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Socio-personal, socio-economic and communication pattern attributes of PKVY famers in Rajasthan

Laksheeta Chauhan, Manmeet Kaur, Subhash Chandra and Ramesh Chand Bunkar

Abstract
The study was carried-out during 2020-2021 in Bikaner district of Rajasthan state on 180 beneficiary and non-beneficiary farmers of Paramparagat Krishi Vikas Yojana (PKVY). A semi-structured interview schedule was used to gather the data from the respondents. The results revealed that majority of the respondents *i.e.* 70.56 percent belonged to middle age group, 90.56 percent were from other backward class, nearly 38 percent of them had primary education and a huge majority of the respondents *i.e.* 89.54 percent were having agriculture as their main occupation. Slightly less than sixty five percent (64.44%) of the respondents possessed land above four hectare and belonged to large category. A vast majority of the farmers *i.e.* 86.66 percent had ground water irrigation as main source of irrigation. It was further revealed that majority of the respondents *i.e.* 64.44 percent had medium level of mass media exposure and 60.30 percent of them had medium level of extension agency contact. The information seeking behaviour of respondents was also found medium with 53.34 percent of total number and fifty-five percent of the respondents had medium level of information sharing behaviour.

Keywords: Farmers, beneficiary, non-beneficiary, PKVY, Rajasthan

Introduction
India is well known all across the globe for its rich culture and heritage. In ancient times, farmers were growing various crops without using agro-chemicals, but with the passage of time, with the sudden increase in population, feeding the huge population was a challenging task and farmers were forced to use various agro-chemicals. However, increasing crop yield through exorbitant use of pesticides and fertilizers poses a major threat to sustainability of agriculture productivity in the long run. Hence, there is a need for agricultural practices that rely more on organic inputs rather than heavy use of chemical fertilizers, insecticides and pesticides. Considering the fact, organic farming came into existence but it is very expensive as well as risky for the Indian farmers. Organic farming is a type of farming that provides healthy, safe and quality food without adversely harming the environment as well as soil's health. It also helps to sustain the productivity and quality of farm produce apart from protecting the soil, human health and environment. For reducing the risk Government of India launched Paramparagat Krishi Vikas Yojana (PKVY) in the year of 2015-16. Through this scheme government provided financial support to the farmers and also helped them by providing organic inputs like vermicompost, organic manures, *etc.* Therefore, understanding the importance of organic farming in agriculture, the present study was undertaken with the objective to document the socio-personal, socio-economic and communication pattern characteristics of beneficiary and non-beneficiary farmers of PKVY.

Research Methodology
The present study was conducted in Bikaner district of Rajasthan state which was purposely selected for the present investigation on the basis of largest number of clusters formed under PKVY during 2015-18. Three *tehsils* namely Nokha, Sridungarhgarh and Bikaner were selected purposely for the present investigation on the basis of highest number of registered farmers under PKVY. For selection of respondents, a comprehensive village-wise list of farmers who were having registration in PKVY was procured from the *Panchayat Samiti*, Bikaner, Rajasthan. The proportionate random sampling method was used to select the respondents who were having registration in PKVY and they were called as beneficiary of PKVY. The same numbers of farmers who have not registered in PKVY were randomly selected from the same villages to constitute the other half of the sample size and were called

as non-beneficiary respondents. Thus, a total of 180 respondents *i.e.* 90 beneficiary and 90 non-beneficiary respondents were included in the present investigation. An interview schedule was designed for collecting the data. The pre-testing of the interview schedule was carried-out with 25 non-sampled respondents who were not included in the study. The personal interview technique was adopted to gather the data and the data was analyzed with the help of various statistical tools such as mean, standard deviation, frequency and percentage.

Results and Discussion

In this section the data regarding the socio-personal, socio-economic and communication pattern characteristics of farmers *viz.* age, caste, education, social participation, occupation, annual income, land holding, source of irrigation, extension agency contact, mass media exposure, information seeking behaviour and information sharing behaviour were studied using appropriate measurement and have been presented under following heads:

Socio-personal Characteristics

Age

The data in Table 1 reveals that maximum number of the beneficiary (65.55%) and non-beneficiary (75.56%) respondents were in the age group of 37 to 60 years. While, 12.23 percent of beneficiary and ten percent of non-beneficiary farmers belonged to old age category. There were 22.22 percent of beneficiary and 14.44 percent of non-beneficiary farmers were in the category of less than 37 years.

