

Socio-economic Characteristics of the Farmers Following E-tendering System for Arecanut in Karnataka

M.C. Vivek¹ and S. Sahana²

1. PG. Scholar, 2. Asstt. Prof. (Agril. Ext.), University of Agril. and Horticultural Sciences, Shivamogga, Karnataka

Corresponding author e-mail : vivekmc1995@gmail.com

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ABSTRACT

The present study aims to understand the personal, communication and psychological characteristics of the farmers who are associated with the e-tendering of arecanut. The study was conducted with the two major APMCs of Karnataka state, namely, APMC, Shivamogga of Shivamogga district and APMC, Bheemasamudra of Chitradurga district during 2020. The primary data were collected randomly from 50 farmers involved in e-tendering of Arecanut from each of the selected APMCs, thus making the total sample size 100. More than half of the farmers were of middle age (59.00%) group and one third of the farmers had education up to high school (37.00%) followed by PUC (24.00%) and graduation (19.00%). Majority of the farmers were of small (42.00%) farmer category with medium (73.00%) trading experience. Whereas, nearly three fourth of the farmers had low (70.00%) cyber proficiency and medium (78.00%) mass media participation. Over two third of the farmers had medium (68.00%) decision-making ability, medium (70.00%) level of economic motivation and medium (69.00%) level of innovativeness. More than half of the farmers had medium (56.00%) level of market orientation with medium (65.00%) level of risk orientation. Nearly two third of the farmers had medium (65.00 %) level of perception about e-tendering system and about one fifth of them belonged to the high (21.00 %) perception category. Capacity building programs for the farmers need to be conducted to make them realise the full potential of e-tendering system. Results from the present study would help the policymakers to have a better understanding of the characteristics and perception of the arecanut farmers involved in the e-tendering system.

Key words: E-tendering; APMC; Arecanut; Farmer; Characteristics; Karnataka;

The share of agriculture and allied sectors in Gross Value Added (GVA) of the country at current prices has declined from 18.20 per cent in 2014-15 to 16.50 per cent in 2019-20, signaling the development process and the structural transformation taking place in the economy (*Govt. of India, 2020*). Even then, agriculture and its allied sectors remain an important sector because of its continued role in ensuring national food security. In the last few decades, India has exhibited remarkable growth in the field of agriculture. The food grain production increased from 50.82 million tonnes (MT) in 1950-51 to 284.95 MT from an area of 123.94 million hectares in 2018-19 (*Govt. of India, 2019a*). Despite the formidable growth in Indian agriculture, it is suffering from inherent problems on the marketing front. The issue can only be addressed by integrating

agricultural production with effective and efficient marketing which could ensure remunerative prices to the producers (*Athawale, 2014*). In addition, adoption of drudgery reduction technology needs to be promoted intensively (*Kumar et al., 2020*). Hence, it is necessary to adopt timely and effective policy reforms concerning agricultural marketing for the overall development of the sector as well as to realise the objective of doubling farmers' income.

Karnataka had a long history of regulated markets, even before many other states conceived the idea. The state of Karnataka has been witnessing increased growth in both area and production of the crop. Karnataka alone produces 70.33 per cent of Arecanut (6.0 lakh tonnes) from an area of 2.79 lakh hectare (*Govt. of India, 2019b*). Among the districts of the state, Shivamogga

stands first in both area (21.06%) and production (21.30%), followed by Davanagere and Dakshina Kannada. However, most of the farmers growing Arecanut in the state are facing problems related to the marketing of the crop. Arecanut growers are not realising expected returns from the crop. Their share in the consumer rupee is only 9.00 to 26.00 per cent, which is far lower compared to any other crop such as cereals, oilseeds, vegetable, fruits and flower crops, where farmers are receiving at least 30.00 per cent of the consumer rupee (*Shambhavi, 2016*).

The use of Information and Communication Technology (ICT) is the only way to bypass several stages and sequences in the process of agricultural development (*Rajneesh and Sisodia, 2020*). In order to take advantage of modern technology to improve agricultural marketing, the state replaced its manual tender system by electronic tender system under the Mandi Modernisation Programme (MMP) in May 2009. The Government of Karnataka in along with the National Commodity Derivative Exchange (NCDEX) implemented the concept of Unified Market Platform (UMP) in 2014. Together with that, Rashtriya e-Market Service Private Limited (ReMS) was launched to provide e-marketing services. Under UMP, licensed traders can participate in the online trading of agricultural commodities in APMC markets across the state (*Pavithra et al., 2018*).

