance of green fodder cultivation in the study area for profitable dairy farming. A study conducted by Satyanarayan *et al.* (2017) also revealed that Bidar district was considered as highly vulnerable district for fodder shortfall and government has to take necessary action to improve the fodder production scenario in the district.

Table 2: Distribution of respondents based on attitude towards cultivation of green fodder crops

	Categories	Frequency	Percentage
Attitude towards Cultivation of Green Fodder Crops (Mean-27.116; S.D-12.269)	Low	50	41.66
	Medium	27	22.5
	High	43	35.84

Relationship between Independent Variables and Attitude Towards Cultivation of Green Fodder Crops

Table 3 shows that attitude of dairy farmers towards cultivation of green fodder crops was found to be significantly correlated with herd size, land holding, annual income, distance from veterinary institution, extension participation, decision making ability, scientific orientation, economic orientation and risk orientation.

Table 3: Relationship between independent variables and attitude towards cultivation of green fodder crops

S. No.	Variables	Correlation Coefficient(r)	Regression Coefficient(B)	Std. Error (SE)	P-value
1	Age	-0.088	-0.003	0.05	0.951
2	Education	-0.052	-0.617	0.496	0.216
3	Family type	0.102	-0.962	1.023	0.349
4	Occupation	0.056	-0.37	1.037	0.722
5	Herd size	0.244***	1.051	0.476	0.03
6	Experience in dairying	0.128	0.593	0.761	0.437
7	Land holding	0.183**	0.724	0.905	0.426
8	Experience in fodder production	0.138	-0.414	0.747	0.581
9	Annual Income (K)	0.165*	0.003	0.015	0.841
10	Social Participation	0.131	1.49	1.945	0.445
11	Distance from veterinary institution (Kms)	0.184**	-0.008	0.067	0.904
12	Information seeking behavior	0.134	0.069	0.179	0.698
13	Extension Participation	0.588***	-0.16	0.231	0.489
14	Decision Making Ability	0.620***	0.175	0.202	0.387
15	Scientific Orientation	0.808***	-0.289	0.311	0.354
16	Economic Orientation	0.873***	0.276	0.527	0.602
17	Risk Orientation	0.907***	2.296	0.395	0
	R square: 0.86	Goodness of fit: 86.0 %			

****Significance @ 1% level of significance; **Significance @ 5% level of significance; *Significance @ 10 % level of significance*

Further, it was also noted that all the variables except age and education were positively correlated with attitude of dairy farmers towards cultivation of green fodder crops. Herd size, land holding and annual income were critical factors for improving the attitude of dairy farmers towards cultivation of green fodder which indicated that as these factors increased or improved positively, the farmers were highly positive towards cultivation of green fodder. These

factors correlated positively with the cultivation of green fodder. Further, it was obvious that farmers who were in constant touch with extension personnel and had lesser distance from veterinary institution, had more favorable attitude towards cultivation of green fodder. It was also found that, decision making ability, scientific orientation, economic orientation and risk orientation were also important for creating favorable attitude towards green fodder cultivation in the study area. The positive change of these above-mentioned factors depicted increasing favorable attitude towards green fodder cultivation. Table 3 depicts that age was negatively correlated with the attitude towards cultivation of green fodder which indicates that as the age advances, the farmers had less favorable attitude towards cultivation of green fodder. Further, with regards to education, it was found that less education of farmers led to less favorable attitude towards cultivation of green fodder crops in the study area. The study also depicted that coefficient of determination (R-square = 0.86) was explained by 17 variables to the extent of 86.0 per cent in this model.

Conclusion

The study found that majority of the respondents had low level of favorable attitude towards cultivation of green fodder crops and variables likeherd size, land holding, annual income, distance from veterinary institution, extension participation, decision making ability, scientific orientation, economic orientation and risk orientation of the respondents were found to be significantly correlated with attitude towards cultivation of green fodder crops. The variables age and education showed negative relationship with attitude towards cultivation of green fodder crops. In this context, there is a need to educate the farmers about fodder production through various extension approaches for improving dairy production in the study area. The concerned organization have to focus on the relevant factors which needs to be improved upon for creating favorable attitude of dairy farmers towards green fodder cultivation.

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Conflict of Interests

There is no conflict of interest.

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