Table 1: Distribution of Respondents on the basis of Age

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non- beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Young (<37.33 years)	20	22.22	13	14.44	33	18.33
2.	Middle (37.33 to 60.27 years)	59	65.55	68	75.56	127	70.56
3.	Old (>60.27 years)	11	12.23	09	10.00	20	11.11

Mean: 48.80 S.D.: 11.47

Table 1 also indicates that the predominance of the overall respondents were in the middle age group *i.e.* between 37 to 60 years of age. This age group constituted 70.56 percent of total sample, followed by 18.33 percent and 11.11 percent farmers from young and old age group, respectively. The findings are in conformity with the findings of Anupama (2014) [2], Barik (2018) [3], Bhatia (2015) [5], Motiwale (2018) [13] and Singh *et al.* (2020) [21] who concluded that majority of the respondents of organic farming belonged to middle age group.

Caste

A close look of the Table 2 explicates that a huge majority of the beneficiary (92.22%) and non-beneficiary (88.89%) respondents belonged to other backward class category. On the other hand, only 03.34 percent beneficiary farmers and 02.22 percent non-beneficiary farmers belonged to scheduled caste category. Further, 04.44 percent beneficiary and 08.89 percent of non-beneficiary respondents belonged to general caste category.

Table 2: Distribution of Respondents on the basis of Caste

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Scheduled Caste	03	03.34	02	02.22	05	02.78
2.	Other Backward Class	83	92.22	80	88.89	163	90.56
3.	General Caste	04	04.44	08	08.89	12	06.66

If we see the data irrespective of beneficiary and non-beneficiary respondents, data in the Table 2 illustrates that majority of the overall respondents (*i.e.* beneficiary and non-beneficiary) belonged to other backward class category. This caste group alone constituted 90.56 percent of the total sample. This was followed by general caste (06.66%) and scheduled caste (02.78%), respectively. The results of the present study are in accordance with the findings of Singh & Sharma (2019) [20] and Priyanka & Jayashankar (2020) [17] who concluded that majority of the organic farmers belonged to other backward class category.

Education

The data presented in Table 3 reveals that out of total respondents, 35.56 percent of the beneficiary farmers and 18.89 percent of non-beneficiary farmers had middle level education, 24.44 percent of beneficiary and 52.22 percent of non-beneficiary farmers had up to primary level education, 16.66 percent of beneficiary and 11.11 percent of non-beneficiary respondents were educated up to secondary level, 08.89 percent of beneficiary and only 03.34 percent of non-beneficiary farmers had education up to senior secondary level and 04.45 percent of beneficiary farmers & 02.22 percent of non-beneficiary farmers were in the category of graduate and above. In the study area, only ten percent of the beneficiary and 12.22 percent of non-beneficiary respondents were found illiterate. Further, the data in Table 3 depicts that 38.33 percent of the overall respondents had education up to primary level, followed by middle (27.22%), secondary (13.89%) and senior-secondary (06.12%). Among all the overall respondents, only 03.33 percent were in the category of graduate and above. Whereas, 11.11 percent of the overall respondents in the study area were found illiterate.

Table 3: Distribution of Respondents on the basis of Education

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Illiterate	09	10.00	11	12.22	20	11.11
2.	Primary	22	24.44	47	52.22	69	38.33
3.	Middle	32	35.56	17	18.89	49	27.22
4.	Secondary	15	16.66	10	11.11	25	13.89
5.	Senior Secondary	08	8.89	03	03.34	11	06.12
6.	Graduate and Above	04	4.45	02	02.22	06	03.33

The findings are in line with the findings of Barik (2018) [3], Midame & Pyasi (2020) [11] and Upadhyay *et al.* (2020) [23] who reported that majority of the organic farmers had education up to middle level but the findings are contradictory with the findings of Patel (2015) [16] and Khadse *et al.* (2021) [10] who concluded that most of the organic farmers had education of graduation and above.