In this background, the present study makes an attempt to understand the personal, communication and psychological characteristics of the farmers who are associated with the e-tendering of arecanut. Further, the perception of farmers about e-tendering system in Arecanut and its association with the characteristics of the farmer were also analysed.

METHODOLOGY

The study was conducted in the two major APMCs of Karnataka state, namely, APMC, Shivamogga of Shivamogga district and APMC, Bheemasamudra of Chitradurga district during January-June 2020. These two APMCs were purposefully selected since they are the two major markets in the state where Arecanut is traded through e-tendering system.

The primary data were collected randomly from 50 farmers involved in e-tendering of Arecanut from each of the selected APMCs, viz., Shivamogga and

Bheemasamudra. Thus, the total sample size was 100. *Measurement of independent variables* : The personal, communication and psychological characteristics of the arecanut farmers were measured with the help of variables which were selected based on the review of literature. The variables were quantified using the measurement tools depicted in Table 1.

Table 1. Variables and measurement tools used for the study

Variables:	Measurement
Age	: Schedule developed by <i>Trivedi (1963)</i>
Education	: Schedule developed by <i>Trivedi (1963)</i>
Land holding	: Classification by Govt. of Karnataka (1996)
Experience in trading	: Schedule developed for the study
Cyber proficiency	: Schedule developed by <i>Sarala (2008)</i> with modifications
Decision making ability	: Scale developed by <i>Moulik (1965)</i> with modifications
Economic motivation	: Scale developed by <i>Supre (1969)</i> with modifications
Innovativeness	: Scale developed by <i>Moulik and Rao (1973)</i> with modifications
Market orientation	: Scale developed by <i>Samantha (1977)</i> with modifications
Mass media participation	: <i>Reddy (1971)</i>
Risk orientation	: Scale developed by <i>Supre (1969)</i> with modifications

A schedule was developed with a large number of statements to assess the perception level of farmers about the operational aspects as well as the usefulness of e-tendering in Arecanut. An extensive review of literature and discussion with experts was done and 30 most suitable items representing all the key aspects of e-tendering were selected and included in the schedule. The responses were collected on a five-point continuum scale viz., 'Strongly agree', 'Agree', 'Un-decided', 'Disagree' and 'Strongly dis-agree' with a score of 5, 4, 3, 2, and 1, respectively for positive statements and vice versa for negative statements.

Appropriate statistical tools were used for analysing the collected data. The primary data collected from the respondents were scored, tabulated and analysed using the statistical tools and techniques i.e Mean, Standard deviation, Frequency and Percentage and Fisher's Exact Probability Test as follow:

$$P(\text{Outcome}) = \frac{(A + B)!(C + D)!(A + C)!(B + D)!}{N! A! B! C! D!}$$

Where,

A,B,C and D=Freq. of four cells in a 2 x 2 contingency table
 N = Total of frequencies

RESULTS AND DISCUSSION

Personal, communication and psychological characteristics of the farmers growing Arecanut

Age : The results depicted in Table 2 reveals that, more than half of the farmers in the Shivamogga APMC belonged to the middle (54.00%) age group followed by young (32.00%) and old (14.00%) age groups. Whereas, nearly two third of the farmers in Bheemasamudra APMC were of middle (64.00%) age group trailed by young (22.00%) and old (14.00%) age groups. On the whole, more than half of the farmers were of middle (59.00%) age group. The probable reason could be the fact that, farmers of middle age group who possessed the needed skills and experience could efficiently and actively participate in the farming activities in comparison to farmers of other age groups. Further, rural youth were not much interested in agriculture and were in search of non-farming jobs that provide them with steady

earnings. Still, 27.00 per cent of the respondent farmers were young, which implies that the attractive profitability of Arecanut cultivation has lured youngsters into taking up the same. The results were in line with the findings of *Bennur (2015)*, *Chandana (2018)*, *Nitesh (2018)* and *Geethavani (2019)*.

Education : It is evident from Table 2 that, majority of the farmers in Shivamogga APMC had education up to the level of high school (40.00%) followed by PUC (22.00%) and graduation (18.00%). Less than ten per cent of the farmers had education up to middle school (8.00%) and an equal number of farmers had education up to primary school (6.00%) as well as post-graduation (6.00%). In case of Bheemasamudra market, more than one third of the farmers had education up to high school (34.00%) and one fourth of them had education up to PUC (26.00%). Only one fifth of them had graduation (20.00%) and less than ten per cent of them had post-graduation (8.00%). Equal number of farmers were educated up to middle (6.00%) and primary school (6.00%).