Social Participation

It is clear from the data presented in Table 4 that a vast majority of the beneficiary farmers (85.56%) and non-beneficiary farmers (94.44%) were not member of any social organization. While, 14.44 percent of the beneficiary respondents and only 05.56 percent of the non-beneficiary farmers were member of social organization. Further, data in Table 4 also reveals that a huge majority of the overall respondents *i.e.* 90.00 percent had no membership in any social organization, whereas, remaining ten percent of them were the member of social organization. The findings are in line with the findings of Tanwar (2019) [22] and Baskaur *et al.* (2021) [4] who concluded that majority of the respondents had no social participation. The findings are contradictory with the findings of Singh *et al.* (2020) [21] who revealed that majority of the respondents had active participation in the various social organizations.

Table 4: Distribution of Respondents on the basis of Social Participation

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	No membership in social organization	77	85.56	85	94.44	162	90.00
2.	Member of social organization	13	14.44	05	05.56	18	10.00

Socio-economic Characteristics

Major Occupation

The data in Table 5 depicts that 90.00 percent of the beneficiary respondents and 88.90 percent of the non-beneficiary respondents had agriculture as their main occupation. Beside this, 06.67 percent of beneficiary farmers and 05.55 percent of non-beneficiary respondents were engaged in business. Remaining 03.33 percent of the beneficiary and 05.55 percent of non-beneficiary respondents were engaged in service.

Table 5: Distribution of Respondents on the basis of Major Occupation

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Agriculture	81	90.00	80	88.90	161	89.45
2.	Business	06	06.67	05	05.55	11	06.11
3.	Service	03	03.33	05	05.55	08	04.44

Further, it is obvious from the data in Table 5 that predominance of the overall farmers in the study area *i.e.* 89.45 percent were in the agriculture sector and remaining 06.11 percent & 04.44 percent of them had other occupation such as business and service, respectively. Thus, it can also be concluded from the above findings that agriculture was the main source of livelihood of the farming community in the study area. The findings are in conformity with the findings of Devi *et al.* (2019) [6], Modak (2019) [12] and Upadhaya *et al.* (2020) [23] who reported that most of the organic farmers had agriculture as their main occupation.

Annual Income

The data in Table 6 depicts that 68.89 percent of the beneficiary respondents had medium income (₹1.22 to 4.06 lac), followed by 21.11 percent of them had low income i.e. <₹ 1.22 lac and remaining ten percent of them were in the high income group *i.e.* > ₹ 4.06 lac, respectively. For non-beneficiary respondents, 66.67 percent of them were in the medium level of income category, followed by 24.44 percent in low income category and 08.89 percent were having high income, respectively.

Table 6: Distribution of Respondents on the basis of Annual Income

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Low (<₹ 1.22 Lac)	19	21.11	22	24.44	41	22.77
2.	Medium (₹ 1.22 to ₹ 4.06 Lac)	62	68.89	60	66.67	122	67.78
3.	High (>₹ 4.06 Lac)	09	10.00	08	08.89	17	09.45

Mean: 2.64 Lac S.D. 1.42 Lac

From the above findings, it can be observed that more than sixty-seven percent of the respondents (both beneficiary and non-beneficiary) were having medium level of income, followed by low (22.77%) and high (09.45%), respectively. The finding are supported by the findings of Sihare (2015) [19], Naik (2015) [14], Motiwale (2018) [13] and Goswami *et al.* (2021) [8] who reported that majority of the farmers had medium level of annual income.

Land Holding

The data presented in the Table 7 indicates that slightly more than sixty-seven percent of the beneficiary farmers (67.77%) and 61.11 percent of the non-beneficiary respondents possessed land above four hectare and belonged to large category, followed by 23.34 percent of beneficiary respondents and 25.56 percent of non-beneficiary respondents were in medium category who possessed 2.1-4 hectares of land. Moreover, 06.67 percent of beneficiary respondents and 07.78 of non-beneficiary respondents who owned 1-2 hectares of land were in the small category. Only 02.22 percent of the beneficiary respondents and 05.55 percent of non-beneficiary respondents possessed land below one hectare and belonged to the marginal category.

Table 7: Distribution of Respondents on the basis of Land Holding

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Marginal (below 1ha.)	02	02.22	05	05.55	07	03.89
2.	Small (1-2 ha.)	06	06.67	07	07.78	13	07.22
3.	Medium (2.1-4 ha.)	21	23.34	23	25.56	44	24.45
4.	Large (above 4 ha.)	61	67.77	55	61.11	116	64.44

Table 7 further reveals that majority of the overall respondents (64.44%) belonged to large land holding category, followed by medium (24.45%), small (07.22%) and marginal (03.89%), respectively. The findings are contradictory with the findings of Barik (2018) [3], Bhatia (2015) [5] and Khadse *et al.* (2021) [10] who showed that majority of the organic farmers possessed small and medium size of land holding, respectively.

Source of Irrigation

The data in Table 8 depicts that 88.89 percent of the beneficiary respondents and 84.44 percent of the non-beneficiary respondents were under the periphery of tube well/ground water as a main source of irrigation, followed by 11.11 percent of beneficiary respondents and 15.56 percent of non-beneficiary respondents were in water hiring category.

Table 8: Distribution of Respondents on the basis of Source of Irrigation

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non- beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Water Hiring	10	11.11	14	15.56	24	13.34
2.	Ground Water Irrigated (Tubewell)	80	88.89	76	84.44	156	86.66

Further, data in Table 8 also depicts that 86.66 percent of the overall respondents had tubewell/ground water as a main source of irrigation, followed by water hiring (13.34%), respectively. The findings are in conformity with the findings of Kaur & Singh (2011) [9] and Annu (2021) [1] who found that majority of the respondents had ground water as the main source of irrigation in Bikaner district of Rajasthan. Tanwar (2019) [22] also reported that preponderance of the respondents had ground water as the major source of irrigation, followed by water hiring in Jaipur district of Rajasthan.

Communication Pattern

Mass Media Exposure

Mass Media Exposure has tremendous effect on the overall behaviour of the respondents in the adoption of different technologies/schemes such as PKVY. The vulnerability of mass media varied amongst the respondents as data presented in the Table 9 shows that majority of the beneficiary (71.11%) and non-beneficiary (57.77%) respondents had medium level of mass media exposure. On the other hand, 21.11 percent of the beneficiary and 06.67 of the non-beneficiary respondents

had high level of mass media exposure. Further, only 07.78 percent of beneficiary and 35.56 percent of the non-beneficiary farmers had low level of mass media exposure.

Table 9: Distribution of Respondents on the basis of Mass Media Exposure

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non- beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Low (<09.48 Score)	07	07.78	32	35.56	39	21.67
2.	Medium (09.48 to 16.14 Score)	64	71.11	52	57.77	116	64.44
3.	High (>16.14 Score)	19	21.11	06	06.67	25	13.89

Mean: 12.81 S.D.: 03.33

Table 9 also shows that majority of the overall respondents *i.e.* 64.44 percent had medium level of mass media exposure. The remaining 21.67 percent of them had low and 13.89 percent had high level of mass media exposure, respectively. The findings are in conformity with the findings of Hanglem (2017), Motiwale (2018) [13] and Baskaur *et al.* (2021) [4] who reported that most of the organic farmers had medium level of mass media exposure.

Extension Agency Contact

The data in Table 10 reveals that majority of beneficiary (62.22%) and non-beneficiary (57.78%) respondents had medium level of extension agency contact. On the other hand, 22.22 percent of beneficiary farmers and 20.00 percent of non-beneficiary respondents possessed high level of extension agency contact and 22.22 percent of non-beneficiary and 15.56 percent of beneficiary respondents had low level of extension agency contact.