When we had to look at the education level of the farmers of both the market, more than one third of the farmers were educated up to high school (37.00%) and

Table 2. Personal characteristics of the farmers growing Arecanut across the e-tendering markets

Variable	Category	Criteria	APMC Shivamogga (n ₁ =50)		APMC Bheemasamudra (n ₂ =50)		Overall (N=100)	
			No.	%	No.	%	No.	%
Age	Young	Up to 35 years	16	32.00	11	22.00	27	27.00
	Middle	36 to 55 years	27	54.00	32	64.00	59	59.00
	Old	Above 55 years	7	14.00	7	14.00	14	14.00
Education	Primary school	I - IV Std	3	6.00	3	6.00	6	6.00
	Middle school	V - VII Std	4	8.00	3	6.00	7	7.00
	High school	VIII - X Std	20	40.00	17	34.00	37	37.00
	P.U.C.	XI - XII Std	11	22.00	13	26.00	24	24.00
	Graduation	Degree	9	18.00	10	20.00	19	19.00
	Post-Graduation	M.Sc. or above	3	6.00	4	8.00	7	7.00
Land	Marginal farmers	< 2.5 acres	12	24.00	10	20.00	22	22.00
	Small farmers	2.51 – 5.00 acres	22	44.00	20	40.00	42	42.00
	Medium farmers	5.01 – 10.00 acres	13	26.00	14	28.00	27	27.00
	Big farmers	> 10.00 acres	3	6.00	6	12.00	9	9.00
Experience in trading	Low	(< \bar{X} - s)	5	10.00	7	14.00	12	12.00
	Medium	(± s)	35	70.00	36	72.00	73	73.00
	High	(> + s)	10	20.00	7	14.00	15	15.00
			\bar{X} = 26.90, S = 10.94		\bar{X} = 24.72, S = 8.75		\bar{X} = 25.81, S = 9.92	

\bar{X} = Mean, S = Sample Standard deviation

nearly one fourth of them had education up to PUC (24.00%) (Table 2). This might be attributed to their realisation of the importance of primary education and the government policy of providing free and compulsory education up to high school. The results were in accordance with the findings of *Gayathri (2018)* and *Tyngkan (2018)*.

Land holding : Majority of the farmers in the Shivamogga APMC were small (44.00%) farmers with a land holding of 5.01 to 10.00 acres and one fourth of them belonged to the medium (26.00%) category with 2.51 to 5.00 acres of land. When 24.00 per cent of them were marginal farmers a land holding of less than 2.50 acres, only a few of them were big (6.00%) farmers with more than 10.00 acres of land. Similarly, majority of the farmers in Bheemasamudra APMC were small (40.00%) farmers. Further, less than thirty per cent of the farmers were of medium (28.00%) category, one fifth of them belonged to the marginal (20.00%) category and 12.00 per cent of them were big farmers. Altogether, majority of the farmers were of small (42.00%) farmer category followed by medium (27.00) farmer category. This might be because of the fragmentation of ancestral land among the family members and the conversion of farmland for other purposes. The results were in conformity with that of *Swarna (2019)* and *Geethavani (2019)*.

Experience in trading : A glance at Table 2 reveals that, more than two third of the farmers in Shivamogga APMC had medium (70.00%) experience in Arecanut trading and one fifth of them had high (20.00%) trading experience. Farmers with low trading experience were 10.00 per cent. As high as 72.00 per cent of the farmers in Bheemasamudra APMC had medium experience in trading and an equal number of farmers had low (14.00%) and high (14.00%) trading experience. On

the whole, nearly three fourth of the farmers had medium (73.00%) trading experience and 15.00 per cent had high trading experience (Table 2). The majority of the arecanut growers came under the middle age group and might have got engaged in trading activities since their younger age. Further, Arecanut being a commercial crop, farmers used to market the produce through co-operatives like MAMCOS, CAMPCO etc. Hence, farmers were directly involved in the trading related activities and might have resulted in medium to high trading experience. The findings were in line with that of *Patil (2018)* and *Vineetha (2018)*.