Table 10: Distribution of Respondents on the basis of Extension Agency Contact

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non- beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Low (<12.19 Score)	14	15.56	20	22.22	34	18.59
2.	Medium (12.19 to 15.47 Score)	56	62.22	52	57.78	108	60.30
3.	High (>15.47 Score)	20	22.22	18	20.00	38	21.11

Mean: 13.82 S.D.: 1.63

The data presented in the above Table 10 also indicates that majority of the overall respondents *i.e.* 60.30 percent had medium level of extension agency contact, followed by high (21.11%) and low (18.59%), respectively. The findings are in line with the findings of Anupama (2014) [2], Naik (2015) [14], Bhatia (2015) [5], Motiwale (2018) [13] and Goswami *et al.* (2021) [8] who reported that majority of the organic farming respondents had medium level of extension agency contact.

Information Seeking Behaviour

The data in Table 11 shows that most of the beneficiary respondents *i.e.* 55.56 percent and non-beneficiary farmers (51.11%) had medium level of information seeking behaviour. Further, 37.78 percent of beneficiary and 23.33 percent of non-beneficiary respondents had high level of information seeking behaviour. On the other hand, only 06.66 percent of beneficiary and 25.56 percent of non-beneficiary respondents had low level of information seeking behaviour.

Table 11: Distribution of Respondents on the basis of Information Seeking Behaviour

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non-beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Low (<07.81 Score)	06	06.66	23	25.56	29	16.16
2.	Medium (07.81 to 10.19 Score)	50	55.56	46	51.11	96	53.34
3.	High (>10.19 Score)	34	37.78	21	23.33	55	30.50

Mean: 09.00 S.D.: 1.18

The data in Table 11 also reveals that most of the overall respondents *i.e.* 53.34 percent had medium level of information seeking behaviour, followed by high (30.50%) and low (16.16%), respectively. The findings are in conformity with the findings of Anupama (2014) [2], Sasidharan (2015) [18], Bhatia (2015) [5] and Annu (2021) [1] who reported that majority of the respondents had medium level of information seeking behaviour.

Information Sharing Behaviour

Information sharing behaviour is operationalized as the extent to which respondents share their knowledge on new/improved practices with other needy persons. The data in Table 12 depicts that most of the beneficiary farmers *i.e.* 63.33 percent and 46.67 percent of the non-beneficiary farmers possessed medium level of information sharing behaviour. Only 05.56 percent of beneficiary and half of the non-beneficiary farmers (50.00%) had low level of information sharing behaviour. On the other side, 31.11 percent of beneficiary and only 03.33 percent of non-beneficiary respondents had high level of information sharing behaviour.

Table 12: Distribution of Respondents on the basis of Information Sharing Behaviour

S. No.	Categories	Respondents					
		Beneficiary Respondents (n=90)		Non- beneficiary Respondents (n=90)		Overall Respondents (N=180)	
		F	%	F	%	F	%
1.	Low (<08.44 Score)	05	05.56	45	50.00	50	27.78
2.	Medium (08.44 to 10.44 Score)	57	63.33	42	46.67	99	55.00
3.	High (>10.44 Score)	28	31.11	03	03.33	31	17.22

Mean: 09.44 S.D.: 1.00

The data in Table 12 also shows that maximum number of overall respondents *i.e.* 55.55 percent had medium level of information sharing behaviour, followed by low (27.78%) and high (17.22%), respectively. The findings are supported by the findings of Papnai *et al.* (2017) [15], Tanwar (2019) [22] and Annu (2021) [1] who concluded that most of the respondents had medium level of information sharing behaviour.

Conclusion

On the basis of the major findings of the study, it is concluded that majority of the respondents in the study area were in the middle age group, belonged to other backward class and had education up to primary level. Most of the respondents were not member of any social organization. Majority of them had agriculture as their main occupation and found in the medium income category. Majority of farmers possessed land above four hectare and belonged to large category. Majority of the respondents had ground water irrigation as a main source of irrigation and they had medium level of mass media exposure, extension agency contact, information seeking behaviour and information sharing behaviour. It is suggested that efforts should be made to increase the level of education of the farmers by starting some education programmes as majority of PKVY farmers in the study area were educated up to primary level. The government should also provide more exposure to the farmers through various extension activities like awareness programmes, trainings, workshops and interactive sessions to enhance their communication capability. Progressive organic farmers' need to be felicitated in '*Kisan Melas'* so that other farmers who are not aware about PKVY can become aware and feel motivated to adopt organic farming.

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