Cyber proficiency : The results depicted in Table 3, point out that two third of the farmers in the Shivamogga APMC had low (66.00%) level of cyber proficiency. However, one fifth of them had high (20.00%) cyber proficiency and less than fifteen per cent had medium (14.00%) cyber proficiency. Likewise, majority of the farmers in Bheemasamudra APMC had low (68.00%) cyber proficiency followed by high (18.00%) and medium (14.00%) level of cyber proficiency. Altogether, majority of the farmers had low (70.00%) cyber proficiency. Even though majority of the Arecanut farmers received formal education and started using mobile phones in their daily life, their knowledge and proficiency with the computer were rather limited. Apart from that, farmers never had to use a computer in Arecanut trading as they were not directly involved in the online trading process. Thus, they had low cyber proficiency. The findings were in agreement with that of *Senthil (2013)* and *Sowjanya (2017)*.

Mass media participation : More than three fourth of the farmers in Shivamogga APMC had medium mass media participation (76.00%) and less than fifteen per cent of them had high (14.00%) level of mass media participation. However, 10.00 per cent of them had low

Table 3. Communication characteristics of the farmers growing Arecanut across the e-tendering markets

Variable	Category	APMC, Shivamogga (n ₁ =50)			APMC, Bheemasamudra (n ₂ =50)			Overall (N=100)		
		Criteria	No.	%	Criteria	No.	%	Criteria	No.	%
Cyber proficiency	Low (< \bar{X} - s)	<8.15	33	66.00	<8.15	34	68.00	<8.14	70	70.00
	Medium (\pm s)	8.15-11.52	7	14.00	8.15-11.28	7	14.00	8.14-11.26	12	12.00
	High (>+ s)	>11.52	10	20.00	>11.28	9	18.00	>11.26	18	18.00
Mass media participation	Low (< - s)	<22.43	5	10.00	<23.38	5	10.00	<23.40	10	10.00
	Medium (\pm s)	22.43-33.05	38	76.00	23.38-31.97	39	78.00	23.40-31.95	78	78.00
	High (>+ s)	>33.05	7	14.00	>31.97	6	12.00	>31.95	12	12.00

level of mass media participation. Further, a vast majority of the farmers in Bheemasamudra had medium (78.00%) level of mass media participation followed by high (12.00%) and low (10.00%) level of mass media participation. Altogether, as high as 78.00 per cent of the farmers had medium level of mass media participation followed by high (12.00%) level of mass media participation (Table 3). Majority of the farmers had education up to high school and most of them either watched television or read a newspaper regularly in search of information related to agriculture and other general issues. Mass media such as television and newspaper were considered as the most economical and credible source of agricultural information. Further, a large proportion of the farmers used mass media to avail current market information and marketed their produce accordingly. All these could be the reason behind their medium to high level of mass media participation. The results were in corroboration with the findings of *Vinayak (2014)*, *Bennur (2015)* and *Narendra (2019)*.

Decision making ability : Nearly three fourth of the farmers in Shivamogga APMC had medium (74.00%) decision-making ability. Farmers with high level of decision-making ability were just 14.00 per cent and those with low level of decision-making ability were 12.00 per cent. At the same time, a vast majority of the

farmers in Bheemasamudra APMC had medium (80.00%) decision-making ability followed by high (14.00%) level of decision-making ability. However, less than ten per cent of the farmers had low (6.00%) level of decision-making ability. Altogether, more than two third of the farmers had medium (68.00%) decision-making ability (Table 4). Majority of the Arecanut growers were educated and were of middle age category with medium experience in trading. Hence, they might have considered all the possible alternatives before arriving at a decision and found it beneficial to seek others advice before taking any decisions. Further, majority of the farmers had medium level of mass media participation which might have also influenced them to have medium level of decision-making ability. The results were in harmony with the findings of *Gayathri (2018)* and *Vineetha (2018)*.

Economic motivation : The results portrayed in the Table 4 reveals that, two third of the farmers sampled from the Shivamogga APMC had medium (66.00%) level of economic motivation. Whereas, less than one fifth of the farmers exhibited high (18.00%) and 16.00 per cent had low level of economic motivation. Likewise, nearly three fourth of the farmers from Bheemasamudra APMC exhibited medium (70.00%) level of economic motivation trailed by low (18.00%) and high (12.00%) level of economic motivation. When we look at the two

Table 4. Psychological characteristics of the farmers growing Arecanut across the e-tendering markets

Variable	Category	APMC, Shivamogga (n ₁ =50)			APMC, Bheemasamudra (n ₂ =50)			Overall (N=100)		
		Criteria	No.	%	Criteria	No.	%	Criteria	No.	%
Decision making ability	Low (< \bar{X} - s)	<16.48	6	12.00	<14.00	3	6.00	<14.03	18	18.00
	Medium (\pm s)	16.48-21.95	37	74.00	14.00-21.80	40	80.00	14.03-21.78	68	68.00
	High (> + s)	>21.95	7	14.00	>21.80	7	14.00	>21.78	14	14.00
Economic motivation	Low (< - s)	<20.63	8	16.00	<20.68	9	18.00	<20.69	18	18.00
	Medium (\pm s)	20.63-25.25	33	66.00	20.68-25.24	35	70.00	20.69-25.22	70	70.00
	High (> + s)	>25.25	9	18.00	>25.24	6	12.00	>25.22	12	12.00
Innovation	Low (< - s)	<15.09	7	14.00	<13.55	7	14.00	<13.97	11	11.00
	Medium (\pm s)	15.09-25.50	35	70.00	13.55-24.61	34	68.00	13.97-24.89	69	69.00
	High (> + s)	>25.50	8	16.00	>24.61	9	18.00	>24.89	20	20.00
Market orientation	Low (< - s)	<21.23	11	22.00	<19.44	10	20.00	<19.99	14	14.00
	Medium (\pm s)	21.23-27.13	36	72.00	19.44-26.48	27	54.00	19.99-26.74	56	56.00
	High (> + s)	>27.13	3	6.00	>26.48	13	26.00	>26.74	30	30.00
Risk orientation	Low (< - s)	<15.89	6	12.00	<15.56	11	22.00	<15.85	17	17.00
	Medium (\pm s)	15.89-23.75	37	74.00	15.56-23.44	30	60.00	15.85-23.53	65	65.00
	High (> + s)	>23.75	7	14.00	>23.44	9	18.00	>23.53	18	18.00

markets, majority of the farmers had medium (70.00%) level of economic motivation. This might be due to their formal education and small land holding, which forced them to make the best use of available resources to maximise their profit. Further, Arecanut cultivation requires comparatively high investment and it is quite natural to expect high returns out of it. The findings were in line with that of *Vinayak (2014)*, *Kavad (2015)* and *Gayathri (2018)*.

Innovativeness : Majority of the farmers in the Shivamogga APMC had medium (70.00%) level of innovativeness and 16.00 per cent of them exhibited high (16.00%) level of innovativeness. Whereas, less than fifteen per cent had low (14.00%) level of innovativeness. With regard to the farmers in Bheemasamudra APMC, nearly two third of them had medium (68.00%) level of innovativeness followed by high (18.00%) and low (14.00%) level of innovativeness. On the whole, more than two third of the farmers had medium (69.00%) level of innovativeness followed by high (20.00%) level of innovativeness (Table 4). As the majority of the respondent farmers were of middle age category with formal education, they were enthusiastic to try new techniques which might improve their productivity. Further, with the rise in Arecanut prices, farmers became economically stable enough to make investments in innovative technologies like drip irrigation and fertigation. In addition, majority of the farmers had medium level of economic motivation as well as mass media participation which could have led to their medium to high level of innovativeness. The results were in agreement with the findings of *Patil (2018)*, *Vineetha (2018)* and *Narendra (2019)*.

Market orientation : It was observed from the Table 4 that, nearly three fourth of the farmers in Shivamogga APMC had medium (72.00%) market orientation followed by low (22.00%) level of market orientation. Less than ten per cent of the farmers had high (6.00%) level of market orientation. Whereas, more than half of the farmers in Bheemasamudra APMC had medium (54.00%) level of market orientation followed by high (26.00%) and low (20.00%) level of market orientation. On the whole, more than half of the farmers had medium (56.00%) level of market orientation followed by high (30.00%) level of market orientation (Table 4). Arecanut being a commercial crop, farmers have got various

avenues to market their produce. Thus, farmers tend to choose the marketing channels with the utmost care to ensure highest price for their produce. Furthermore, majority of the farmers had education up to high school and exhibited medium economic motivation, which might have influenced them to have medium to high level of market orientation. The findings were in harmony with that of *Gayathri (2018)*, *Vineetha (2018)* and *Chethan (2019)*.

Risk orientation : As depicted in Table 4, majority of the farmers in the Shivamogga APMC had medium (74.00%) risk orientation. Whereas, farmers with high and low level of risk orientation were 14.00 per cent and 12.00 per cent, respectively. Similarly, in case of the farmers in Bheemasamudra APMC, more than half of them exhibited medium (60.00%) level of risk orientation. At the same time, farmers with low level of risk orientation were 22.00 per cent and 18.00 per cent of them exhibited high level of risk orientation. Altogether, majority of the farmers had medium (65.00%) level of risk orientation and less than one fifth of them exhibited high (18.00%) level risk orientation. Arecanut cultivation was considered to be highly remunerative and hence farmers were ready to take risk with a view of making higher profits. Further, majority of the farmers had education up to high school level and exhibited medium level of economic motivation. Along with that, the economic sustainability of the farmers might have led to their medium to high level of risk orientation. The obtained results were similar to the findings of *Patil (2018)*, *Vineetha (2018)* and *Narendra (2019)*.

Perception of the farmers about e-tendering system in Arecanut : The results depicted in Table 5 reveal that, nearly two third of the respondents had medium (65.00 %) level of perception and about one fifth of them belonged to the high (21.00%) perception category. However, low level of perception was observed in 14.00 per cent of the farmers. This could be bestowed to the relative advantages of e-tendering system over the traditional closed tendering system. As perceived by the farmers, e-tendering system ensures competitive price to the farmers for their produce and has improved the transparency of the tendering process. Further, the e-tendering system was also perceived to save a significant amount of farmers' time since all the process were

Table 2. Personal characteristics of the farmers growing Arecanut across the e-tendering markets

Variable	Category	Criteria	APMC Shivamogga (n ₁ =50)		APMC Bheemasamudra (n ₂ =50)		Overall (N=100)	
			No.	%	No.	%	No.	%
Perception of farmers	Low	(< \bar{X} - s)	7	14.00	8	16.00	14	14.00
	Medium	(± s)	37	74.00	36	72.00	65	65.00
	High	(> + s)	6	12.00	6	12.00	21	21.00
			\bar{X} = 111.26	S = 5.95	\bar{X} = 98.70	S = 3.81	\bar{X} = 104.94	S = 8.02

\bar{X} = Mean S = Sample Standard deviation

Table 6. Association between characteristics of the farmer growing Arecanut and their perception about e-tendering (N=100)

Independent variable	Fisher's exact probability
Age	5.171 ^{NS}
Education	10.88*
Land holding	4.393 ^{NS}
Cyber proficiency	0.804 ^{NS}
Decision making ability	2.333 ^{NS}
Experience in trading	2.186 ^{NS}
Economic motivation	1.761 ^{NS}
Innovativeness	9.400*
Market orientation	9.897*
Mass media participation	2.262 ^{NS}
Risk orientation	10.727*

* Significant at 5% level of significance

^{NS}Non-significant

computerised. Hence, the system of e-tendering has made a noticeable influence on the day to day functioning of the market and might have led to medium to high level of perception of the farmers about e-tendering system in Arecanut. The results were in corroboration with the findings of *Bennur (2015)*, *Reddy (2016)*, *Pavithra et al. (2018)* and *Marbaniang et al. (2020)*.

Association between personal, communication and psychological characteristics of the farmer and their perception about e-tendering system in Arecanut : The association between personal, communication and psychological characteristics of the farmer and their perception about e-tendering system in Arecanut was depicted in the Table 6. Fisher's exact test was carried out to determine the results since some of the expected frequencies were less than five. Characteristics of the farmers such as education, innovativeness, market orientation and risk orientation were found to be

significantly associated with their perception about e-tendering system at 5.00 per cent level of significance. Farmers with better education might have the ability to understand things better and hence they might have a better perception about the e-tendering system. Further, farmers with better market orientation, risk orientation and innovativeness might be quicker in adopting innovative technologies as well as marketing methods. Hence, they might have the instinct to understand the system in detail and thereby had a better perception about e-tendering system in Arecanut. Whereas, the other characteristics such as age, land holding, cyber proficiency, decision making ability, experience in trading, economic motivation and mass media participation were found to be statistically non-significant at 5.00 per cent level of significance. Similar results were reported by *Bennur (2015)*, *(2015)* and *Meena et al. (2019)*.

CONCLUSION

The present study analysed the personal, communication and psychological characteristics of the farmers who are associated with the e-tendering of arecanut. More than half of the farmers were of middle age group and one third of the farmers had education up to high school. Whereas, nearly three fourth of the farmers had low cyber proficiency and medium mass media participation. Over two third of the farmers had medium decision-making ability, medium level of economic motivation and medium level of innovativeness. More than half of the farmers had medium level of market orientation with medium level of risk orientation. Majority of the farmers were having medium to high level of perception towards e-tendering system in arecanut. Capacity building programs for the farmers need to be conducted so as to make them capable of realising the full potential of e-tendering system.

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